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National Environmental Policy Act Compliance Guide

Volume II

(Reference Book)

U.S. Department of Energy
Environment, Safety and Health
Office of NEPA Oversight

September 1994

MASTER

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PREFACE

Volume II (Reference Book) of the National Environmental Policy Act Compliance Guide contains current copies of regulations and guidance from the Council on Environmental Quality, the Department of Energy, the Department of State, and the Environmental Protection Agency, related to compliance with the National Environmental Policy Act of 1969 (NEPA). Certain documents are also available electronically, as noted in the Table of Contents. We will continue to make additional contents of the NEPA Compliance Guide available electronically. Volume I (Guidance Manual) of the NEPA Compliance Guide, under revision, will include information on NEPA compliance planning, NEPA documents and procedures, and coordination of NEPA review with other Federal environmental review requirements.

Volume II of the NEPA Compliance Guide should foster sound and efficient environmental decisionmaking. The NEPA Compliance Guide is provided to Department of Energy and contractor staff for information purposes only and should not be interpreted as legal guidance. The Office of NEPA Oversight plans to revise Volume II (Reference Book) from time to time to address additional issues and, as necessary, to reflect any new policies, regulations, and judicial determinations. Supplements, when necessary, will be mailed to all persons on the distribution list. The Office welcomes suggestions for improvement. As a general rule, direct questions about NEPA compliance to an appropriate program or field office NEPA Compliance Officer. Comments on Volume II should be provided to the Director, Office of NEPA Oversight, (202) 586-4600.

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NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)
COMPLIANCE GUIDE
Volume II (Reference Book)

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Note: Under the Secretarial Policy Statement on NEPA (June 13, 1994; Tab IV-3) DOE now will rely, as a general rule, on the CERCLA process for review of actions to be taken under CERCLA. Therefore, the references in this guidance to DOE's NEPA/CERCLA integration policy have been superseded (except when DOE chooses, after consultation with stakeholders and as a matter of policy, to integrate the NEPA and CERCLA processes for specific proposed actions). The Office of NEPA Oversight has included this guidance in the NEPA Compliance Guide, however, because it is a useful discussion of the relationship among programmatic, sitewide, and project-specific NEPA reviews.

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Council on Environmental Quality
Executive Office of the President

REGULATIONS

For Implementing The Procedural Provisions Of The

NATIONAL ENVIRONMENTAL POLICY ACT



Reprint
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PART 1500—PURPOSE, POLICY, AND MANDATE

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AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609) and E.O. 11514, Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55990, Nov. 28, 1978, unless otherwise noted.

§ 1500.1 Purpose.

(a) The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101.

(b) NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

(c) Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose.

§ 1500.2 Policy.

Federal agencies shall to the fullest extent possible:

(a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations.

(b) Implement procedures to make the NEPA process more useful to decisionmakers and the public; to reduce paperwork and the accumulation of extraneous background data; and to emphasize real environmental issues and alternatives. Environmental impact statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary environmental analyses.

(c) Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.

(d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment.

(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.

(f) Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.

§ 1500.3 Mandate.

Parts 1500 through 1508 of this title provide regulations applicable to and binding on all Federal agencies for implementing the procedural provisions

of the National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321 et seq.) (NEPA or the Act) except where compliance would be inconsistent with other statutory requirements. These regulations are issued pursuant to NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.) section 309 of the Clean Air Act, as amended (42 U.S.C. 7609) and Executive Order 11514, Protection and Enhancement of Environmental Quality (March 5, 1970, as amended by Executive Order 11991, May 24, 1977). These regulations, unlike the predecessor guidelines, are not confined to sec. 102(2)(C) (environmental impact statements). The regulations apply to the whole of section 102(2). The provisions of the Act and of these regulations must be read together as a whole in order to comply with the spirit and letter of the law. It is the Council's intention that judicial review of agency compliance with these regulations not occur before an agency has filed the final environmental impact statement, or has made a final finding of no significant impact (when such a finding will result in action affecting the environment), or takes action that will result in irreparable injury. Furthermore, it is the Council's intention that any trivial violation of these regulations not give rise to any independent cause of action.

§ 1500.4 Reducing paperwork.

Agencies shall reduce excessive paperwork by:

(a) Reducing the length of environmental impact statements (§ 1502.2(c)), by means such as setting appropriate page limits (§§ 1501.7(b)(1) and 1502.7).

(b) Preparing analytic rather than encyclopedic environmental impact statements (§ 1502.2(a)).

(c) Discussing only briefly issues other than significant ones (§ 1502.2(b)).

(d) Writing environmental impact statements in plain language (§ 1502.8).

(e) Following a clear format for environmental impact statements (§ 1502.10).

(f) Emphasizing the portions of the environmental impact statement that are useful to decisionmakers and the public (§§ 1502.14 and 1502.15) and reducing emphasis on background material (§ 1502.16).

(g) Using the scoping process, not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the environmental impact statement process accordingly (§ 1501.7).

(h) Summarizing the environmental impact statement (§ 1502.12) and circulating the summary instead of the entire environmental impact statement if the latter is unusually long (§ 1502.19).

(i) Using program, policy, or plan environmental impact statements and tiering from statements of broad scope to those of narrower scope, to eliminate repetitive discussions of the same issues (§§ 1502.4 and 1502.20).

(j) Incorporating by reference (§ 1502.21).

(k) Integrating NEPA requirements with other environmental review and consultation requirements (§ 1502.25).

(l) Requiring comments to be as specific as possible (§ 1503.3).

(m) Attaching and circulating only changes to the draft environmental impact statement, rather than rewriting and circulating the entire statement when changes are minor (§ 1503.4(c)).

(n) Eliminating duplication with State and local procedures, by providing for joint preparation (§ 1506.2), and with other Federal procedures, by providing that an agency may adopt appropriate environmental documents prepared by another agency (§ 1506.3).

(o) Combining environmental documents with other documents (§ 1506.4).

(p) Using categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement (§ 1508.4).

(q) Using a finding of no significant impact when an action not otherwise excluded will not have a significant

effect on the human environment and is therefore exempt from requirements to prepare an environmental impact statement (§ 1508.13).

[43 FR 55990, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

§ 1500.5 Reducing delay.

Agencies shall reduce delay by:

(a) Integrating the NEPA process into early planning (§ 1501.2).

(b) Emphasizing interagency cooperation before the environmental impact statement is prepared, rather than submission of adversary comments on a completed document (§ 1501.6).

(c) Insuring the swift and fair resolution of lead agency disputes (§ 1501.5).

(d) Using the scoping process for an early identification of what are and what are not the real issues (§ 1501.7).

(e) Establishing appropriate time limits for the environmental impact statement process (§§ 1501.7(b)(2) and 1501.8).

(f) Preparing environmental impact statements early in the process (§ 1502.5).

(g) Integrating NEPA requirements with other environmental review and consultation requirements (§ 1502.25).

(h) Eliminating duplication with State and local procedures by providing for joint preparation (§ 1506.2) and with other Federal procedures by providing that an agency may adopt appropriate environmental documents prepared by another agency (§ 1506.3).

(i) Combining environmental documents with other documents (§ 1506.4).

(j) Using accelerated procedures for proposals for legislation (§ 1506.8).

(k) Using categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment (§ 1508.4) and which are therefore exempt from requirements to prepare an environmental impact statement.

(l) Using a finding of no significant impact when an action not otherwise excluded will not have a significant effect on the human environment (§ 1508.13) and is therefore exempt from requirements to prepare an environmental impact statement.

§ 1500.6 Agency authority.

Each agency shall interpret the provisions of the Act as a supplement to its existing authority and as a mandate to view traditional policies and missions in the light of the Act's national environmental objectives. Agencies shall review their policies, procedures, and regulations accordingly and revise them as necessary to insure full compliance with the purposes and provisions of the Act. The phrase "to the fullest extent possible" in section 102 means that each agency of the Federal Government shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible.

PART 1501—NEPA AND AGENCY PLANNING

Sec.

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AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609, and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55992, Nov. 29, 1978, unless otherwise noted.

§ 1501.1 Purpose.

The purposes of this part include:

(a) Integrating the NEPA process into early planning to insure appropriate consideration of NEPA's policies and to eliminate delay.

(b) Emphasizing cooperative consultation among agencies before the environmental impact statement is prepared rather than submission of adversary comments on a completed document.

(c) Providing for the swift and fair resolution of lead agency disputes.

(d) Identifying at an early stage the significant environmental issues deserving of study and deemphasizing insignificant issues, narrowing the scope of the environmental impact statement accordingly.

(e) Providing a mechanism for putting appropriate time limits on the environmental impact statement process.

§ 1501.2 Apply NEPA early in the process.

Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. Each agency shall:

(a) Comply with the mandate of section 102(2)(A) to "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment," as specified by § 1507.2.

(b) Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses. Environmental documents and appropriate analyses shall be circulated and reviewed at the same time as other planning documents.

(c) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act.

(d) Provide for cases where actions are planned by private applicants or other non-Federal entities before Federal involvement so that:

(1) Policies or designated staff are available to advise potential applicants of studies or other information foreseeably required for later Federal action.

(2) The Federal agency consults early with appropriate State and local agencies and Indian tribes and with interested private persons and organizations when its own involvement is reasonably foreseeable.

(3) The Federal agency commences its NEPA process at the earliest possible time.

§ 1501.3 When to prepare an environmental assessment.

(a) Agencies shall prepare an environmental assessment (§ 1508.9) when necessary under the procedures adopted by individual agencies to supplement these regulations as described in § 1507.3. An assessment is not necessary if the agency has decided to prepare an environmental impact statement.

(b) Agencies may prepare an environmental assessment on any action at any time in order to assist agency planning and decisionmaking.

§ 1501.4 Whether to prepare an environmental impact statement.

In determining whether to prepare an environmental impact statement the Federal agency shall:

(a) Determine under its procedures supplementing these regulations (described in § 1507.3) whether the proposal is one which:

(1) Normally requires an environmental impact statement, or

(2) Normally does not require either an environmental impact statement or an environmental assessment (categorical exclusion).

(b) If the proposed action is not covered by paragraph (a) of this section, prepare an environmental assessment (§ 1508.9). The agency shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by § 1508.9(a)(1).

(c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement.

(d) Commence the scoping process (§ 1501.7), if the agency will prepare an environmental impact statement.

(e) Prepare a finding of no significant impact (§ 1508.13), if the agency determines on the basis of the environmental assessment not to prepare a statement.

(1) The agency shall make the finding of no significant impact available

to the affected public as specified in § 1506.6.

(2) In certain limited circumstances, which the agency may cover in its procedures under § 1507.3, the agency shall make the finding of no significant impact available for public review (including State and areawide clearinghouses) for 30 days before the agency makes its final determination whether to prepare an environmental impact statement and before the action may begin. The circumstances are:

(i) The proposed action is, or is closely similar to, one which normally requires the preparation of an environmental impact statement under the procedures adopted by the agency pursuant to § 1507.3, or

(ii) The nature of the proposed action is one without precedent.

§ 1501.5 Lead agencies.

(a) A lead agency shall supervise the preparation of an environmental impact statement if more than one Federal agency either:

(1) Proposes or is involved in the same action; or

(2) Is involved in a group of actions directly related to each other because of their functional interdependence or geographical proximity.

(b) Federal, State, or local agencies, including at least one Federal agency, may act as joint lead agencies to prepare an environmental impact statement (§ 1506.2).

(c) If an action falls within the provisions of paragraph (a) of this section the potential lead agencies shall determine by letter or memorandum which agency shall be the lead agency and which shall be cooperating agencies. The agencies shall resolve the lead agency question so as not to cause delay. If there is disagreement among the agencies, the following factors (which are listed in order of descending importance) shall determine lead agency designation:

(1) Magnitude of agency's involvement.

(2) Project approval/disapproval authority.

(3) Expertise concerning the action's environmental effects.

(4) Duration of agency's involvement.

(5) Sequence of agency's involvement.

(d) Any Federal agency, or any State or local agency or private person substantially affected by the absence of lead agency designation, may make a written request to the potential lead agencies that a lead agency be designated.

(e) If Federal agencies are unable to agree on which agency will be the lead agency or if the procedure described in paragraph (c) of this section has not resulted within 45 days in a lead agency designation, any of the agencies or persons concerned may file a request with the Council asking it to determine which Federal agency shall be the lead agency.

A copy of the request shall be transmitted to each potential lead agency. The request shall consist of:

(1) A precise description of the nature and extent of the proposed action.

(2) A detailed statement of why each potential lead agency should or should not be the lead agency under the criteria specified in paragraph (c) of this section.

(f) A response may be filed by any potential lead agency concerned within 20 days after a request is filed with the Council. The Council shall determine as soon as possible but not later than 20 days after receiving the request and all responses to it which Federal agency shall be the lead agency and which other Federal agencies shall be cooperating agencies.

[43 FR 55992, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

§ 1501.6 Cooperating agencies.

The purpose of this section is to emphasize agency cooperation early in the NEPA process. Upon request of the lead agency, any other Federal agency which has jurisdiction by law shall be a cooperating agency. In addition any other Federal agency which has special expertise with respect to any environmental issue, which should be addressed in the statement may be a cooperating agency upon request of the lead agency. An agency may re-

quest the lead agency to designate it a cooperating agency.

(a) The lead agency shall:

(1) Request the participation of each cooperating agency in the NEPA process at the earliest possible time.

(2) Use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible consistent with its responsibility as lead agency.

(3) Meet with a cooperating agency at the latter's request.

(b) Each cooperating agency shall:

(1) Participate in the NEPA process at the earliest possible time.

(2) Participate in the scoping process (described below in § 1501.7).

(3) Assume on request of the lead agency responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement concerning which the cooperating agency has special expertise.

(4) Make available staff support at the lead agency's request to enhance the latter's interdisciplinary capability.

(5) Normally use its own funds. The lead agency shall, to the extent available funds permit, fund those major activities or analyses it requests from cooperating agencies. Potential lead agencies shall include such funding requirements in their budget requests.

(c) A cooperating agency may in response to a lead agency's request for assistance in preparing the environmental impact statement (described in paragraph (b) (3), (4), or (5) of this section) reply that other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council.

§ 1501.7 Scoping.

There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping. As soon as practicable after its decision to prepare an environmental impact statement and before the scoping process the lead agency shall publish a notice of intent (§ 1508.22) in the FEDERAL REGISTER except as provided in § 1507.3(e).

(a) As part of the scoping process the lead agency shall:

(1) Invite the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons (including those who might not be in accord with the action on environmental grounds), unless there is a limited exception under § 1507.3(c). An agency may give notice in accordance with § 1506.6.

(2) Determine the scope (§ 1508.25) and the significant issues to be analyzed in depth in the environmental impact statement.

(3) Identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (§ 1506.3), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.

(4) Allocate assignments for preparation of the environmental impact statement among the lead and cooperating agencies, with the lead agency retaining responsibility for the statement.

(5) Indicate any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the impact statement under consideration.

(6) Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, and integrated with, the environmental impact statement as provided in § 1502.25.

(7) Indicate the relationship between the timing of the preparation of environmental analyses and the agency's tentative planning and decisionmaking schedule.

(b) As part of the scoping process the lead agency may:

(1) Set page limits on environmental documents (§ 1502.7).

(2) Set time limits (§ 1501.8).

(3) Adopt procedures under § 1507.3 to combine its environmental assessment process with its scoping process.

(4) Hold an early scoping meeting or meetings which may be integrated with any other early planning meeting the agency has. Such a scoping meeting will often be appropriate when the impacts of a particular action are confined to specific sites.

(c) An agency shall revise the determinations made under paragraphs (a) and (b) of this section if substantial changes are made later in the proposed action, or if significant new circumstances or information arise which bear on the proposal or its impacts.

§ 1501.8 Time limits.

Although the Council has decided that prescribed universal time limits for the entire NEPA process are too inflexible, Federal agencies are encouraged to set time limits appropriate to individual actions (consistent with the time intervals required by § 1506.10). When multiple agencies are involved the reference to agency below means lead agency.

(a) The agency shall set time limits if an applicant for the proposed action requests them: *Provided,* That the limits are consistent with the purposes of NEPA and other essential considerations of national policy.

(b) The agency may:

(1) Consider the following factors in determining time limits:

(i) Potential for environmental harm.

(ii) Size of the proposed action.

(iii) State of the art of analytic techniques.

(iv) Degree of public need for the proposed action, including the consequences of delay.

(v) Number of persons and agencies affected.

(vi) Degree to which relevant information is known and if not known the time required for obtaining it.

(vii) Degree to which the action is controversial.

(viii) Other time limits imposed on the agency by law, regulations, or executive order.

(2) Set overall time limits or limits for each constituent part of the NEPA process, which may include:

(i) Decision on whether to prepare an environmental impact statement (if not already decided).

(ii) Determination of the scope of the environmental impact statement.

(iii) Preparation of the draft environmental impact statement.

(iv) Review of any comments on the draft environmental impact statement from the public and agencies.

(v) Preparation of the final environmental impact statement.

(vi) Review of any comments on the final environmental impact statement.

(vii) Decision on the action based in part on the environmental impact statement.

(3) Designate a person (such as the project manager or a person in the agency's office with NEPA responsibilities) to expedite the NEPA process.

(c) State or local agencies or members of the public may request a Federal Agency to set time limits.

PART 1502—ENVIRONMENTAL IMPACT STATEMENT

Sec.

1502.1 Purpose.
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1502.4 Major Federal actions requiring the preparation of environmental impact statements.
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1502.23 Cost-benefit analysis.
1502.24 Methodology and scientific accuracy.
1502.25 Environmental review and consultation requirements.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55994, Nov. 29, 1978, unless otherwise noted.

§ 1502.1 Purpose.

The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses. An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

§ 1502.2 Implementation.

To achieve the purposes set forth in § 1502.1 agencies shall prepare environmental impact statements in the following manner:

(a) Environmental impact statements shall be analytic rather than encyclopedic.

(b) Impacts shall be discussed in proportion to their significance. There shall be only brief discussion of other than significant issues. As in a finding of no significant impact, there should be only enough discussion to show why more study is not warranted.

(c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations. Length should vary first with potential environmental problems and then with project size.

(d) Environmental impact statements shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of the Act and other environmental laws and policies.

(e) The range of alternatives discussed in environmental impact statements shall encompass those to be considered by the ultimate agency decisionmaker.

(f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (§ 1506.1).

(g) Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.

§ 1502.3 Statutory requirements for statements.

As required by sec. 102(2)(C) of NEPA environmental impact statements (§ 1508.11) are to be included in every recommendation or report.

On proposals (§ 1508.23).

For legislation and (§ 1508.17).

Other major Federal actions (§ 1508.18).

Significantly (§ 1508.27).

Affecting (§§ 1508.3, 1508.8).

The quality of the human environment (§ 1508.14).

§ 1502.4 Major Federal actions requiring the preparation of environmental impact statements.

(a) Agencies shall make sure the proposal which is the subject of an environmental impact statement is properly defined. Agencies shall use the criteria for scope (§ 1508.25) to determine which proposal(s) shall be the subject of a particular statement. Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall

be evaluated in a single impact statement.

(b) Environmental impact statements may be prepared, and are sometimes required, for broad Federal actions such as the adoption of new agency programs or regulations (§ 1508.18). Agencies shall prepare statements on broad actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decisionmaking.

(c) When preparing statements on broad actions (including proposals by more than one agency), agencies may find it useful to evaluate the proposal(s) in one of the following ways:

(1) Geographically, including actions occurring in the same general location, such as body of water, region, or metropolitan area.

(2) Generically, including actions which have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media, or subject matter.

(3) By stage of technological development including federal or federally assisted research, development or demonstration programs for new technologies which, if applied, could significantly affect the quality of the human environment. Statements shall be prepared on such programs and shall be available before the program has reached a stage of investment or commitment to implementation likely to determine subsequent development or restrict later alternatives.

(d) Agencies shall as appropriate employ scoping (§ 1501.7), tiering (§ 1502.20), and other methods listed in §§ 1500.4 and 1500.5 to relate broad and narrow actions and to avoid duplication and delay.

§ 1502.5 Timing.

An agency shall commence preparation of an environmental impact statement as close as possible to the time the agency is developing or is presented with a proposal (§ 1508.23) so that preparation can be completed in time for the final statement to be included in any recommendation or report on the proposal. The statement shall be prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made (§§ 1500.2(c), 1501.2, and 1502.2). For instance:

(a) For projects directly undertaken by Federal agencies the environmental impact statement shall be prepared at the feasibility analysis (go-no go) stage and may be supplemented at a later stage if necessary.

(b) For applications to the agency appropriate environmental assessments or statements shall be commenced no later than immediately after the application is received. Federal agencies are encouraged to begin preparation of such assessments or statements earlier, preferably jointly with applicable State or local agencies.

(c) For adjudication, the final environmental impact statement shall normally precede the final staff recommendation and that portion of the public hearing related to the impact study. In appropriate circumstances the statement may follow preliminary hearings designed to gather information for use in the statements.

(d) For informal rulemaking the draft environmental impact statement shall normally accompany the proposed rule.

§ 1502.6 Interdisciplinary preparation.

Environmental impact statements shall be prepared using an inter-disciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process (§ 1501.7).

§ 1502.7 Page limits.

The text of final environmental impact statements (e.g., paragraphs (d) through (g) of § 1502.10) shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.

§ 1502.8 Writing.

Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts.

§ 1502.9 Draft, final, and supplemental statements.

Except for proposals for legislation as provided in § 1506.8 environmental impact statements shall be prepared in two stages and may be supplemented.

(a) Draft environmental impact statements shall be prepared in accordance with the scope decided upon in the scoping process. The lead agency shall work with the cooperating agencies and shall obtain comments as required in Part 1503 of this chapter. The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.

(b) Final environmental impact statements shall respond to comments as required in Part 1503 of this chapter. The agency shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.

(c) Agencies:

(1) Shall prepare supplements to either draft or final environmental impact statements if:

(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

(ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

(3) Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.

(4) Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council.

§ 1502.10 Recommended format.

Agencies shall use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for environmental impact statements should be followed unless the agency determines that there is a compelling reason to do otherwise:

(a) Cover sheet.

(b) Summary.

(c) Table of contents.

(d) Purpose of and need for action.

(e) Alternatives including proposed action (sections 102(2)(C)(iii) and 102(2)(E) of the Act).

(f) Affected environment.

(g) Environmental consequences (especially sections 102(2)(C) (i), (ii), (iv), and (v) of the Act).

(h) List of preparers.

(i) List of Agencies, Organizations, and persons to whom copies of the statement are sent.

(j) Index.

(k) Appendices (if any).

If a different format is used, it shall include paragraphs (a), (b), (c), (h), (i), and (j), of this section and shall include the substance of paragraphs (d), (e), (f), (g), and (k) of this section, as further described in §§ 1502.11 through 1502.18, in any appropriate format.

§ 1502.11 Cover sheet.

The cover sheet shall not exceed one page. It shall include:

(a) A list of the responsible agencies including the lead agency and any cooperating agencies.

(b) The title of the proposed action that is the subject of the statement (and if appropriate the titles of related cooperating agency actions), together with the State(s) and county(ies) (or other jurisdiction if applicable) where the action is located.

(c) The name, address, and telephone number of the person at the agency who can supply further information.

(d) A designation of the statement as a draft, final, or draft or final supplement.

(e) A one paragraph abstract of the statement.

(f) The date by which comments must be received (computed in cooperation with EPA under § 1506.10).

The information required by this section may be entered on Standard Form 424 (in items 4, 6, 7, 10, and 18).

§ 1502.12 Summary.

Each environmental impact statement shall contain a summary which adequately and accurately summarizes the statement. The summary shall stress the major conclusions, areas of controversy (including issues raised by agencies and the public), and the issues to be resolved (including the choice among alternatives). The summary will normally not exceed 15 pages.

§ 1502.13 Purpose and need.

The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.

§ 1502.14 Alternatives including the proposed action.

This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (§ 1502.15) and the Environmental Consequences (§ 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

§ 1502.15 Affected environment.

The environmental impact statement shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses in a statement shall be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Agencies shall avoid useless bulk in statements and shall concentrate effort and attention on important issues. Verbose descriptions of the affected environment are themselves no measure of the adequacy of an environmental impact statement.

§ 1502.16 Environmental consequences.

This section forms the scientific and analytic basis for the comparisons under § 1502.14. It shall consolidate

the discussions of those elements required by sections 102(2)(C) (i), (ii), (iv), and (v) of NEPA which are within the scope of the statement and as much of section 102(2)(C)(iii) as is necessary to support the comparisons. The discussion will include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented. This section should not duplicate discussions in § 1502.14. It shall include discussions of:

(a) Direct effects and their significance (§ 1508.8).

(b) Indirect effects and their significance (§ 1508.8).

(c) Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned. (See § 1506.2(d).)

(d) The environmental effects of alternatives including the proposed action. The comparisons under § 1502.14 will be based on this discussion.

(e) Energy requirements and conservation potential of various alternatives and mitigation measures.

(f) Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures.

(g) Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.

(h) Means to mitigate adverse environmental impacts (if not fully covered under § 1502.14(f)).

[43 FR 55994, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

§ 1502.17 List of preparers.

The environmental impact statement shall list the names, together with their qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers, including basic components of the statement (§§ 1502.6 and 1502.8). Where possible the persons who are responsible for a particular analysis, including analyses in background papers, shall be identified. Normally the list will not exceed two pages.

§ 1502.18 Appendix.

If an agency prepares an appendix to an environmental impact statement the appendix shall:

(a) Consist of material prepared in connection with an environmental impact statement (as distinct from material which is not so prepared and which is incorporated by reference (§ 1502.21)).

(b) Normally consist of material which substantiates any analysis fundamental to the impact statement.

(c) Normally be analytic and relevant to the decision to be made.

(d) Be circulated with the environmental impact statement or be readily available on request.

§ 1502.19 Circulation of the environmental impact statement.

Agencies shall circulate the entire draft and final environmental impact statements except for certain appendices as provided in § 1502.18(d) and unchanged statements as provided in § 1503.4(c). However, if the statement is unusually long, the agency may circulate the summary instead, except that the entire statement shall be furnished to:

(a) Any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved and any appropriate Federal, State or local agency authorized to develop and enforce environmental standards.

(b) The applicant, if any.

(c) Any person, organization, or agency requesting the entire environmental impact statement.

(d) In the case of a final environmental impact statement any person,

organization, or agency which submitted substantive comments on the draft.

If the agency circulates the summary and thereafter receives a timely request for the entire statement and for additional time to comment, the time for that requestor only shall be extended by at least 15 days beyond the minimum period.

§ 1502.20 Tiering.

Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§ 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different stages of actions. (Section 1508.28).

§ 1502.21 Incorporation by reference.

Agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference.

§ 1502.22 Incomplete or unavailable information.

When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.

(a) If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

(b) If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement: (1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

(c) The amended regulation will be applicable to all environmental impact statements for which a Notice of Intent (40 CFR 1508.22) is published in the FEDERAL REGISTER on or after May 27, 1986. For environmental impact statements in progress, agencies may choose to comply with the re-

quirements of either the original or amended regulation.

[51 FR 15625, Apr. 25, 1986]

§ 1502.23 Cost-benefit analysis.

If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences. To assess the adequacy of compliance with section 102(2)(B) of the Act the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations. In any event, an environmental impact statement should at least indicate those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.

§ 1502.24 Methodology and scientific accuracy.

Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.

§ 1502.25 Environmental review and consultation requirements.

(a) To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders.

(b) The draft environmental impact statement shall list all Federal permits, licenses, and other entitlements which must be obtained in implementing the proposal. If it is uncertain whether a Federal permit, license, or other entitlement is necessary, the draft environmental impact statement shall so indicate.

PART 1503—COMMENTING

Sec.

1503.1 Inviting comments.
1503.2 Duty to comment.
1503.3 Specificity of comments.
1503.4 Response to comments.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55997, Nov. 29, 1978, unless otherwise noted.

§ 1503.1 Inviting comments.

(a) After preparing a draft environmental impact statement and before preparing a final environmental impact statement the agency shall:

(1) Obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce environmental standards.

(2) Request the comments of:

(i) Appropriate State and local agencies which are authorized to develop and enforce environmental standards;

(ii) Indian tribes, when the effects may be on a reservation; and

(iii) Any agency which has requested that it receive statements on actions of the kind proposed.

Office of Management and Budget Circular A-95 (Revised), through its system of clearinghouses, provides a means of securing the views of State and local environmental agencies. The clearinghouses may be used, by mutual agreement of the lead agency and the clearinghouse, for securing

State and local reviews of the draft environmental impact statements.

(3) Request comments from the applicant, if any.

(4) Request comments from the public, affirmatively soliciting comments from those persons or organizations who may be interested or affected.

(b) An agency may request comments on a final environmental impact statement before the decision is finally made. In any case other agencies or persons may make comments before the final decision unless a different time is provided under § 1506.10.

§ 1503.2 Duty to comment.

Federal agencies with jurisdiction by law or special expertise with respect to any environmental impact involved and agencies which are authorized to develop and enforce environmental standards shall comment on statements within their jurisdiction, expertise, or authority. Agencies shall comment within the time period specified for comment in § 1506.10. A Federal agency may reply that it has no comment. If a cooperating agency is satisfied that its views are adequately reflected in the environmental impact statement, it should reply that it has no comment.

§ 1503.3 Specificity of comments.

(a) Comments on an environmental impact statement or on a proposed action shall be as specific as possible and may address either the adequacy of the statement or the merits of the alternatives discussed or both.

(b) When a commenting agency criticizes a lead agency's predictive methodology, the commenting agency should describe the alternative methodology which it prefers and why.

(c) A cooperating agency shall specify in its comments whether it needs additional information to fulfill other applicable environmental reviews or consultation requirements and what information it needs. In particular, it shall specify any additional information it needs to comment adequately on the draft statement's analysis of significant site-specific effects associated with the granting or approving by that cooperating agency of necessary Federal permits, licenses, or entitlements.

(d) When a cooperating agency with jurisdiction by law objects to or expresses reservations about the proposal on grounds of environmental impacts, the agency expressing the objection or reservation shall specify the mitigation measures it considers necessary to allow the agency to grant or approve applicable permit, license, or related requirements or concurrences.

§ 1503.4 Response to comments.

(a) An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:

(1) Modify alternatives including the proposed action.

(2) Develop and evaluate alternatives not previously given serious consideration by the agency.

(3) Supplement, improve, or modify its analyses.

(4) Make factual corrections.

(5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

(b) All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

(c) If changes in response to comments are minor and are confined to the responses described in paragraphs (a) (4) and (5) of this section, agencies may write them on errata sheets and attach them to the statement instead of rewriting the draft statement. In such cases only the comments, the responses, and the changes and not the final statement need be circulated (§ 1502.19). The entire document with

a new cover sheet shall be filed as the final statement (§ 1506.9).

PART 1504—PREDECISION REFERRALS TO THE COUNCIL OF PROPOSED FEDERAL ACTIONS DETERMINED TO BE ENVIRONMENTALLY UNSATISFACTORY

Sec.
1504.1 Purpose.
1504.2 Criteria for referral.
1504.3 Procedure for referrals and response.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55998, Nov. 29, 1978, unless otherwise noted.

§ 1504.1 Purpose.

(a) This part establishes procedures for referring to the Council Federal interagency disagreements concerning proposed major Federal actions that might cause unsatisfactory environmental effects. It provides means for early resolution of such disagreements.

(b) Under section 309 of the Clean Air Act (42 U.S.C. 7609), the Administrator of the Environmental Protection Agency is directed to review and comment publicly on the environmental impacts of Federal activities, including actions for which environmental impact statements are prepared. If after this review the Administrator determines that the matter is "unsatisfactory from the standpoint of public health or welfare or environmental quality," section 309 directs that the matter be referred to the Council (hereafter "environmental referrals").

(c) Under section 102(2)(C) of the Act other Federal agencies may make similar reviews of environmental impact statements, including judgments on the acceptability of anticipated environmental impacts. These reviews must be made available to the President, the Council and the public.

§ 1504.2 Criteria for referral.

Environmental referrals should be made to the Council only after concerted, timely (as early as possible in the process), but unsuccessful attempts to resolve differences with the lead agency. In determining what environmental objections to the matter are appropriate to refer to the Council, an agency should weigh potential adverse environmental impacts, considering:

(a) Possible violation of national environmental standards or policies.

(b) Severity.

(c) Geographical scope.

(d) Duration.

(e) Importance as precedents.

(f) Availability of environmentally preferable alternatives.

§ 1504.3 Procedure for referrals and response.

(a) A Federal agency making the referral to the Council shall:

(1) Advise the lead agency at the earliest possible time that it intends to refer a matter to the Council unless a satisfactory agreement is reached.

(2) Include such advice in the referring agency's comments on the draft environmental impact statement, except when the statement does not contain adequate information to permit an assessment of the matter's environmental acceptability.

(3) Identify any essential information that is lacking and request that it be made available at the earliest possible time.

(4) Send copies of such advice to the Council.

(b) The referring agency shall deliver its referral to the Council not later than twenty-five (25) days after the final environmental impact statement has been made available to the Environmental Protection Agency, commenting agencies, and the public. Except when an extension of this period has been granted by the lead agency, the Council will not accept a referral after that date.

(c) The referral shall consist of:

(1) A copy of the letter signed by the head of the referring agency and delivered to the lead agency informing the lead agency of the referral and the reasons for it, and requesting that no action be taken to implement the matter until the Council acts upon the

referral. The letter shall include a copy of the statement referred to in (c)(2) of this section.

(2) A statement supported by factual evidence leading to the conclusion that the matter is unsatisfactory from the standpoint of public health or welfare or environmental quality. The statement shall:

(i) Identify any material facts in controversy and incorporate (by reference if appropriate) agreed upon facts,

(ii) Identify any existing environmental requirements or policies which would be violated by the matter,

(iii) Present the reasons why the referring agency believes the matter is environmentally unsatisfactory,

(iv) Contain a finding by the agency whether the issue raised is of national importance because of the threat to national environmental resources or policies or for some other reason,

(v) Review the steps taken by the referring agency to bring its concerns to the attention of the lead agency at the earliest possible time, and

(vi) Give the referring agency's recommendations as to what mitigation alternative, further study, or other course of action (including abandonment of the matter) are necessary to remedy the situation.

(d) Not later than twenty-five (25) days after the referral to the Council the lead agency may deliver a response to the Council, and the referring agency. If the lead agency requests more time and gives assurance that the matter will not go forward in the interim, the Council may grant an extension. The response shall:

(1) Address fully the issues raised in the referral.

(2) Be supported by evidence.

(3) Give the lead agency's response to the referring agency's recommendations.

(e) Interested persons (including the applicant) may deliver their views in writing to the Council. Views in support of the referral should be delivered not later than the referral. Views in support of the response shall be delivered not later than the response.

(f) Not later than twenty-five (25) days after receipt of both the referral and any response or upon being informed that there will be no response (unless the lead agency agrees to a longer time), the Council may take one or more of the following actions:

(1) Conclude that the process of referral and response has successfully resolved the problem.

(2) Initiate discussions with the agencies with the objective of mediation with referring and lead agencies.

(3) Hold public meetings or hearings to obtain additional views and information.

(4) Determine that the issue is not one of national importance and request the referring and lead agencies to pursue their decision process.

(5) Determine that the issue should be further negotiated by the referring and lead agencies and is not appropriate for Council consideration until one or more heads of agencies report to the Council that the agencies' disagreements are irreconcilable.

(6) Publish its findings and recommendations (including where appropriate a finding that the submitted evidence does not support the position of an agency).

(7) When appropriate, submit the referral and the response together with the Council's recommendation to the President for action.

(g) The Council shall take no longer than 60 days to complete the actions specified in paragraph (f) (2), (3), or (5) of this section.

(h) When the referral involves an action required by statute to be determined on the record after opportunity for agency hearing, the referral shall be conducted in a manner consistent with 5 U.S.C. 557(d) (Administrative Procedure Act).

[43 FR 55998, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

PART 1505—NEPA AND AGENCY DECISIONMAKING

Sec.

1505.1 Agency decisionmaking procedures.
1505.2 Record of decision in cases requiring environmental impact statements.
1505.3 Implementing the decision.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C.

7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 55999, Nov. 29, 1978, unless otherwise noted.

§ 1505.1 Agency decisionmaking procedures.

Agencies shall adopt procedures (§ 1507.3) to ensure that decisions are made in accordance with the policies and purposes of the Act. Such procedures shall include but not be limited to:

(a) Implementing procedures under section 102(2) to achieve the requirements of sections 101 and 102(1).

(b) Designating the major decision points for the agency's principal programs likely to have a significant effect on the human environment and assuring that the NEPA process corresponds with them.

(c) Requiring that relevant environmental documents, comments, and responses be part of the record in formal rulemaking or adjudicatory proceedings.

(d) Requiring that relevant environmental documents, comments, and responses accompany the proposal through existing agency review processes so that agency officials use the statement in making decisions.

(e) Requiring that the alternatives considered by the decisionmaker are encompassed by the range of alternatives discussed in the relevant environmental documents and that the decisionmaker consider the alternatives described in the environmental impact statement. If another decision document accompanies the relevant environmental documents to the decisionmaker, agencies are encouraged to make available to the public before the decision is made any part of that document that relates to the comparison of alternatives.

§ 1505.2 Record of decision in cases requiring environmental impact statements.

At the time of its decision (§ 1506.10) or, if appropriate, its recommendation to Congress, each agency shall prepare a concise public record of decision. The record, which may be integrated into any other record prepared by the agency, shall:

(a) State what the decision was.

(b) Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.

(c) State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.

§ 1505.3 Implementing the decision.

Agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation (§ 1505.2(c)) and other conditions established in the environmental impact statement or during its review and committed as part of the decision shall be implemented by the lead agency or other appropriate consenting agency. The lead agency shall:

(a) Include appropriate conditions in grants, permits or other approvals.

(b) Condition funding of actions on mitigation.

(c) Upon request, inform cooperating or commenting agencies on progress in carrying out mitigation measures which they have proposed and which were adopted by the agency making the decision.

(d) Upon request, make available to the public the results of relevant monitoring.

PART 1506—OTHER REQUIREMENTS OF NEPA

Sec.

1506.1 Limitations on actions during NEPA process.
1506.2 Elimination of duplication with State and local procedures.
1506.3 Adoption.
1506.4 Combining documents.
1506.5 Agency responsibility.
1506.6 Public involvement.
1506.7 Further guidance.
1506.8 Proposals for legislation.
1506.9 Filing requirements.
1506.10 Timing of agency action.
1506.11 Emergencies.
1506.12 Effective date.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 56000, Nov. 29, 1978, unless otherwise noted.

§ 1506.1 Limitations on actions during NEPA process.

(a) Until an agency issues a record of decision as provided in § 1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would:

(1) Have an adverse environmental impact; or

(2) Limit the choice of reasonable alternatives.

(b) If any agency is considering an application from a non-Federal entity, and is aware that the applicant is about to take an action within the agency's jurisdiction that would meet either of the criteria in paragraph (a) of this section, then the agency shall promptly notify the applicant that the agency will take appropriate action to insure that the objectives and procedures of NEPA are achieved.

(c) While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

(1) Is justified independently of the program;

(2) Is itself accompanied by an adequate environmental impact statement; and

(3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

(d) This section does not preclude development by applicants of plans or designs or performance of other work necessary to support an application for Federal, State or local permits or assistance. Nothing in this section shall preclude Rural Electrification Administration approval of minimal expenditures not affecting the environment (*e.g.* long leadtime equipment and purchase options) made by nongovernmental entities seeking loan guarantees from the Administration.

§ 1506.2 Elimination of duplication with State and local procedures.

(a) Agencies authorized by law to cooperate with State agencies of statewide jurisdiction pursuant to section 102(2)(D) of the Act may do so.

(b) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall to the fullest extent possible include:

(1) Joint planning processes.

(2) Joint environmental research and studies.

(3) Joint public hearings (except where otherwise provided by statute).

(4) Joint environmental assessments.

(c) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall to the fullest extent possible include joint environmental impact statements. In

such cases one or more Federal agencies and one or more State or local agencies shall be joint lead agencies. Where State laws or local ordinances have environmental impact statement requirements in addition to but not in conflict with those in NEPA, Federal agencies shall cooperate in fulfilling these requirements as well as those of Federal laws so that one document will comply with all applicable laws.

(d) To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.

§ 1506.3 Adoption.

(a) An agency may adopt a Federal draft or final environmental impact statement or portion thereof provided that the statement or portion thereof meets the standards for an adequate statement under these regulations.

(b) If the actions covered by the original environmental impact statement and the proposed action are substantially the same, the agency adopting another agency's statement is not required to recirculate it except as a final statement. Otherwise the adopting agency shall treat the statement as a draft and recirculate it (except as provided in paragraph (c) of this section).

(c) A cooperating agency may adopt without recirculating the environmental impact statement of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied.

(d) When an agency adopts a statement which is not final within the agency that prepared it, or when the action it assesses is the subject of a referral under Part 1504, or when the statement's adequacy is the subject of a judicial action which is not final, the agency shall so specify.

§ 1506.4 Combining documents.

Any environmental document in compliance with NEPA may be combined with any other agency document to reduce duplication and paperwork.

§ 1506.5 Agency responsibility.

(a) *Information.* If an agency requires an applicant to submit environmental information for possible use by the agency in preparing an environmental impact statement, then the agency should assist the applicant by outlining the types of information required. The agency shall independently evaluate the information submitted and shall be responsible for its accuracy. If the agency chooses to use the information submitted by the applicant in the environmental impact statement, either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers (§ 1502.17). It is the intent of this paragraph that acceptable work not be redone, but that it be verified by the agency.

(b) *Environmental assessments.* If an agency permits an applicant to prepare an environmental assessment, the agency, besides fulfilling the requirements of paragraph (a) of this section, shall make its own evaluation of the environmental issues and take responsibility for the scope and content of the environmental assessment.

(c) *Environmental impact statements.* Except as provided in §§ 1506.2 and 1506.3 any environmental impact statement prepared pursuant to the requirements of NEPA shall be prepared directly by or by a contractor selected by the lead agency or where appropriate under § 1501.6(b), a cooperating agency. It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest. Contractors shall execute a disclosure statement prepared by the lead agency, or where appropriate the cooperating agency, specifying that they have no financial or other interest in the out-

come of the project. If the document is prepared by contract, the responsible Federal official shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents. Nothing in this section is intended to prohibit any agency from requesting any person to submit information to it or to prohibit any person from submitting information to any agency.

§ 1506.6 Public involvement.

Agencies shall:

(a) Make diligent efforts to involve the public in preparing and implementing their NEPA procedures.

(b) Provide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected.

(1) In all cases the agency shall mail notice to those who have requested it on an individual action.

(2) In the case of an action with effects of national concern notice shall include publication in the FEDERAL REGISTER and notice by mail to national organizations reasonably expected to be interested in the matter and may include listing in the *102 Monitor.* An agency engaged in rulemaking may provide notice by mail to national organizations who have requested that notice regularly be provided. Agencies shall maintain a list of such organizations.

(3) In the case of an action with effects primarily of local concern the notice may include:

(i) Notice to State and areawide clearinghouses pursuant to EO 12372, the Intergovernmental Review Process.

(ii) Notice to Indian tribes when effects may occur on reservations.

(iii) Following the affected State's public notice procedures for comparable actions.

(iv) Publication in local newspapers (in papers of general circulation rather than legal papers).

(v) Notice through other local media.

(vi) Notice to potentially interested community organizations including small business associations.

(vii) Publication in newsletters that may be expected to reach potentially interested persons.

(viii) Direct mailing to owners and occupants of nearby or affected property.

(ix) Posting of notice on and off site in the area where the action is to be located.

(c) Hold or sponsor public hearings or public meetings whenever appropriate or in accordance with statutory requirements applicable to the agency. Criteria shall include whether there is:

(1) Substantial environmental controversy concerning the proposed action or substantial interest in holding the hearing.

(2) A request for a hearing by another agency with jurisdiction over the action supported by reasons why a hearing will be helpful. If a draft environmental impact statement is to be considered at a public hearing, the agency should make the statement available to the public at least 15 days in advance (unless the purpose of the hearing is to provide information for the draft environmental impact statement).

(d) Solicit appropriate information from the public.

(e) Explain in its procedures where interested persons can get information or status reports on environmental impact statements and other elements of the NEPA process.

(f) Make environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of the Freedom of Information Act (5 U.S.C. 552), without regard to the exclusion for interagency memoranda where such memoranda transmit comments of Federal agencies on the environmental impact of the proposed action. Materials to be made available to the public shall be provided to the public without charge to the extent practicable, or at a fee which is not more than the actual costs of reproducing copies required to be sent to other Federal agencies, including the Council.

§ 1506.7 Further guidance.

The Council may provide further guidance concerning NEPA and its procedures including:

(a) A handbook which the Council may supplement from time to time, which shall in plain language provide guidance and instructions concerning the application of NEPA and these regulations.

(b) Publication of the Council's Memoranda to Heads of Agencies.

(c) In conjunction with the Environmental Protection Agency and the publication of the 102 Monitor, notice of:

(1) Research activities;

(2) Meetings and conferences related to NEPA; and

(3) Successful and innovative procedures used by agencies to implement NEPA.

§ 1506.8 Proposals for legislation.

(a) The NEPA process for proposals for legislation (§ 1508.17) significantly affecting the quality of the human environment shall be integrated with the legislative process of the Congress. A legislative environmental impact statement is the detailed statement required by law to be included in a recommendation or report on a legislative proposal to Congress. A legislative environmental impact statement shall be considered part of the formal transmittal of a legislative proposal to Congress; however, it may be transmitted to Congress up to 30 days later in order to allow time for completion of an accurate statement which can serve as the basis for public and Congressional debate. The statement must be available in time for Congressional hearings and deliberations.

(b) Preparation of a legislative environmental impact statement shall conform to the requirements of these regulations except as follows:

(1) There need not be a scoping process.

(2) The legislative statement shall be prepared in the same manner as a draft statement, but shall be considered the "detailed statement" required by statute; *Provided,* That when any of the following conditions exist both the draft and final environmental impact statement on the legislative proposal shall be prepared and circulated as provided by §§ 1503.1 and 1506.10.

(i) A Congressional Committee with jurisdiction over the proposal has a rule requiring both draft and final environmental impact statements.

(ii) The proposal results from a study process required by statute (such as those required by the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.) and the Wilderness Act (16 U.S.C. 1131 et seq.)).

(iii) Legislative approval is sought for Federal or federally assisted construction or other projects which the agency recommends be located at specific geographic locations. For proposals requiring an environmental impact statement for the acquisition of space by the General Services Administration, a draft statement shall accompany the Prospectus or the 11(b) Report of Building Project Surveys to the Congress, and a final statement shall be completed before site acquisition.

(iv) The agency decides to prepare draft and final statements.

(c) Comments on the legislative statement shall be given to the lead agency which shall forward them along with its own responses to the Congressional committees with jurisdiction.

§ 1506.9 Filing requirements.

Environmental impact statements together with comments and responses shall be filed with the Environmental Protection Agency, attention Office of Federal Activities (A-104), 401 M Street SW., Washington, D.C. 20460. Statements shall be filed with EPA no earlier than they are also transmitted to commenting agencies and made available to the public. EPA shall deliver one copy of each statement to the Council, which shall satisfy the requirement of availability to the President. EPA may issue guidelines to agencies to implement its responsibilities under this section and § 1506.10.

§ 1506.10 Timing of agency action.

(a) The Environmental Protection Agency shall publish a notice in the FEDERAL REGISTER each week of the environmental impact statements filed

during the preceding week. The minimum time periods set forth in this section shall be calculated from the date of publication of this notice.

(b) No decision on the proposed action shall be made or recorded under § 1505.2 by a Federal agency until the later of the following dates:

(1) Ninety (90) days after publication of the notice described above in paragraph (a) of this section for a draft environmental impact statement.

(2) Thirty (30) days after publication of the notice described above in paragraph (a) of this section for a final environmental impact statement.

An exception to the rules on timing may be made in the case of an agency decision which is subject to a formal internal appeal. Some agencies have a formally established appeal process which allows other agencies or the public to take appeals on a decision and make their views known, after publication of the final environmental impact statement. In such cases, where a real opportunity exists to alter the decision, the decision may be made and recorded at the same time the environmental impact statement is published. This means that the period for appeal of the decision and the 30-day period prescribed in paragraph (b)(2) of this section may run concurrently. In such cases the environmental impact statement shall explain the timing and the public's right of appeal. An agency engaged in rulemaking under the Administrative Procedure Act or other statute for the purpose of protecting the public health or safety, may waive the time period in paragraph (b)(2) of this section and publish a decision on the final rule simultaneously with publication of the notice of the availability of the final environmental impact statement as described in paragraph (a) of this section.

(c) If the final environmental impact statement is filed within ninety (90) days after a draft environmental impact statement is filed with the Environmental Protection Agency, the minimum thirty (30) day period and the minimum ninety (90) day period may run concurrently. However, subject to paragraph (d) of this section agencies shall allow not less than 45 days for comments on draft statements.

(d) The lead agency may extend prescribed periods. The Environmental Protection Agency may upon a showing by the lead agency of compelling reasons of national policy reduce the prescribed periods and may upon a showing by any other Federal agency of compelling reasons of national policy also extend prescribed periods, but only after consultation with the lead agency. (Also see § 1507.3(d).) Failure to file timely comments shall not be a sufficient reason for extending a period. If the lead agency does not concur with the extension of time, EPA may not extend it for more than 30 days. When the Environmental Protection Agency reduces or extends any period of time it shall notify the Council.

[43 FR 56000, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979]

§ 1506.11 Emergencies.

Where emergency circumstances make it necessary to take an action with significant environmental impact without observing the provisions of these regulations, the Federal agency taking the action should consult with the Council about alternative arrangements. Agencies and the Council will limit such arrangements to actions necessary to control the immediate impacts of the emergency. Other actions remain subject to NEPA review.

§ 1506.12 Effective date.

The effective date of these regulations is July 30, 1979, except that for agencies that administer programs that qualify under section 102(2)(D) of the Act or under sec. 104(h) of the Housing and Community Development Act of 1974 an additional four months shall be allowed for the State or local agencies to adopt their implementing procedures.

(a) These regulations shall apply to the fullest extent practicable to ongoing activities and environmental documents begun before the effective date. These regulations do not apply to an environmental impact statement or supplement if the draft statement was filed before the effective date of these

regulations. No completed environmental documents need be redone by reasons of these regulations. Until these regulations are applicable, the Council's guidelines published in the FEDERAL REGISTER of August 1, 1973, shall continue to be applicable. In cases where these regulations are applicable the guidelines are superseded. However, nothing shall prevent an agency from proceeding under these regulations at an earlier time.

(b) NEPA shall continue to be applicable to actions begun before January 1, 1970, to the fullest extent possible.

PART 1507—AGENCY COMPLIANCE

Sec.
1507.1 Compliance.
1507.2 Agency capability to comply.
1507.3 Agency procedures.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 56002, Nov. 29, 1978, unless otherwise noted.

§ 1507.1 Compliance.

All agencies of the Federal Government shall comply with these regulations. It is the intent of these regulations to allow each agency flexibility in adapting its implementing procedures authorized by § 1507.3 to the requirements of other applicable laws.

§ 1507.2 Agency capability to comply.

Each agency shall be capable (in terms of personnel and other resources) of complying with the requirements enumerated below. Such compliance may include use of other's resources, but the using agency shall itself have sufficient capability to evaluate what others do for it. Agencies shall:

(a) Fulfill the requirements of section 102(2)(A) of the Act to utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on the human environment. Agencies shall designate a person to be responsible for overall review of agency NEPA compliance.

(b) Identify methods and procedures required by section 102(2)(B) to insure that presently unquantified environmental amenities and values may be given appropriate consideration.

(c) Prepare adequate environmental impact statements pursuant to section 102(2)(C) and comment on statements in the areas where the agency has jurisdiction by law or special expertise or is authorized to develop and enforce environmental standards.

(d) Study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. This requirement of section 102(2)(E) extends to all such proposals, not just the more limited scope of section 102(2)(C)(iii) where the discussion of alternatives is confined to impact statements.

(e) Comply with the requirements of section 102(2)(H) that the agency initiate and utilize ecological information in the planning and development of resource-oriented projects.

(f) Fulfill the requirements of sections 102(2)(F), 102(2)(G), and 102(2)(I), of the Act and of Executive Order 11514, Protection and Enhancement of Environmental Quality, Sec. 2.

§ 1507.3 Agency procedures.

(a) Not later than eight months after publication of these regulations as finally adopted in the FEDERAL REGISTER, or five months after the establishment of an agency, whichever shall come later, each agency shall as necessary adopt procedures to supplement these regulations. When the agency is a department, major subunits are encouraged (with the consent of the department) to adopt their own procedures. Such procedures shall not paraphrase these regulations. They shall confine themselves to implementing procedures. Each agency shall consult with the Council while developing its procedures and before publishing them in the FEDERAL REGISTER for comment. Agencies with similar programs should consult with each other

and the Council to coordinate their procedures, especially for programs requesting similar information from applicants. The procedures shall be adopted only after an opportunity for public review and after review by the Council for conformity with the Act and these regulations. The Council shall complete its review within 30 days. Once in effect they shall be filed with the Council and made readily available to the public. Agencies are encouraged to publish explanatory guidance for these regulations and their own procedures. Agencies shall continue to review their policies and procedures and in consultation with the Council to revise them as necessary to ensure full compliance with the purposes and provisions of the Act.

(b) Agency procedures shall comply with these regulations except where compliance would be inconsistent with statutory requirements and shall include:

(1) Those procedures required by §§ 1501.2(d), 1502.9(c)(3), 1505.1, 1506.6(e), and 1508.4.

(2) Specific criteria for and identification of those typical classes of action:

(i) Which normally do require environmental impact statements.

(ii) Which normally do not require either an environmental impact statement or an environmental assessment (categorical exclusions (§ 1508.4)).

(iii) Which normally require environmental assessments but not necessarily environmental impact statements.

(c) Agency procedures may include specific criteria for providing limited exceptions to the provisions of these regulations for classified proposals. They are proposed actions which are specifically authorized under criteria established by an Executive Order or statute to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive Order or statute. Environmental assessments and environmental impact statements which address classified proposals may be safeguarded and restricted from public dissemination in accordance with agencies' own regulations applicable to classified information. These documents may be organized so that classified portions can be included as annexes, in order that the unclassified portions can be made available to the public.

(d) Agency procedures may provide for periods of time other than those presented in § 1506.10 when necessary to comply with other specific statutory requirements.

(e) Agency procedures may provide that where there is a lengthy period between the agency's decision to prepare an environmental impact statement and the time of actual preparation, the notice of intent required by § 1501.7 may be published at a reasonable time in advance of preparation of the draft statement.

PART 1508—TERMINOLOGY AND INDEX

Sec.

1508.1 Terminology.
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AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

SOURCE: 43 FR 56003, Nov. 29, 1978, unless otherwise noted.

§ 1508.1 Terminology.

The terminology of this part shall be uniform throughout the Federal Government.

§ 1508.2 Act.

"Act" means the National Environmental Policy Act, as amended (42 U.S.C. 4321, et seq.) which is also referred to as "NEPA."

§ 1508.3 Affecting.

"Affecting" means will or may have an effect on.

§ 1508.4 Categorical exclusion.

"Categorical exclusion" means a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in implementation of these regulations (§ 1507.3) and for which, therefore, neither an environmental assessment nor an environmental impact statement is required. An agency may decide in its procedures or otherwise, to prepare environmental assessments for the reasons stated in § 1508.9 even though it is not required to do so. Any procedures under this section shall provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect.

§ 1508.5 Cooperating agency.

"Cooperating agency" means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in § 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

§ 1508.6 Council.

"Council" means the Council on Environmental Quality established by Title II of the Act.

§ 1508.7 Cumulative impact.

"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

§ 1508.8 Effects.

"Effects" include:

(a) Direct effects, which are caused by the action and occur at the same time and place.

(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

§ 1508.9 Environmental assessment.

"Environmental assessment":

(a) Means a concise public document for which a Federal agency is responsible that serves to:

(1) Briefly provide sufficient evidence and analysis for determining

whether to prepare an environmental impact statement or a finding of no significant impact.

(2) Aid an agency's compliance with the Act when no environmental impact statement is necessary.

(3) Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

§ 1508.10 Environmental document.

"Environmental document" includes the documents specified in § 1508.9 (environmental assessment), § 1508.11 (environmental impact statement), § 1508.13 (finding of no significant impact), and § 1508.22 (notice of intent).

§ 1508.11 Environmental impact statement.

"Environmental impact statement" means a detailed written statement as required by section 102(2)(C) of the Act.

§ 1508.12 Federal agency.

"Federal agency" means all agencies of the Federal Government. It does not mean the Congress, the Judiciary, or the President, including the performance of staff functions for the President in his Executive Office. It also includes for purposes of these regulations States and units of general local government and Indian tribes assuming NEPA responsibilities under section 104(h) of the Housing and Community Development Act of 1974.

§ 1508.13 Finding of no significant impact.

"Finding of no significant impact" means a document by a Federal agency briefly presenting the reasons why an action, not otherwise excluded (§ 1508.4), will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. It shall include the environmental assessment or a summary of it and shall note any other environmental documents related to it (§ 1501.7(a)(5)). If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference.

§ 1508.14 Human environment.

"Human environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" (§ 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

§ 1508.15 Jurisdiction by law.

"Jurisdiction by law" means agency authority to approve, veto, or finance all or part of the proposal.

§ 1508.16 Lead agency.

"Lead agency" means the agency or agencies preparing or having taken primary responsibility for preparing the environmental impact statement.

§ 1508.17 Legislation.

"Legislation" includes a bill or legislative proposal to Congress developed by or with the significant cooperation and support of a Federal agency, but does not include requests for appropriations. The test for significant cooperation is whether the proposal is in fact predominantly that of the agency rather than another source. Drafting does not by itself constitute significant cooperation. Proposals for legislation include requests for ratification of treaties. Only the agency which has primary responsibility for the subject matter involved will prepare a legislative environmental impact statement.

§ 1508.18 Major Federal action.

"Major Federal action" includes actions with effects that may be major and which are potentially subject to

Federal control and responsibility. Major reinforces but does not have a meaning independent of significantly (§ 1508.27). Actions include the circumstance where the responsible officials fail to act and that failure to act is reviewable by courts or administrative tribunals under the Administrative Procedure Act or other applicable law as agency action.

(a) Actions include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals (§§ 1506.8, 1508.17). Actions do not include funding assistance solely in the form of general revenue sharing funds, distributed under the State and Local Fiscal Assistance Act of 1972, 31 U.S.C. 1221 et seq., with no Federal agency control over the subsequent use of such funds. Actions do not include bringing judicial or administrative civil or criminal enforcement actions.

(b) Federal actions tend to fall within one of the following categories:

(1) Adoption of official policy, such as rules, regulations, and interpretations adopted pursuant to the Administrative Procedure Act, 5 U.S.C. 551 et seq.; treaties and international conventions or agreements; formal documents establishing an agency's policies which will result in or substantially alter agency programs.

(2) Adoption of formal plans, such as official documents prepared or approved by federal agencies which guide or prescribe alternative uses of federal resources, upon which future agency actions will be based.

(3) Adoption of programs, such as a group of concerted actions to implement a specific policy or plan; systematic and connected agency decisions allocating agency resources to implement a specific statutory program or executive directive.

(4) Approval of specific projects, such as construction or management activities located in a defined geographic area. Projects include actions approved by permit or other regulatory decision as well as federal and federally assisted activities.

§ 1508.19 Matter.

"Matter" includes for purposes of Part 1504:

(a) With respect to the Environmental Protection Agency, any proposed legislation, project, action or regulation as those terms are used in section 309(a) of the Clean Air Act (42 U.S.C. 7609).

(b) With respect to all other agencies, any proposed major federal action to which section 102(2)(C) of NEPA applies.

§ 1508.20 Mitigation.

"Mitigation" includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

§ 1508.21 NEPA process.

"NEPA process" means all measures necessary for compliance with the requirements of section 2 and Title I of NEPA.

§ 1508.22 Notice of intent.

"Notice of intent" means a notice that an environmental impact statement will be prepared and considered. The notice shall briefly:

(a) Describe the proposed action and possible alternatives.

(b) Describe the agency's proposed scoping process including whether, when, and where any scoping meeting will be held.

(c) State the name and address of a person within the agency who can answer questions about the proposed action and the environmental impact statement.

§ 1508.23 **Proposal.**

"Proposal" exists at that stage in the development of an action when an agency subject to the Act has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated. Preparation of an environmental impact statement on a proposal should be timed (§ 1502.5) so that the final statement may be completed in time for the statement to be included in any recommendation or report on the proposal. A proposal may exist in fact as well as by agency declaration that one exists.

§ 1508.24 **Referring agency.**

"Referring agency" means the federal agency which has referred any matter to the Council after a determination that the matter is unsatisfactory from the standpoint of public health or welfare or environmental quality.

§ 1508.25 **Scope.**

Scope consists of the range of actions, alternatives, and impacts to be considered in an environmental impact statement. The scope of an individual statement may depend on its relationships to other statements (§§1502.20 and 1508.28). To determine the scope of environmental impact statements, agencies shall consider 3 types of actions, 3 types of alternatives, and 3 types of impacts. They include:

(a) Actions (other than unconnected single actions) which may be:

(1) Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

(2) Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.

(3) Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequencies together, such as common timing or geography. An agency may wish to analyze these actions in the same impact statement. It should do so when the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement.

(b) Alternatives, which include: (1) No action alternative.

(2) Other reasonable courses of actions.

(3) Mitigation measures (not in the proposed action).

(c) Impacts, which may be: (1) Direct; (2) indirect; (3) cumulative.

§ 1508.26 **Special expertise.**

"Special expertise" means statutory responsibility, agency mission, or related program experience.

§ 1508.27 **Significantly.**

"Significantly" as used in NEPA requires considerations of both context and intensity:

(a) *Context.* This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) *Intensity.* This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency

believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

[43 FR 56003, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979]

§ 1508.28 Tiering.

"Tiering" refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. Tiering is appropriate when the sequence of statements or analyses is:

(a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis.

(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.

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THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, AS AMENDED*

An Act to establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Environmental Policy Act of 1969."

PURPOSE

SEC. 2. The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

TITLE I

DECLARATION OF NATIONAL ENVIRONMENTAL POLICY

SEC. 101. (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

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*Pub. L. 91–190, 42 U.S.C. 4321–4347, January 1, 1970, as amended by Pub. L. 94–52, July 3, 1975, and Pub. L. 94–83, August 9, 1975.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

SEC. 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall—

(A) Utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) Identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) Include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) The environmental impact of the proposed action,

(ii) Any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) Alternatives to the proposed action,

(iv) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (c) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this Act; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) Recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) Make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) Initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) Assist the Council on Environmental Quality established by title II of this Act.

SEC. 103. All agencies of the Federal Government shall review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of this Act and shall propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this Act.

SEC. 104. Nothing in section 102 or 103 shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency.

SEC. 105. The policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies.

TITLE II

COUNCIL ON ENVIRONMENTAL QUALITY

SEC. 201. The President shall transmit to the Congress annually beginning July 1, 1970, an Environmental Quality Report (hereinafter referred to as the "report") which shall set forth (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the aquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including, but not limited to, the forest, dryland, wetland, range, urban, suburban and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nation in the light of expected population pressures; (4) a review of the programs and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.

SEC. 202. There is created in the Executive Office of the President a Council on Environmental Quality (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President to serve at his pleasure, by and with the advice and consent of the Senate. The President shall designate one of the members of the Council to serve as Chairman. Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to appraise programs and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to

the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

SEC. 203. The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

SEC. 204. It shall be the duty and function of the Council—

(1) to assist and advise the President in the preparation of the Environmental Quality Report required by section 201 of this title;

(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of this Act, and to compile and submit to the President studies relating to such conditions and trends;

(3) to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;

(4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation;

(5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;

(6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;

(7) to report at least once each year to the President on the state and condition of the environment; and

(8) to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

SEC. 205. In exercising its powers, functions, and duties under this Act, the Council shall—

(1) Consult with the Citizens' Advisory Committee on Environmental Quality established by Executive Order No. 11472, dated May 29, 1969, and with such representatives of science, industry, agriculture, labor, conservation organizations, State and local governments and other groups, as it deems advisable; and

(2) Utilize, to the fullest extent possible, the services, facilities and information (including statistical information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided, thus assuring that the Council's activities will not unnecessarily overlap or conflict with similar activities authorized by law and performed by established agencies.

SEC. 206. Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for Level II of the Executive Schedule Pay Rates (5 U.S.C. 5313). The other members of the Council shall be compensated at the rate provided for Level IV of the Executive Schedule Pay Rates (5 U.S.C. 5315).

SEC. 207. The Council may accept reimbursements from any private nonprofit organization or from any department, agency, or instrumentality of the Federal Government, any State, or local government, for the reasonable travel expenses incurred by an officer or employee of the Council in connection with his attendance at any conference, seminar, or similar meeting conducted for the benefit of the Council.

SEC. 208. The Council may make expenditures in support of its international activities, including expenditures for: (1) international travel; (2) activities in implementation of international agreements; and (3) the sup-

port of international exchange programs in the United States and in foreign countries.

SEC. 209. There are authorized to be appropriated to carry out the provisions of this chapter not to exceed $300,000 for fiscal year 1970, $700,000 for fiscal year 1971, and $1,000,000 for each fiscal year thereafter.

THE ENVIRONMENTAL QUALITY IMPROVEMENT ACT OF 1970*

TITLE II—ENVIRONMENTAL QUALITY (OF THE WATER QUALITY IMPROVEMENT ACT OF 1974)

SHORT TITLE

SEC. 201. This title may be cited as the "Environmental Quality Improvement Act of 1970."

FINDINGS, DECLARATIONS, AND PURPOSES

SEC. 202. (a) The Congress finds—

(1) That man has caused changes in the environment;

(2) That many of these changes may affect the relationship between man and his environment; and

(3) That population increases and urban concentration contribute directly to pollution and the degradation of our environment.

(b)(1) The Congress declares that there is a national policy for the environment which provides for the enhancement of environmental quality. This policy is evidenced by statutes heretofore enacted relating to the prevention, abatement, and control of environmental pollution, water and land resources, transportation, and economic and regional development.

(2) The primary responsibility for implementing this policy rests with State and local governments.

(3) The Federal Government encourages and supports implementation of this policy through appropriate regional organizations established under existing law.

(c) The purposes of this title are—

(1) To assure that each Federal department and agency conducting or supporting public works activities which affect the environment shall implement the policies established under existing law; and

(2) To authorize an Office of Environmental Quality, which, notwithstanding any other provision of law, shall provide the professional and administrative staff for the Council on Environmental Quality established by Public Law 91–190.

OFFICE OF ENVIRONMENTAL QUALITY

SEC. 203. (a) There is established in the Executive Office of the President an office to be known as the Office of Environmental Quality (hereafter in this title referred to as the "Office"). The Chairman of the Council on Environmental Quality established by Public Law 91–190 shall be the Director of the Office. There shall be in the Office a Deputy Director who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) The compensation of the Deputy Director shall be fixed by the President at a rate not in excess of the annual rate of compensation payable to the Deputy Director of the Bureau of the Budget.

(c) The Director is authorized to employ such officers and employees (including experts and consultants) as may be necessary to enable the Office to carry out its functions under this title and Public Law 91–190, except that he may employ no more than 10 specialists and other experts without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and pay such specialists and experts without regard to the provisions of chapter 51 and subchapter 111 of chapter 53 of such title relating to classification and General Schedule pay rates, but no such specialist or

*Pub. L. 91–224, 42 U.S.C. 4371–4374, April 3, 1970.

expert shall be paid at a rate in excess of the maximum rate for GS–18 of the General Schedule under section 5330 of title 5.

(d) In carrying out his functions the Director shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality by—

(1) Providing the professional and administrative staff and support for the Council on Environmental Quality established by Public Law 91–190;

(2) Assisting the Federal agencies and departments in appraising the effectiveness of existing and proposed facilities, programs, policies, and activities of the Federal Government, and those specific major projects designated by the President which do not require individual project authorization by Congress, which affect environmental quality;

(3) Reviewing the adequacy of existing systems for monitoring and predicting environmental changes in order to achieve effective coverage and efficient use of research facilities and other resources;

(4) Promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encourage the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man;

(5) Assisting in coordinating among the Federal departments and agencies those programs and activities which affect, protect, and improve environmental quality;

(6) Assisting the Federal departments and agencies in the development and interrelationship of environmental quality criteria and standards established through the Federal Government;

(7) Collecting, collating, analyzing, and interpreting data and information on environmental quality, ecological research, and evaluation.

(e) The Director is authorized to contract with public or private agencies, institutions, and organizations and with individuals without regard to sections 3618 and 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5) in carrying out his functions.

REPORT

SEC. 204. Each Environmental Quality Report required by Public Law 91–190 shall, upon transmittal to Congress, be referred to each standing committee having jurisdiction over any part of the subject matter of the Report.

AUTHORIZATION

SEC. 205. There are hereby authorized to be appropriated not to exceed $500,000 for the fiscal year ending June 30, 1970, not to exceed $750,000 for the fiscal year ending June 30, 1971, not to exceed $1,250,000 for the fiscal year ending June 30, 1972, and not to exceed $1,500,000 for the fiscal year ending June 30, 1973. These authorizations are in addition to those contained in Public Law 91–190.

Approved April 3, 1970.

THE CLEAN AIR ACT § 309*

§ 7609. Policy review

(a) The Administrator shall review and comment in writing on the environmental impact of any matter relating to duties and responsibilities granted pursuant to this chapter or other provisions of the authority of the Administrator, contained in any (1) legislation proposed by any Federal department or agency, (2) newly authorized Federal projects for construction and any major Federal agency action (other than a project for construction) to which section 4332(2)(C) of this title applies, and (3) proposed regulations published by any department or agency of the Federal Government. Such written comment shall be made public at the conclusion of any such review.

(b) In the event the Administrator determines that any such legislation, action, or regulation is unsatisfactory from the standpoint of public health or welfare or environmental quality, he shall publish his determination and the matter shall be referred to the Council on Environmental Quality.

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*July 14, 1955, c. 360, § 309, as added Dec. 31, 1970, Pub. L. 91-604 § 12(a), 42 U.S.C. § 7609 (1970).

Executive Order 11514. March 5, 1970

PROTECTION AND ENHANCEMENT OF ENVIRONMENTAL QUALITY

As amended by Executive Order 11991. (Secs. 2(g) and (3(h)). May 24, 1977*

By virtue of the authority vested in me as President of the United States and in furtherance of the purpose and policy of the National Environmental Policy Act of 1969 (Public Law No. 91-190, approved January 1, 1970), it is ordered as follows:

Section 1. *Policy.* The Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Federal agencies shall initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals. The Council on Environmental Quality, through the Chairman, shall advise and assist the President in leading this national effort.

Sec. 2. *Responsibilities of Federal agencies.* Consonant with Title I of the National Environmental Policy Act of 1969, hereafter referred to as the "Act", the heads of Federal agencies shall:

(a) Monitor, evaluate, and control on a continuing basis their agencies' activities so as to protect and enhance the quality of the environment. Such activities shall include those directed to controlling pollution and enhancing the environment and those designed to accomplish other program objectives which may affect the quality of the environment. Agencies shall develop programs and measures to protect and enhance environmental quality and shall assess progress in meeting the specific objectives of such activities. Heads of agencies shall consult with appropriate Federal, State and local agencies in carrying out their activities as they affect the quality of the environment.

(b) Develop procedures to ensure the fullest practicable provision of timely public information and understanding of Federal plans and programs with environmental impact in order to obtain the views of interested parties. These procedures shall include, whenever appropriate, provision for public hearings, and shall provide the public with relevant information, including information on alternative courses of action. Federal agencies shall also encourage State and local agencies to adopt similar procedures for informing the public concerning their activities affecting the quality of the environment.

(c) Insure that information regarding existing or potential environmental problems and control methods developed as part of research, development, demonstration, test, or evaluation activities is made available to Federal agencies, States, counties, municipalities, institutions, and other entities, as appropriate.

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*The Preamble to Executive Order 11991 is as follows:

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the purpose and policy of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), the Environmental Quality Improvement Act of 1970 (42 U.S.C. 4371 *et seq.*), and Section 309 of the Clean Air Act, as amended (42 U.S.C. 1857h-7), it is hereby ordered as follows:

(d) Review their agencies' statutory authority, administrative regulations, policies, and procedures, including those relating to loans, grants, contracts, leases, licenses, or permits, in order to identify any deficiencies or inconsistencies therein which prohibit or limit full compliance with the purposes and provisions of the Act. A report on this review and the corrective actions taken or planned, including such measures to be proposed to the President as may be necessary to bring their authority and policies into conformance with the intent, purposes, and procedures of the Act, shall be provided to the Council on Environmental Quality not later than September 1, 1970.

(e) Engage in exchange of data and research results, and cooperate with agencies of other governments to foster the purposes of the Act.

(f) Proceed, in coordination with other agencies, with actions required by section 102 of the Act.

(g) In carrying out their responsibilites under the Act and this Order, comply with the regulations issued by the Council except where such compliance would be inconsistent with statutory requirements.

Sec. 3. *Responsibilities of Council on Environmental Quality.* The Council on Environmental Quality shall:

(a) Evaluate existing and proposed policies and activities of the Federal Government directed to the control of pollution and the enhancement of the environment and to the accomplishment of other objectives which affect the quality of the environment. This shall include continuing review of procedures employed in the development and enforcement of Federal standards affecting environmental quality. Based upon such evaluations the Council shall, where appropriate, recommend to the President policies and programs to achieve more effective protection and enhancement of environmental quality and shall, where appropriate, seek resolution of significant environmental issues.

(b) Recommend to the President and to the agencies priorities among programs designed for the control of pollution and for enhancement of the environment.

(c) Determine the need [illegible] policies and programs for dealing with environmental problems not being adequately addressed.

(d) Conduct, as it determines to be appropriate, public hearings or conferences on issues of environmental significance.

(e) Promote the development and use of indices and monitoring systems (1) to assess environmental conditions and trends, (2) to predict the environmental impact of proposed public and private actions, and (3) to determine the effectiveness of programs for protecting and enhancing environmental quality.

(f) Coordinate Federal programs related to environmental quality.

(g) Advise and assist the President and the agencies in achieving international cooperation for dealing with environmental problems, under the foreign policy guidance of the Secretary of State.

(h) Issue regulations to Federal agencies for the implementation of the procedural provisions of the Act (42 U.S.C. 4332(2)). Such regulations shall be developed after consultation with affected agencies and after such public hearings as may be appropriate. They will be designed to make the environmental impact statement process more useful to decisionmakers and the public; and to reduce paperwork and the accumulation of extraneous background data, in order to emphasize the need to focus on real environmental issues and alternatives. They will require impact statements to be concise, clear, and to the point, and supported by evidence that agencies have made the necessary environmental analyses. The Council shall include in its regulations procedures (1) for the early preparation of environmental impact statements, and (2) for the referral to the Council of conflicts between agencies concerning the implementation of the National Environmental Policy Act of 1969, as amended, and

Section 309 of the Clean Air Act, as amended, for the Council's recommendation as to their prompt resolution.

(i) Issue such other instructions to agencies, and request such reports and other information from them, as may be required to carry out the Council's responsibilities under the Act.

(j) Assist the President in preparing the annual Environmental Quality Report provided for in section 201 of the Act.

(k) Foster investigations, studies, surveys, research, and analyses relating to (i) ecological systems and environmental quality, (ii) the impact of new and changing technologies thereon, and (iii) means of preventing or reducing adverse effects from such technologies.

Sec. 4. *Amendments of E.O. 11472.* Executive Order No. 11472 of May 29, 1969, including the heading thereof, is hereby amended:

(1) By substituting for the term "the Environmental Quality Council", wherever it occurs, the following: "the Cabinet Committee on the Environment".

(2) By substituting for the term "the Council", wherever it occurs, the following: "the Cabinet Committee".

(3) By inserting in subsection (f) of section 101, after "Budget,", the following: "the Director of the Office of Science and Technology,".

(4) By substituting for subsection (g) of section 101 the following:

"(g) The Chairman of the Council on Environmental Quality (established by Public Law 91-190) shall assist the President in directing the affairs of the Cabinet Committee."

(5) by deleting subsection (c) of section 102.

(6) By substituting for "the Office of Science and Technology", in section 104, the following: "the Council on Environmental Quality (established by Public Law 91-190)".

(7) By substituting for "(hereinafter referred to as the 'Committee')", in section 201, the following: "(hereinafter referred to as the 'Citizens' Committee')".

(8) By substituting for the term "the Committee", wherever it occurs, the following: "the Citizens' Committee".

Executive Order 11988—Floodplain management

SOURCE: The provisions of Executive Order 11988 of May 24, 1977, appear at 42 FR 26951, 3 CFR, 1977 Comp., p. 117, unless otherwise noted.

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 *et seq.*), and the Flood Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

SECTION 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands, and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

SEC. 2. In carrying out the activities described in Section 1 of this Order, each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of this Order, as follows:

(a) (1) Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain—for major Federal actions significantly affecting the quality of the human environment, the evaluation required below will be included in any statement prepared under Section 102(2) (C) of the National Environmental Policy Act. This Determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information. The Water Resources Council shall issue guidance on this information not later than October 1, 1977.

(2) If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible develop-

ment in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy set forth in this Order requires siting in a floodplain, the agency shall, prior to taking action, (i) design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accord with Section 2(d) of this Order, and (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.

(3) For programs subject to the Office of Management and Budget Circular A–95, the agency shall send the notice, not to exceed three pages in length including a location map, to the state and areawide A-95 clearinghouses for the geographic areas affected. The notice shall include: (i) the reasons why the action is proposed to be located in a floodplain; (ii) a statement indicating whether the action conforms to applicable state or local floodplain protection standards and (iii) a list of the alternatives considered. Agencies shall endeavor to allow a brief comment period prior to taking any action.

(4) each agency shall also provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

(b) Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in a floodplain, whether the proposed action is in accord with this Order.

(c) Each agency shall take floodplain management into account when formulating or evaluating any water and land use plans and shall require land and water resources use appropriate to the degree of hazard involved. Agencies shall include adequate provision for the evaluation and consideration of flood hazards in the regulations and operating procedures for the licenses, permits, loan or grants-in-aid programs that they administer. Agencies shall also encourage and provide appropriate guidance to applicants to evaluate the effects of their proposals in floodplains prior to submitting applications for Federal licenses, permits, loans or grants.

(d) As allowed by law, each agency shall issue or amend existing regulations and procedures within one year to comply with this Order. These procedures shall incorporate the Unified National Program for Floodplain Management of the Water Resources Council,[1] and shall explain the means that the agency will employ to pursue the nonhazardous use of riverine, coastal and other floodplains in connection with the activities under its authority. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order. Agencies shall prepare their procedures in consultation with the Water Resources Council, the Director of the Federal Emergency

[1] EDITORIAL NOTE: Inactive as of Oct. 1, 1982.

Management Agency, and the Council on Environmental Quality, and shall update such procedures as necessary.

[Sec. 2 amended by EO 12148 of July 20, 1979, 44 FR 43239, 3 CFR, 1979 Comp., p. 412]

SEC. 3. In addition to the requirements of Section 2, agencies with responsibilities for Federal real property and facilities shall take the following measures:

(a) The regulations and procedures established under Section 2(d) of this Order shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the standards and criteria and to be consistent with the intent of those promulgated under the National Flood Insurance Program. They shall deviate only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for a given type of structure or facility.

(b) If, after compliance with the requirements of this Order, new construction of structures or facilities are to be located in a floodplain, accepted floodproofing and other flood protection measures shall be applied to new construction or rehabilitation. To achieve flood protection, agencies shall, wherever practicable, elevate structures above the base flood level rather than filling in land.

(c) If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible agency shall provide on structures, and other places where appropriate, conspicuous delineation of past and probable flood height in order to enhance public awareness of and knowledge about flood hazards.

(d) When property in flooodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.

SEC. 4. In addition to any responsibilities under this Order and Sections 202 and 205 of the Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4106 and 4128), agencies which guarantee, approve, regulate, or insure any financial transaction which is related to an area located in a floodplain shall, prior to completing action on such transaction, inform any private parties participating in the transaction of the hazards of locating structures in the floodplain.

SEC. 5. The head of each agency shall submit a report to the Council on Environmental Quality and to the Water Resources Council on June 30, 1978, regarding the status of their procedures and the impact of this Order on the agency's operations. Thereafter, the Water Resources Council shall periodically evaluate agency procedures and their effectiveness.

SEC. 6. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting floodplains.

(b) The term "base flood" shall mean that flood which has a one percent or greater chance of occurrence in any given year.

(c) The term "floodplain" shall mean the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

SEC. 7. Executive Order No. 11296 of August 10, 1966, is hereby revoked. All actions, procedures, and issuances taken under that Order and still in effect shall remain in effect until modified by appropriate authority under the terms of this Order.

SEC. 8. Nothing in this Order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

SEC. 9. To the extent the provisions of section 2(a) of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.

Executive Order 11990—Protection of wetlands

SOURCE: The provisions of Executive Order 11990 of May 24, 1977, appear at 42 FR 26961, 3 CFR, 1977 Comp., p. 121, unless otherwise noted.

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), in order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

SECTION 1. (a) Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

(b) This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property.

SEC. 2. (a) In furtherance of Section 101(b)(3) of the National Environmental Policy Act of 1969 (42 U.S.C. 4331(b)(3)) to improve and coordinate Federal plans, functions, programs and resources to the end that the Nation may attain the widest range of beneficial uses of the environment without degradation and risk to health or safety, each

agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

(b) Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

SEC. 3. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in wetlands, whether the proposed action is in accord with this Order.

SEC. 4. When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

SEC. 5. In carrying out the activities described in Section 1 of this Order, each agency shall consider factors relevant to a proposal's effect on the survival and quality of the wetlands. Among these factors are:

(a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion;

(b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and

(c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

SEC. 6. As allowed by law, agencies shall issue or amend their existing procedures in order to comply with this Order. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council,[1] shall be utilized to fulfill the requirements of this Order.

SEC. 7. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which per-

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[1] EDITORIAL NOTE: Inactive as of Oct. 1, 1982.

form the activities described in Section 1 which are located in or affecting wetlands.

(b) The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order.

(c) The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

SEC. 8. This Order does not apply to projects presently under construction or to projects for which all of the funds have been appropriated through Fiscal Year 1977, or to projects and programs for which a draft or final environmental impact statement will be filed prior to October 1, 1977. The provisions of Section 2 of this Order shall be implemented by each agency not later than October 1, 1977.

SEC. 9. Nothing in this Order shall apply to assistance provided for emergency work, essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

SEC. 10. To the extent the provisions of Sections 2 and 5 of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.

[under review by interagency task force as of September 1994]

Codification of Presidential Proclamations and Executive Orders

Executive Order 12114—Environmental effects abroad of major Federal actions

SOURCE: The provisions of Executive Order 12114 of Jan. 4, 1979, appear at 44 FR 1957, 3 CFR, 1979 Comp., p. 356, unless otherwise noted.

By virtue of the authority vested in me by the Constitution and the laws of the United states, and as President of the United States, in order to further environmental objectives consistent with the foreign policy and national security policy of the United States, it is ordered as follows:

SECTION 1

1-1. *Purpose and Scope.* The purpose of this Executive Order is to enable responsible officials of Federal agencies having ultimate responsibility for authorizing and approving actions encompassed by this

Order to be informed of pertinent environmental considerations and to take such considerations into account, with other pertinent considerations of national policy, in making decisions regarding such actions. While based on independent authority, this Order furthers the purpose of the National Environmental Policy Act and the Marine Protection Research and Sanctuaries Act and the Deepwater Port Act consistent with the foreign policy and national security policy of the United States, and represents the United States government's exclusive and complete determination of the procedural and other actions to be taken by Federal agencies to further the purpose of the National Environmental Policy Act, with respect to the environment outside the United States, its territories and possessions.

SECTION 2

2–1. *Agency Procedures.* Every Federal agency taking major Federal actions encompassed hereby and not exempted herefrom having significant effects on the environment outside the geographical borders of the United States and its territories and possessions shall within eight months after the effective date of this Order have in effect procedures to implement this Order. Agencies shall consult with the Department of State and the Council on Environmental Quality concerning such procedures prior to placing them in effect.

2–2. *Information Exchange.* To assist in effectuating the foregoing purpose, the Department of State and the Council on Environmental Quality in collaboration with other interested Federal agencies and other nations shall conduct a program for exchange on a continuing basis of information concerning the environment. The objectives of this program shall be to provide information for use by decisionmakers, to heighten awareness of and interest in environmental concerns and, as appropriate, to facilitate environmental cooperation with foreign nations.

2–3. *Actions Included.* Agencies in their procedures under Section 2–1 shall establish procedures by which their officers having ultimate responsibility for authority and approving actions in one of the following categories encompassed by this Order, take into consideration in making decisions concerning such actions, a document described in Section 2–4(a):

(a) major Federal actions significantly affecting the environment of the global commons outside the jurisdiction of any nation (e.g., the oceans or Antarctica);

(b) major Federal actions significantly affecting the environment of a foreign nation not participating with the United States and not otherwise involved in the action;

(c) major Federal actions significantly affecting the environment of a foreign nation which provide to that nation:

(1) a product, or physical project producing a principal product or an emission or effluent, which is prohibited or strictly regulated by Federal law in the United States because its toxic effects on the environment create a serious public health risk; or

(2) a physical project which in the United States is prohibited or strictly regulated by Federal law to protect the environment against radioactive substances.

(d) major Federal actions outside the United States, its territories and possessions which significantly affect natural or ecological resources of global importance designated for protection under this subsection by the President, or, in the case of such a resource protected by international agreement binding on the United States, by the Secretary of State. Recommendations to the President under this subsection shall be accompanied by the views of the Council on Environmental Quality and the Secretary of State.

2–4. *Applicable Procedures.* (a) There are the following types of documents to be used in connection with actions described in Section 2–3:

(i) environmental impact statements (including generic, program and specific statements);

(ii) bilateral or multilateral environmental studies, relevant or related to the proposed action, by the United States and one or more foreign nations, or by an international body or organization in which the United States is a member or participant; or

(iii) concise reviews of the environmental issues involved, including environmental assessments, summary environmental analyses or other appropriate documents.

(b) Agencies shall in their procedures provide for preparation of documents described in Section 2–4(a), with respect to actions described in Section 2–3, as follows:

(i) for effects described in Section 2–3(a), an environmental impact statement described in Section 2–4(a)(i);

(ii) for effects described in Section 2–3(b), a document described in Section 2–4(a)(ii) or (iii), as determined by the agency;

(iii) for effects described in Section 2–3(c), a document described in Section 2–4(a)(ii) or (iii), as determined by the agency;

(iv) for effects described in Section 2–3(d), a document described in Section 2–4(a)(i), (ii) or (iii), as determined by the agency.

Such procedures may provide that an agency need not prepare a new document when a document described in Section 2–4(a) already exists.

(c) Nothing in this Order shall serve to invalidate any existing regulations of any agency which have been adopted pursuant to court order or pursuant to judicial settlement of any case or to prevent any agency from providing in its procedures for measures in addition to those provided for herein to further the purpose of the National Environmental Policy Act and other environmental laws, including the Marine Protection Research and Sanctuaries Act and the Deepwater Port Act, consistent with the foreign and national security policies of the United States.

(d) Except as provided in Section 2–5(b), agencies taking action encompassed by this Order shall, as soon as feasible, inform other Federal agencies with relevant expertise of the availability of environmental documents prepared under this Order.

Agencies in their procedures under Section 2–1 shall make appropriate provision for determining when an affected nation shall be informed in accordance with Section 3–2 of this Order of the availability of environmental documents prepared pursuant to those procedures.

In order to avoid duplication of resources, agencies in their procedures shall provide for appropriate utilization of the resources of other Federal agencies with relevant environmental jurisdiction or expertise.

2–5. *Exemptions and Considerations.* (a) Notwithstanding Section 2–3, the following actions are exempt from this Order:

(i) actions not having a significant effect on the environment outside the United States as determined by the agency;

(ii) actions taken by the President;

(iii) actions taken by or pursuant to the direction of the President or Cabinet officer when the national security or interest is involved or when the action occurs in the course of an armed conflict;

(iv) intelligence activities and arms transfers;

(v) export licenses or permits or export approvals, and actions relating to nuclear activities except actions providing to a foreign nation a nuclear production or utilization facility as defined in the Atomic Energy Act of 1954, as amended, or a nuclear waste management facility;

(vi) votes and other actions in international conferences and organizations;

(vii) disaster and emergency relief action.

(b) Agency procedures under Section 2–1 implementing Section 2–4 may provide for appropriate modifications in the contents, timing and availability of documents to other affected Federal agencies and affected nations, where necessary to:

(i) enable the agency to decide and act promptly as and when required;

(ii) avoid adverse impacts on foreign relations or infringement in fact or appearance of other nations' sovereign responsibilities, or

(iii) ensure appropriate reflection of:

(1) diplomatic factors;

(2) international commercial, competitive and export promotion factors;

(3) needs for governmental or commercial confidentiality;

(4) national security considerations;

(5) difficulties of obtaining information and agency ability to analyze meaningfully environmental effects of a proposed action; and

(6) the degree to which the agency is involved in or able to affect a decision to be made.

(c) Agency procedure under Section 2–1 may provide for categorical exclusions and for such exemptions in addition to those specified in subsection (a) of this Section as may be necessary to meet emergency circumstances, situations involving exceptional foreign policy and national security sensitivities and other such special circumstances. In utilizing such additional exemptions agencies shall, as soon as feasible, consult with the Department of State and the Council on Environmental Quality.

(d) The provisions of Section 2–5 do not apply to actions described in Section 2–3(a) unless permitted by law.

SECTION 3

3–1. *Rights of Action.* This Order is solely for the purpose of establishing internal procedures for Federal agencies to consider the significant effects of their actions on the environment outside the United States, its territories and possessions, and nothing in this Order shall be construed to create a cause of action.

3–2. *Foreign Relations.* The Department of State shall coordinate all communications by agencies with foreign governments concerning environmental agreements and other arrangements in implementation of this Order.

3–3. *Multi-Agency Actions.* Where more than one Federal agency is involved in an action or program, a lead agency, as determined by the agencies involved, shall have responsibility for implementation of this Order.

3–4. *Certain Terms.* For purposes of this Order, "environment" means the natural and physical environment and excludes social, economic and other environments; and an action significantly affects the environment if it does significant harm to the environment even though on balance the agency believes the action to be beneficial to the environment. The term "export approvals" in Section 2–5(a)(v) does not mean or include direct loans to finance exports.

3–5. *Multiple Impacts.* If a major Federal action having effects on the environment of the United States or the global commons requires preparation of an environmental impact statement, and if the action also has effects on the environment of a foreign nation, an environmental impact statement need not be prepared with respect to the effects on the environment of the foreign nation.

Executive Order 12088—Federal compliance with pollution control standards

SOURCE: The provisions of Executive Order 12088 of Oct. 13, 1978, appear at 43 FR 47707, 3 CFR, 1978 Comp., p. 243, unless otherwise noted.

By the authority vested in me as President by the Constitution and statutes of the United States of America, including Section 22 of the Toxic Substances Control Act (15 U.S.C. 2621), Section 313 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1323), Section 1447 of the Public Health Service Act, as amended by the Safe Drinking Water Act (42 U.S.C. 300j-6), Section 118 of the Clean Air Act, as amended (42 U.S.C. 7418(b)), Section 4 of the Noise Control Act of 1972 (42 U.S.C. 4903), Section 6001 of the Solid Waste Disposal Act, as amended (42 U.S.C. 6961), and Section 301 of Title 3 of the United States Code, and to ensure Federal compliance with applicable pollution control standards, it is hereby ordered as follows:

1-1. *Applicability of Pollution Control Standards.*

1-101. The head of each Executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under the control of the agency.

1-102. The head of each Executive agency is responsible for compliance with applicable pollution control standards, including those established pursuant to, but not limited to, the following:

(a) Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

(b) Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*).

(c) Public Health Service Act, as amended by the Safe Drinking Water Act (42 U.S.C. 300f *et seq.*).

(d) Clean Air Act, as amended (42 U.S.C. 7401 *et seq.*).

(e) Noise Control Act of 1972 (42 U.S.C. 4901 *et seq.*).

(f) Solid Waste Disposal Act, as amended (42 U.S.C. 6901 *et seq.*).

(g) Radiation guidance pursuant to Section 274(h) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021(h); see also, the Radiation Protection Guidance to Federal Agencies for Diagnostic X Rays approved by the President on January 26, 1978 and published at page 4377 of the FEDERAL REGISTER on February 1, 1978).

(h) Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 U.S.C. 1401, 1402, 1411-1421, 1441-1444 and 16 U.S.C. 1431-1434).

(i) Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 *et seq.*).

1-103. "Applicable pollution control standards" means the same substantive, procedural, and other requirements that would apply to a private person.

1-2. *Agency Coordination.*

1-201. Each Executive agency shall cooperate with the Administrator of the Environmental Protection Agency, hereinafter referred to as

the Administrator, and State, interstate, and local agencies in the prevention, control, and abatement of environmental pollution.

1–202. Each Executive agency shall consult with the Administrator and with State, interstate, and local agencies concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution.

1–3. *Technical Advice and Oversight.*

1–301. The Administrator shall provide technical advice and assistance to Executive agencies in order to ensure their cost effective and timely compliance with applicable pollution control standards.

1–302. The Administrator shall conduct such reviews and inspections as may be necessary to monitor compliance with applicable pollution control standards by Federal facilities and activities.

1–4. *Pollution Control Plan.*

1–401. Each Executive agency shall submit to the Director of the Office of Management and Budget, through the Administrator, an annual plan for the control of environmental pollution. The plan shall provide for any necessary improvement in the design, construction, management, operation, and maintenance of Federal facilities and activities, and shall include annual cost estimates. The Administrator shall establish guidelines for developing such plans.

1–402. In preparing its plan, each Executive agency shall ensure that the plan provides for compliance with all applicable pollution control standards.

1–403. The plan shall be submitted in accordance with any other instructions that the Director of the Office of Management and Budget may issue.

1–5. *Funding.*

1–501. The head of each Executive agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget.

1–502. The head of each Executive agency shall ensure that funds appropriated and apportioned for the prevention, control and abatement of environmental pollution are not used for any other purpose unless permitted by law and specifically approved by the Office of Management and Budget.

1–6. *Compliance With Pollution Controls.*

1–601. Whenever the Administrator or the appropriate State, interstate, or local agency notifies an Executive agency that it is in violation of an applicable pollution control standard (see Section 1–102 of this Order), the Executive agency shall promptly consult with the notifying agency and provide for its approval a plan to achieve and maintain compliance with the applicable pollution control standard. This plan shall include an implementation schedule for coming into compliance as soon as practicable.

1–602. The Administrator shall make every effort to resolve conflicts regarding such violation between Executive agencies and, on request of any party, such conflicts between an Executive agency and a State, interstate, or a local agency. If the Administrator cannot resolve a conflict, the Administrator shall request the Director of the Office of Management and Budget to resolve the conflict.

1-603. The Director of the Office of Management and Budget shall consider unresolved conflicts at the request of the Administrator. The Director shall seek the Administrator's technological judgment and determination with regard to the applicability of statutes and regulations.

1-604. These conflict resolution procedures are in addition to, not in lieu of, other procedures, including sanctions, for the enforcement of applicable pollution control standards.

1-605. Except as expressly provided by a Presidential exemption under this Order, nothing in this Order, nor any action or inaction under this Order, shall be construed to revise or modify any applicable pollution control standard.

1-7. *Limitation on Exemptions.*

1-701. Exemptions from applicable pollution control standards may only be granted under statutes cited in Section 1-102(a) through 1-102(f) if the President makes the required appropriate statutory determination: that such exemption is necessary (a) in the interest of national security, or (b) in the paramount interest of the United States.

1-702. The head of an Executive agency may, from time to time, recommend to the President through the Director of the Office of Management and Budget, that an activity or facility, or uses thereof, be exempt from an applicable pollution control standard.

1-703. The Administrator shall advise the President, through the Director of the Office of Management and Budget, whether he agrees or disagrees with a recommendation for exemption and his reasons therefor.

1-704. The Director of the Office of Management and Budget must advise the President within sixty days of receipt of the Administrator's views.

1-8. *General Provisions.*

1-801. The head of each Executive agency that is responsible for the construction or operation of Federal facilities outside the United States shall ensure that such construction or operation complies with the environmental pollution control standards of general applicability in the host country or jurisdiction.

1-802. Executive Order No. 11752 of December 17, 1973, is revoked.

THE WHITE HOUSE

WASHINGTON

February 11, 1994

MEMORANDUM FOR THE HEADS OF ALL DEPARTMENTS AND AGENCIES

SUBJECT: Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Today I have issued an Executive order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. That order is designed to focus Federal attention on the environmental and human health conditions in minority communities and low-income communities with the goal of achieving environmental justice. That order is also intended to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority communities and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.

The purpose of this separate memorandum is to underscore certain provision of existing law that can help ensure that all communities and persons across this Nation live in a safe and healthful environment. Environmental and civil rights statutes provide many opportunities to address environmental hazards in minority communities and low-income communities. Application of these existing statutory provisions is an important part of this Administration's efforts to prevent those minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.

I am therefore today directing that all department and agency heads take appropriate and necessary steps to ensure that the following specific directives are implemented immediately:

In accordance with Title VI of the Civil Rights Act of 1964, each Federal agency shall ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

Each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. section 4321 et seq. Mitigation measures outlined or analyzed in an environmental assessment, environmental impact statement, or record of decision, whenever feasible, should address significant and adverse environmental effects of proposed Federal actions on minority communities and low-income communities.

Each Federal agency shall provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of meetings, crucial documents, and notices.

The Environmental Protection Agency, when reviewing environmental effects of proposed action of other Federal agencies under section 309 of the Clean Air Act, 42 U.S.C. section 7609, shall ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

Each Federal agency shall ensure that the public, including minority communities and low-income communities, has adequate access to public information relating to human health or environmental planning, regulations, and enforcement when required under the Freedom of Information Act, 5 U.S.C. section 552, the Sunshine Act, 5 U.S.C. section 552b, and the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11044.

* * *

This memorandum is intended only to improve the internal management of the Executive Branch and is not intended to, nor does it create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.

William J. Clinton

Federal Register
Vol. 59, No. 32
Wednesday, February 16, 1994

Presidential Documents

Title 3—

The President

Executive Order 12898 of February 11, 1994

Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1–1. IMPLEMENTATION.

1–101. *Agency Responsibilities.* To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

1–102. *Creation of an Interagency Working Group on Environmental Justice* (a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an interagency Federal Working Group on Environmental Justice ("Working Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall: (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1–103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3–3 of this order;

(4) assist in coordinating data collection, required by this order;

(5) examine existing data and studies on environmental justice;

(6) hold public meetings as required in section 5–502(d) of this order; and

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

1–103. *Development of Agency Strategies.* (a) Except as provided in section 6–605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)–(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

(b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.

(c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.

(d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.

(e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.

(f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.

(g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

1–104. *Reports to the President.* Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1–103(e) of this order

Sec. 2–2. FEDERAL AGENCY RESPONSIBILITIES FOR FEDERAL PROGRAMS. Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including popu-

lations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Sec. 3–3. RESEARCH, DATA COLLECTION, AND ANALYSIS.

3–301. *Human Health and Environmental Research and Analysis.* (a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

3–302. *Human Health and Environmental Data Collection and Analysis.* To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a): (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) In connection with the development and implementation of agency strategies in section 1–103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001–11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

Sec. 4–4. SUBSISTENCE CONSUMPTION OF FISH AND WILDLIFE.

4–401. *Consumption Patterns.* In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

4–402. *Guidance.* Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or wildlife. Agencies shall consider such guidance in developing their policies and rules.

Sec. 5–5. PUBLIC PARTICIPATION AND ACCESS TO INFORMATION. (a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

Sec. 6–6. GENERAL PROVISIONS.

6–601. *Responsibility for Agency Implementation.* The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

6–602. *Executive Order No. 12250.* This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

6–603. *Executive Order No. 12875.* This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.

6–604. *Scope.* For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

6–605. *Petitions for Exemptions.* The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

6–606. *Native American Programs.* Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian Tribes.

6–607. *Costs.* Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

6–608. *General.* Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

6–609. *Judicial Review.* This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural,

enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance of the United States, its agencies, its officers, or any other person with this order.

William J. Clinton

THE WHITE HOUSE,
February 11, 1994.

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Editorial note: For the memorandum that was concurrently issued on Federal environmental program reform, see issue No. 6 of the *Weekly Compilation of Presidential Documents.*

46 Fed. Reg. 18026 (Mar. 23, 1981),
As amended.

COUNCIL ON ENVIRONMENTAL QUALITY
Executive Office of the President

Memorandum to Agencies:

Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations

SUMMARY: The Council on Environmental Quality, as part of its oversight of implementation of the National Environmental Policy Act, held meetings in the ten Federal regions with Federal, State, and local officials to discuss administration of the implementing regulations. The forty most asked questions were compiled in a memorandum to agencies for the information of relevant officials. In order efficiently to respond to public inquiries this memorandum is reprinted in this issue of the Federal Register.

Ref: 40 CFR Parts 1500 - 1508 (1987).

FOR FURTHER INFORMATION CONTACT:

General Counsel, Council on Environmental Quality, 722 Jackson Place NW, Washington, D.C. 20006; (202)-395-5750.

12/91 Working Print

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

March 16, 1981

MEMORANDUM FOR FEDERAL NEPA LIAISONS, FEDERAL, STATE, AND LOCAL OFFICIALS AND OTHER PERSONS INVOLVED IN THE NEPA PROCESS

Subject: Questions and Answers About the NEPA Regulations

During June and July of 1980 the Council on Environmental Quality, with the assistance and cooperation of EPA's EIS Coordinators from the ten EPA regions, held one-day meetings with federal, state and local officials in the ten EPA regional offices around the country. In addition, on July 10, 1980, CEQ conducted a similar meeting for the Washington, D.C. NEPA liaisons and persons involved in the NEPA process. At these meetings CEQ discussed (a) the results of its 1980 review of Draft EISs issued since the July 30, 1979 effective date of the NEPA regulations, (b) agency compliance with the Record of Decision requirements in Section 1505 of the NEPA regulations, and (c) CEQ's preliminary findings on how the scoping process is working. Participants at these meetings received copies of materials prepared by CEQ summarizing its oversight and findings.

These meetings also provided NEPA liaisons and other participants with an opportunity to ask questions about NEPA and the practical application of the NEPA regulations. A number of these questions were answered by CEQ representatives at the regional meetings. In response to the many requests from the agencies and other participants, CEQ has compiled forty of the most important or most frequently asked questions and their answers and reduced them to writing. The answers were prepared by the General Counsel of CEQ in consultation with the Office of Federal Activities of EPA. These answers, of course, do not impose any additional requirements beyond those of the NEPA regulations. This document does not represent new guidance under the NEPA regulations, but rather makes generally available to concerned agencies and private individuals the answers which CEQ has already given at the 1980 regional meetings. The answers also reflect the advice which the Council has given over the past two years to aid agency staff and consultants in their day-to-day application of NEPA and the regulations.

CEQ has also received numerous inquiries regarding the scoping process. CEQ hopes to issue written guidance on scoping later this year on the basis of its special study of scoping, which is nearing completion.

NICHOLAS C. YOST
General Counsel

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ENDNOTES 32

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1a. **Range of Alternatives.** What is meant by "range of alternatives" as referred to in Sec. 1505.1(e)?[1]

A. The phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Section 1502.14. A decisionmaker must not consider alternatives beyond the range of alternatives discussed in the relevant environmental documents. Moreover, a decisionmaker must, in fact, consider all the alternatives discussed in an EIS. Section 1505.1(e).

1b. **How many alternatives** have to be discussed when there is an infinite number of possible alternatives?

A. For some proposals there may exist a very large or even an infinite number of possible reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedicating 0, 10, 30, 50, 70, 90, or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.

2a. **Alternatives Outside the Capability of Applicant or Jurisdiction of Agency.** If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

2b. Must the EIS analyze **alternatives outside the jurisdiction** or capability of the agency or beyond what Congress has authorized?

A. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law

does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

3. No-Action Alternative. What does the "no action" alternative include? If an agency is under a court order or legislative command to act, must the EIS address the "no action" alternative?

A. Section 1502.14(d) requires the alternatives analysis in the EIS to "include the alternative of no action." There are two distinct interpretations of "no action" that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases "no action" is "no change" from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the EIS to those impacts projected for the existing plan. In this case, alternatives would include management plans of both greater and lesser intensity, especially greater and lesser levels of resource development.

The second interpretation of "no action" is illustrated in instances involving federal decisions on proposals for projects. "No action" in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward.

Where a choice of "no action" by the agency would result in predictable actions by others, this consequence of the "no action" alternative should be included in the analysis. For example, if denial of permission to build a railroad to a facility would lead to construction of a road and increased truck traffic, the EIS should analyze this consequence of the "no action" alternative.

In light of the above, it is difficult to think of a situation where it would not be appropriate to address a "no action" alternative. Accordingly, the regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative outside the jurisdiction of the agency which must be analyzed. Section 1502.14(c). See Question 2 above.

Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by NEPA. Section 1500.1(a).

4a. **Agency's Preferred Alternative.** What is the "agency's preferred alternative"?

A. The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the "agency's preferred alternative" is different from the "environmentally preferable alternative," although in some cases one alternative may be both. See Question 6 below. It is identified so that agencies and the public can understand the lead agency's orientation.

4b. Does the **"preferred alternative"** have to be identified in the Draft EIS and the Final EIS or just in the Final EIS?

A. Section 1502.14(e) requires the section of the EIS on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement . . ." This means that if the agency has a preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS. If the responsible federal official in fact has no preferred alternative at the Draft EIS stage, a preferred alternative need not be identified there. By the time the Final EIS is filed, Section 1502.14(e) presumes the existence of a preferred alternative and requires its identification in the Final EIS "unless another law prohibits the expression of such a preference."

4c. Q. Who recommends or determines the **"preferred alternative?"**

A. The lead agency's official with line responsibility for preparing the EIS and assuring its adequacy is responsible for identifying the agency's preferred alternative(s). The NEPA regulations do not dictate which official in an agency shall be responsible for preparation of EISs, but agencies can identify this official in their implementing procedures, pursuant to Section 1507.3.

Even though the agency's preferred alternative is identified by the EIS preparer in the EIS, the statement must be objectively prepared and not slanted to support the choice of the agency's preferred alternative over the other reasonable and feasible alternatives.

5. **Proposed Action v. Preferred Alternative.** Is the "proposed action" the same thing as the "preferred alternative"?

A. The "proposed action" may be, but is not necessarily, the agency's "preferred alternative." The proposed action may be a proposal in its initial form before

undergoing analysis in the EIS process. If the proposed action is internally generated, such as preparing a land management plan, the proposed action might end up as the agency's preferred alternative. On the other hand the proposed action may be granting an application to a non-federal entity for a permit. The agency may or may not have a "preferred alternative" at the Draft EIS stage (see Question 4 above). In that case the agency may decide at the Final EIS stage, on the basis of the Draft EIS and the public and agency comments, that an alternative other than the proposed action is the agency's "preferred alternative."

5b. Is the analysis of the "proposed action" in an EIS to be treated differently from the analysis of alternatives?

A. The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.

6a. Environmentally Preferable Alternative. What is the meaning of the term "environmentally preferable alternative" as used in the regulations with reference to Records of Decision? How is the term "environment" used in the phrase?

A. Section 1505.2(b) requires that, in cases where an EIS has been prepared, the Record of Decision (ROD) must identify all alternatives that were considered, ". . . specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.

The Council recognizes that the identification of the environmentally preferable alternative may involve difficult judgments, particularly when one environmental value must be balanced against another. The public and other agencies reviewing a Draft EIS can assist the lead agency to develop and determine environmentally preferable alternatives by providing their views in comments on the Draft EIS. Through the identification of the environmentally preferable alternative, the decisionmaker is clearly faced with a choice between that alternative and others, and must consider whether the decision accords with the Congressionally declared policies of the Act.

6b. **Who recommends or determines** what is environmentally preferable?

A. The agency EIS staff is encouraged to make recommendations of the environmentally preferable alternative(s) during EIS preparation. In any event the lead agency official responsible for the EIS is encouraged to identify the environmentally preferable alternative(s) in the EIS. In all cases, commentors from other agencies and the public are also encouraged to address this question. The agency must identify the environmentally preferable alternative in the ROD.

7. Difference Between Sections of EIS on Alternatives and Environmental Consequences. What is the difference between the sections in the EIS on "alternatives" and "environmental consequences"? How do you avoid duplicating the discussion of alternatives in preparing these two sections?

A. The "alternatives" section is the heart of the EIS. This section rigorously explores and objectively evaluates all reasonable alternatives including the proposed action. Section 1502.14. It should include relevant comparisons on environmental and other grounds. The "environmental consequences" section of the EIS discusses the specific environmental impacts or effects of each of the alternatives including the proposed action. Section 1502.16. In order to avoid duplication between these two sections, most of the "alternatives" section should be devoted to describing and comparing the alternatives. Discussion of the environmental impacts of these alternatives should be limited to a concise descriptive summary of such impacts in a comparative form, including charts or tables, thus sharply defining the issues and providing a clear basis for choice among options. Section 1502.14. The "environmental consequences" section should be devoted largely to a scientific analysis of the direct and indirect environmental effects of the proposed action and of each of the alternatives. It forms the analytic basis for the concise comparison in the "alternatives" section.

8. Early Application of NEPA. Section 1501.2(d) of the NEPA regulations requires agencies to provide for the early application of NEPA to cases where actions are planned by **private applicants** or **non-Federal entities** and are, at some stage, subject to federal approval of permits, loans, loan guarantees, insurance or other actions. What must and can agencies do to apply NEPA early in these cases?

A. Section 1501.2(d) requires federal agencies to take steps toward ensuring that private parties and state and local entities initiate environmental studies as soon as federal involvement in their proposals can be foreseen. This section is intended to ensure that environmental factors are considered at an early stage in the planning process and to avoid the situation where the applicant for a federal permit or approval has completed planning and eliminated all alternatives to the proposed action by the time the EIS process commences or before the EIS process has been completed.

Through early consultation, business applicants and approving agencies may gain better appreciation of each other's needs and foster a decisionmaking process which avoids later unexpected confrontations.

Federal agencies are required by Section 1507.3(b) to develop procedures to carry out Section 1501.2(d). The procedures should include an "outreach program", such as a means for prospective applicants to conduct pre-application consultations with the lead and cooperating agencies. Applicants need to find out, in advance of project planning, what environmental studies or other information will be required, and what mitigation requirements are likely, in connecton with the later federal NEPA process. Agencies should designate staff to advise potential applicants of the agency's NEPA information requirements and should publicize their pre-application procedures and information requirements in newsletters or other media used by potential applicants.

Complementing Section 1501.2(d), Section 1506.5(a) requires agencies to assist applicants by outlining the types of information required in those cases where the agency requires the applicant to submit environmental data for possible use by the agency in preparing an EIS.

Section 1506.5(b) allows agencies to authorize preparation of environmental assessments by applicants. Thus, the procedures should also include a means for anticipating and utilizing applicants' environmental studies or "early corporate environmental assessments" to fulfill some of the federal agency's NEPA obligations. However, in such cases the agency must still evaluate independently the environmental issues and take responsibility for the environmental assessment.

These provisions are intended to encourage and enable private and other non-federal entities to build environmental considerations into their own planning processes in a way that facilitates the application of NEPA and avoids delay.

9. Applicant Who Needs Other Permits. To what extent must an agency inquire into whether an applicant for a federal permit, funding or other approval of a proposal will also need approval from another agency for the same proposal or some other related aspect of it?

A. Agencies must integrate the NEPA process into other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. Specifically, the agency must "provide for cases where actions are planned by . . . applicants," so that designated staff are available to advise potential applicants of studies or other information that will foreseeably be required for the later federal action; the agency shall consult with the applicant if the agency foresees its own involvement in the proposal; and it shall insure that the NEPA process commences at the earliest possible time. Section 1501.2(d). (See Question 8.)

The regulations emphasize agency cooperation early in the NEPA process. Section 1501.6. Section 1501.7 on "scoping" also provides that all affected Federal agencies are to be invited to participate in scoping the environmental issues and to identify the various environmental review and consultation requirements that may apply to the proposed action. Further, Section 1502.25(b) requires that the draft EIS list all the federal permits, licenses and other entitlements that are needed to implement the proposal.

These provisions create an affirmative obligation on federal agencies to inquire early, and to the maximum degree possible, to ascertain whether an applicant is or will be seeking other federal assistance or approval, or whether the applicant is waiting until a proposal has been substantially developed before requesting federal aid or approval.

Thus, a federal agency receiving a request for approval or assistance should determine whether the applicant has filed separate requests for federal approval or assistance with other federal agencies. Other federal agencies that are likely to become involved should then be contacted, and the NEPA process coordinated, to insure an early and comprehensive analysis of the direct and indirect effects of the proposal and any related actions. The agency should inform the applicant that action on its application may be delayed unless it submits all other federal applications (where feasible to do so), so that all the relevant agencies can work together on the scoping process and preparation of the EIS.

10a. **Limitations on Action During 30-Day Review Period for Final EIS.** What actions by agencies and/or applicants are allowed during EIS preparation and during the 30-day review period after publication of a final EIS?

A. No federal decision on the proposed action shall be made or recorded until at least 30 days after the publication by EPA of notice that the particular EIS has been filed with EPA. Sections 1505.2 and 1506.10. Section 1505.2 requires this decision to be stated in a public Record of Decision.

Until the agency issues its Record of Decision, no action by an agency or an applicant concerning the proposal shall be taken which would have an adverse environmental impact or limit the choice of reasonable alternatives. Section 1506.1(a). But this does not preclude preliminary planning or design work which is needed to support an application for permits or assistance. Section 1506.1(d).

When the impact statement in question is a program EIS, no major action concerning the program may be taken which may significantly affect the quality of the human environment, unless the particular action is justified independently of the program, is accompanied by its own adequate environmental impact statement and will not prejudice the ultimate decision on the program. Section 1506.1(c).

10b. Do these limitations on action (described in Question 10a) apply to state or local agencies that have statutorily delegated responsibility for preparation of environmental documents required by NEPA, for example, under the HUD Block Grant program?

A. Yes, these limitations do apply, without any variation from their application to federal agencies.

11. **Limitations on Actions by an Applicant During EIS Process.** What actions must a lead agency take during the NEPA process when it becomes aware that a non-federal applicant is about to take an action within the agency's jurisdiction that would either have an adverse environmental impact or limit the choice of reasonable alternatives (e.g., prematurely commit money or other resources towards the completion of the proposal)?

A. The federal agency must notify the applicant that the agency will take strong affirmative steps to insure that the objectives and procedures of NEPA are fulfilled. Section 1506.1(b). These steps could include seeking injunctive measures under NEPA, or the use of sanctions available under either the agency's permitting authority or statutes setting forth the agency's statutory mission. For example, the agency might advise an applicant that if it takes such action the agency will not process its application.

12a. **Effective Date and Enforceability of the Regulations.** What actions are subject to the Council's new regulations, and what actions are grandfathered under the old guidelines?

A. The effective date of the Council's regulations was July 30, 1979 (except for certain HUD programs under the Housing and Community Development Act, 42 U.S.C. 5304(h), and certain state highway programs that qualify under Section 102(2)(D) of NEPA for which the regulations became effective on November 30, 1979). All the provisions of the regulations are binding as of that date, including those covering decisionmaking, public participation, referrals, limitations on actions, EIS supplements, etc. For example, a Record of Decision would be prepared even for decisions where the draft EIS was filed before July 30, 1979.

But in determining whether or not the new regulations apply to the preparation of a particular environmental document, the relevant factor is the date of filing of the draft of that document. Thus, the new regulations do not require the redrafting of an EIS or supplement if the draft EIS or supplement was filed before July 30, 1979. However, a supplement prepared after the effective date of the regulations for an EIS issued in final before the effective date of the regulations would be controlled by the regulations.

Even though agencies are not required to apply the regulations to an EIS or other document for which the draft was filed prior to July 30, 1979, the regulations

encourage agencies to follow the regulations "to the fullest extent practicable," i.e., if it is feasible to do so, in preparing the final document. Section 1506.12(a).

12b. Are projects authorized by Congress before the effective date of the Council's regulations grandfathered?

A. No. The date of Congressional authorization for a project is not determinative of whether the Council's regulations or former Guidelines apply to the particular proposal. No incomplete projects or proposals of any kind are grandfathered in whole or in part. Only certain environmental documents, for which the draft was issued before the effective date of the regulations, are grandfathered and subject to the Council's former Guidelines.

12c. **Can a violation of the regulations give rise to a cause of action?**

A. While a trivial violation of the regulations would not give rise to an independent cause of action, such a cause of action would arise from a substantial violation of the regulations. Section 1500.3.

13. **Use of Scoping Before Notice of Intent to Prepare EIS.** Can the scoping process be used in connection with preparation of an environmental assessment, i.e., before both the decision to proceed with an EIS and publication of a notice of intent?

A. Yes. Scoping can be a useful tool for discovering alternatives to a proposal, or significant impacts that may have been overlooked. In cases where an environmental assessment is being prepared to help an agency decide whether to prepare an EIS, useful information might result from early participation by other agencies and the public in a scoping process.

The regulations state that the scoping process is to be preceded by a Notice of Intent (NOI) to prepare an EIS. But that is only the minimum requirement. Scoping may be initiated earlier, as long as there is appropriate public notice and enough information available on the proposal so that the public and relevant agencies can participate effectively.

However, scoping that is done before the assessment, and in aid of its preparation, cannot substitute for the normal scoping process after publication of the NOI, unless the earlier public notice stated clearly that this possibility was under consideration, and the NOI expressly provides that written comments on the scope of alternatives and impacts will still be considered.

14a. **Rights and Responsibilities of Lead and Cooperating Agencies.** What are the respective rights and responsibilities of lead and cooperating agencies? What letters and memoranda must be prepared?

A. After a lead agency has been designated (Sec. 1501.5), that agency has the responsibility to solicit cooperation from other federal agencies that have jurisdiction by law or special expertise on any environmental issue that should be addressed in the EIS being prepared. Where appropriate, the lead agency should seek the cooperation of state or local agencies of similar qualifications. When the proposal may affect an Indian reservation, the agency should consult with the Indian tribe. Section 1508.5. The request for cooperation should come at the earliest possible time in the NEPA process.

After discussions with the candidate cooperating agencies, the lead agency and the cooperating agencies are to determine by letter or by memorandum which agencies will undertake cooperating responsibilities. To the extent possible at this stage, responsibilities for specific issues should be assigned. The allocation of responsibilities will be completed during scoping. Section 1501.7(a)(4).

Cooperating agencies must assume responsibility for the development of information and the preparation of environmental analyses at the request of the lead agency. Section 1501.6(b)(3). Cooperating agencies are now required by Section 1501.6 to devote staff resources that were normally primarily used to critique or comment on the Draft EIS after its preparation, much earlier in the NEPA process -- primarily at the scoping and Draft EIS preparation stages. If a cooperating agency determines that its resource limitations preclude any involvement, or the degree of involvement (amount of work) requested by the lead agency, it must so inform the lead agency in writing and submit a copy of this correspondence to the Council. Section 1501.6(c).

In other words, the potential cooperating agency must decide early if it is able to devote any of its resources to a particular proposal. For this reason the regulation states that an agency may reply to a request for cooperation that "other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement." (Emphasis added). The regulation refers to the "action," rather than to the EIS, to clarify that the agency is taking itself out of all phases of the federal action, not just draft EIS preparation. This means that the agency has determined that it cannot be involved in the later stages of EIS review and comment, as well as decisionmaking on the proposed action. For this reason, cooperating agencies with jurisdiction by law (those which have permitting or other approval authority) cannot opt out entirely of the duty to cooperate on the EIS. See also Question 15, relating specifically to the responsibility of EPA.

14b. How are disputes resolved between lead and cooperating agencies concerning the scope and level of detail of analysis and the quality of data in impact statements?

A. Such disputes are resolved by the agencies themselves. A lead agency, of course, has the ultimate responsibility for the content of an EIS. But it is supposed to use the environmental analysis and recommendations of cooperating agencies with jurisdiction by law or special expertise to the maximum extent possible, consistent with its own responsibilities as lead agency. Section 1501.6(a)(2).

If the lead agency leaves out a significant issue or ignores the advice and expertise of the cooperating agency, the EIS may be found later to be inadequate. Similarly, where cooperating agencies have their own decisions to make and they intend to adopt the environmental impact statement and base their decisions on it, one document should include all of the information necessary for the decisions by the cooperating agencies. Otherwise they may be forced to duplicate the EIS process by issuing a new, more complete EIS or Supplemental EIS, even though the original EIS could have sufficed if it had been properly done at the outset. Thus, both lead and cooperating agencies have a stake in producing a document of good quality. Cooperating agencies also have a duty to participate fully in the scoping process to ensure that the appropriate range of issues is determined early in the EIS process.

Because the EIS is not the Record of Decision, but instead constitutes the information and analysis on which to base a decision, disagreements about conclusions to be drawn from the EIS need not inhibit agencies from issuing a joint document, or adopting another agency's EIS, if the analysis is adequate. Thus, if each agency has its own "preferred alternative," both can be identified in the EIS. Similarly, a cooperating agency with jurisdiction by law may determine in its own ROD that alternative A is the environmentally preferable action, even though the lead agency has decided in its separate ROD that Alternative B is environmentally preferable.

14c. What are the specific responsibilities of federal and state cooperating agencies to review draft EISs?

A. Cooperating agencies (i.e., agencies with jurisdiction by law or special expertise) and agencies that are authorized to develop or enforce environmental standards, must comment on environmental impact statements within their jurisdiction, expertise or authority. Sections 1503.2, 1508.5. If a cooperating agency is satisfied that its views are adequately reflected in the environmental impact statement, it should simply comment accordingly. Conversely, if the cooperating agency determines that a draft EIS is incomplete, inadequate or inaccurate, or it has other comments, it should promptly make such comments, conforming to the requirements of specificity in section 1503.3.

14d. How is the lead agency to treat the comments of another agency with jurisdiction by law or special expertise which has failed or refused to cooperate or participate in scoping or EIS preparation?

A. A lead agency has the responsibility to respond to all substantive comments raising significant issues regarding a draft EIS. Section 1503.4. However, cooperating agencies are generally under an obligation to raise issues or otherwise participate in the EIS process during scoping and EIS preparation if they reasonably can do so. In practical terms, if a cooperating agency fails to cooperate at the outset, such as during scoping, it will find that its comments at a later stage will not be as persuasive to the lead agency.

15. Commenting Responsibilities of EPA. Are EPA's responsibilities to review and comment on the environmental effects of agency proposals under Section 309 of the Clean Air Act independent of its responsibility as a cooperating agency?

A. Yes. EPA has an obligation under Section 309 of the Clean Air Act to review and comment in writing on the environmental impact of any matter relating to the authority of the Administrator contained in proposed legislation, federal construction projects, other federal actions requiring EISs, and new regulations. 42 U.S.C. Sec. 7609. This obligation is independent of its role as a cooperating agency under the NEPA regulations.

16. Third Party Contracts. What is meant by the term "third party contracts" in connection with the preparation of an EIS? See Section 1506.5(c). When can "third party contracts" be used?

A. As used by EPA and other agencies, the term "third party contract" refers to the preparation of EISs by contractors paid by the applicant. In the case of an EIS for a National Pollution Discharge Elimination System (NPDES) permit, the applicant, aware in the early planning stages of the proposed project of the need for an EIS, contracts directly with a consulting firm for its preparation. See 40 C.F.R. 6.604(g). The "third party" is EPA which, under Section 1506.5(c), must select the consulting firm, even though the applicant pays for the cost of preparing the EIS. The consulting firm is responsible to EPA for preparing an EIS that meets the requirements of the NEPA regulations and EPA's NEPA procedures. It is in the applicant's interest that the EIS comply with the law so that EPA can take prompt action on the NPDES permit application. The "third party contract" method under EPA's NEPA procedures is purely voluntary, though most applicants have found it helpful in expediting compliance with NEPA.

If a federal agency uses "third party contracting," the applicant may undertake the necessary paperwork for the solicitation of a field of candidates under the agency's direction, so long as the agency complies with Section 1506.5(c). Federal

procurement requirements do not apply to the agency because it incurs no obligations or costs under the contract, nor does the agency procure anything under the contract.

17a. **Disclosure Statement to Avoid Conflict of Interest.** If an EIS is prepared with the assistance of a consulting firm, the firm must execute a disclosure statement. What criteria must the firm follow in determining whether it has any "financial or other interest in the outcome of the project" which would cause a conflict of interest?

A. Section 1506.5(c), which specifies that a consulting firm preparing an EIS must execute a disclosure statement, does not define "financial or other interest in the outcome of the project." The Council interprets this term broadly to cover any known benefits other than general enhancement of professional reputation. This includes any financial benefit such as a promise of future construction or design work on the project, as well as indirect benefits the consultant is aware of (e.g., if the project would aid proposals sponsored by the firm's other clients). For example, completion of a highway project may encourage construction of a shopping center or industrial park from which the consultant stands to benefit. If a consulting firm is aware that it has such an interest in the decision on the proposal, it should be disqualified from preparing the EIS, to preserve the objectivity and integrity of the NEPA process.

When a consulting firm has been involved in developing initial data and plans for the project, but does not have any financial or other interest in the outcome of the decision, it need not be disqualified from preparing the EIS. However, a disclosure statement in the draft EIS should clearly state the scope and extent of the firm's prior involvement to expose any potential conflicts of interest that may exist.

17b. If the firm in fact has no promise of future work or other interest in the outcome of the proposal, may the firm later bid in competition with others for future work on the project if the proposed action is approved?

A. Yes.

18. **Uncertainties About Indirect Effects of A Proposal.** How should uncertainties about indirect effects of a proposal be addressed, for example, in cases of disposal of federal lands, when the identity or plans of future landowners is unknown?

A. The EIS must identify all the indirect effects that are known, and make a good faith effort to explain the effects that are not known but are "reasonably foreseeable." Section 1508.8(b). In the example, if there is total uncertainty about the identity of future land owners or the nature of future land uses, then of course, the agency is not required to engage in speculation or contemplation about their future plans. But, in the ordinary course of business, people do make judgments based upon reasonably foreseeable occurrences. It will often be possible to consider the likely purchasers and the development trends in that area or similar areas in recent years; or the likelihood

that the land will be used for an energy project, shopping center, subdivision, farm or factory. The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known. The agency cannot ignore these uncertain, but probable, effects of its decisions.

19a. Mitigation Measures. What is the scope of mitigation measures that must be discussed?

A. The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered "significant." Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14.

19b. How should an EIS treat the subject of available mitigation measures that are (1) outside the jurisdiction of the lead or cooperating agencies, or (2) unlikely to be adopted or enforced by the responsible agency?

A. All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies. Sections 1502.16(h), 1505.2(c). This will serve to alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation.

However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies. Sections 1502.16(h), 1505.2. If there is a history of nonenforcement or opposition to such measures, the EIS and Record of Decision should acknowledge such opposition or nonenforcement. If the necessary mitigation measures will not be ready for a long period of time, this fact, of course, should also be recognized.

20. Worst Case Analysis. [Withdrawn.] [2]

21. **Combining Environmental and Planning Documents.** Where an EIS or an EA is combined with another project planning document (sometimes called "**piggybacking**"), to what degree may the EIS or EA refer to and rely upon information in the project document to satisfy NEPA's requirements?

A. Section 1502.25 of the regulations requires that draft EISs be prepared concurrently and integrated with environmental analyses and related surveys and studies required by other federal statutes. In addition, Section 1506.4 allows any environmental document prepared in compliance with NEPA to be combined with any other agency document to reduce duplication and paperwork. However, these provisions were not intended to authorize the preparation of a short summary or outline EIS, attached to a detailed project report or land use plan containing the required environmental impact data. In such circumstances, the reader would have to refer constantly to the detailed report to understand the environmental impacts and alternatives which should have been found in the EIS itself.

The EIS must stand on its own as an analytical document which fully informs decisionmakers and the public of the environmental effects of the proposal and those of the reasonable alternatives. Section 1502.1. But, as long as the EIS is clearly identified and is self-supporting, it can be physically included in or attached to the project report or land use plan, and may use attached report material as technical backup.

Forest Service environmental impact statements for forest management plans are handled in this manner. The EIS identifies the agency's preferred alternative, which is developed in detail as the proposed management plan. The detailed proposed plan accompanies the EIS through the review process, and the documents are appropriately cross-referenced. The proposed plan is useful for EIS readers as an example, to show how one choice of management options translates into effects on natural resources. This procedure permits initiation of the 90-day public review of proposed forest plans, which is required by the National Forest Management Act.

All the alternatives are discussed in the EIS, which can be read as an independent document. The details of the management plan are not repeated in the EIS, and vice versa. This is a reasonable functional separation of the documents: the EIS contains information relevant to the choice among alternatives; the plan is a detailed description of proposed management activities suitable for use by the land managers. This procedure provides for concurrent compliance with the public review requirements of both NEPA and the National Forest Management Act.

Under some circumstances, a project report or management plan may be totally merged with the EIS, and the one document labeled as both "EIS" and "management plan" or "project report." This may be reasonable where the documents are short, or

where the EIS format and the regulations for clear, analytical EISs also satisfy the requirements for a project report.

22. **State and Federal Agencies as Joint Lead Agencies.** May state and federal agencies serve as joint lead agencies? If so, how do they resolve law, policy and resource conflicts under NEPA and the relevant state environmental policy act? How do they resolve differences in perspective where, for example, national and local needs may differ?

A. Under Section 1501.5(b), federal, state or local agencies, as long as they include at least one federal agency, may act as joint lead agencies to prepare an EIS. Section 1506.2 also strongly urges state and local agencies and the relevant federal agencies to cooperate fully with each other. This should cover joint research and studies, planning activities, public hearings, environmental assessments and the preparation of joint EISs under NEPA and the relevant "little NEPA" state laws, so that one document will satisfy both laws.

The regulations also recognize that certain inconsistencies may exist between the proposed federal action and any approved state or local plan or law. The joint document should discuss the extent to which the federal agency would reconcile its proposed action with such plan or law. Section 1506.2(d). (See Question 23).

Because there may be differences in perspective as well as conflicts among federal, state and local goals for resources management, the Council has advised participating agencies to adopt a flexible, cooperative approach. The joint EIS should reflect all of their interests and missions, clearly identified as such. The final document would then indicate how state and local interests have been accommodated, or would identify conflicts in goals (e.g., how a hydroelectric project, which might induce second home development, would require new land use controls). The EIS must contain a complete discussion of scope and purpose of the proposal, alternatives, and impacts so that the discussion is adequate to meet the needs of local, state and federal decisionmakers.

23a. **Conflicts of Federal Proposal With Land Use Plans, Policies or Controls.** How should an agency handle potential conflicts between a proposal and the objectives of Federal, state or local land use plans, policies and controls for the area concerned? See Sec. 1502.16(c).

A. The agency should first inquire of other agencies whether there are any potential conflicts. If there would be immediate conflicts, or if conflicts could arise in the future when the plans are finished (see Question 23(b) below), the EIS must acknowledge and describe the extent of those conflicts. If there are any possibilities of resolving the conflicts, these should be explained as well. The EIS should also evaluate the seriousness of the impact of the proposal on the land use plans and policies, and whether, or how much, the proposal will impair the effectiveness of

land use control mechanisms for the area. Comments from officials of the affected area should be solicited early and should be carefully acknowleged and answered in the EIS.

23b. What constitutes a **"land use plan or policy"** for purposes of this discussion?

A. The term "land use plans," includes all types of formally adopted documents for land use planning, zoning and related regulatory requirements. Local general plans are included, even though they are subject to future change. Proposed plans should also be addressed if they have been formally proposed by the appropriate government body in a written form, and are being actively pursued by officials of the jurisdiction. Staged plans, which must go through phases of development such as the Water Resources Council's Level A, B and C planning process should also be included even though they are incomplete.

The term "policies" includes formally adopted statements of land use policy as embodied in laws or regulations. It also includes proposals for action such as the initiation of a planning process, or a formally adopted policy statement of the local, regional or state executive branch, even if it has not yet been formally adopted by the local, regional or state legislative body.

23c. What options are available for the decisionmaker when conflicts with such plans or policies are identified?

A. After identifying any potential land use conflicts, the decisionmaker must weigh the significance of the conflicts, among all the other environmental and non-environmental factors that must be considered in reaching a rational and balanced decision. Unless precluded by other law from causing or contributing to any inconsistency with the land use plans, policies or controls, the decisionmaker retains the authority to go forward with the proposal, despite the potential conflict. In the Record of Decision, the decisionmaker must explain what the decision was, how it was made, and what mitigation measures are being imposed to lessen adverse environmental impacts of the proposal, among the other requirements of Section 1505.2. This provision would require the decisionmaker to explain any decision to override land use plans, policies or controls for the area.

24a. **Environmental Impact Statements on Policies, Plans or Programs.** When are EISs required on policies, plans or programs?

A. An EIS must be prepared if an agency proposes to implement a specific policy, to adopt a plan for a group of related actions, or to implement a specific statutory program or executive directive. Section 1508.18. In addition, the adoption of official policy in the form of rules, regulations and interpretations pursuant to the Administrative Procedure Act, treaties, conventions, or other formal documents

establishing governmental or agency policy which will substantially alter agency programs, could require an EIS. Section 1508.18. In all cases, the policy, plan, or program must have the potential for significantly affecting the quality of the human environment in order to require an EIS. It should be noted that a proposal "may exist in fact as well as by agency declaration that one exists." Section 1508.23.

24b. When is an area-wide or overview EIS appropriate?

A. The preparation of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other reasonably foreseeable or proposed agency actions, share common timing or geography. For example, when a variety of energy projects may be located in a single watershed, or when a series of new energy technologies may be developed through federal funding, the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts of the reasonably foreseeable actions under that program or within that geographical area.

24c. What is the function of tiering in such cases?

A. Tiering is a procedure which allows an agency to avoid duplication of paperwork through the incorporation by reference of the general discussions and relevant specific discussions from an environmental impact statement of broader scope into one of lesser scope or vice versa. In the example given in Question 24b, this would mean that an overview EIS would be prepared for all of the energy activities reasonably foreseeable in a particular geographic area or resulting from a particular development program. This impact statement would be followed by site-specific or project-specific EISs. The tiering process would make each EIS of greater use and meaning to the public as the plan or program develops, without duplication of the analysis prepared for the previous impact statement.

25a. **Appendices and Incorporation by Reference.** When is it appropriate to use appendices instead of including information in the body of an EIS?

A. The body of the EIS should be a succinct statement of all the information on environmental impacts and alternatives that the decisionmaker and the public need, in order to make the decision and to ascertain that every significant factor has been examined. The EIS must explain or summarize methodologies of research and modeling, and the results of research that may have been conducted to analyze impacts and alternatives.

Lengthy technical discussions of modeling methodology, baseline studies, or other work are best reserved for the appendix. In other words, if only technically trained individuals are likely to understand a particular discussion then it should go in the

appendix, and a plain language summary of the analysis and conclusions of that technical discussion should go in the text of the EIS.

The final statement must also contain the agency's responses to comments on the draft EIS. These responses will be primarily in the form of changes in the document itself, but specific answers to each significant comment should also be included. These specific responses may be placed in an appendix. If the comments are especially voluminous, summaries of the comments and responses will suffice. (See Question 29 regarding the level of detail required for responses to comments.)

25b. How does an **appendix** differ from **incorporation by reference?**

A. First, if at all possible, the appendix accompanies the EIS, whereas the material which is incorporated by reference does not accompany the EIS. Thus the appendix should contain information that reviewers will be likely to want to examine. The appendix should include material that pertains to preparation of a particular EIS. Research papers directly relevant to the proposal, lists of affected species, discussion of the methodology of models used in the analysis of impacts, extremely detailed responses to comments, or other information, would be placed in the appendix.

The appendix must be complete and available at the time the EIS is filed. Five copies of the appendix must be sent to EPA with five copies of the EIS for filing. If the appendix is too bulky to be circulated, it instead must be placed in conveniently accessible locations or furnished directly to commentors upon request. If it is not circulated with the EIS, the Notice of Availability published by EPA must so state, giving a telephone number to enable potential commentors to locate or request copies of the appendix promptly.

Material that is not directly related to preparation of the EIS should be incorporated by reference. This would include other EISs, research papers in the general literature, technical background papers or other material that someone with technical training could use to evaluate the analysis of the proposal. These must be made available, either by citing the literature, furnishing copies to central locations, or sending copies directly to commentors upon request.

Care must be taken in all cases to ensure that material incorporated by reference, and the occasional appendix that does not accompany the EIS, are in fact available for the full minimum public comment period.

26a. **Index and Keyword Index in EISs.** How detailed must an EIS index be?

A. The EIS index should have a level of detail sufficient to focus on areas of the EIS of reasonable interest to any reader. It cannot be restricted to the most important topics. On the other hand, it need not identify every conceivable term or phrase in the EIS.

If an agency believes that the reader is reasonably likely to be interested in a topic, it should be included.

26b. Is a keyword index required?

A. No. A keyword index is a relatively short list of descriptive terms that identifies the key concepts or subject areas in a document. For example it could consist of 20 terms which describe the most significant aspects of an EIS that a future researcher would need: type of proposal, type of impacts, type of environment, geographical area, sampling or modelling methodologies used. This technique permits the compilation of EIS data banks, by facilitating quick and inexpensive access to stored materials. While a keyword index is not required by the regulations, it could be a useful addition for several reasons. First, it can be useful as a quick index for reviewers of the EIS, helping to focus on areas of interest. Second, if an agency keeps a listing of the keyword indexes of the EISs it produces, the EIS preparers themselves will have quick access to similar research data and methodologies to aid their future EIS work. Third, a keyword index will be needed to make an EIS available to future researchers using EIS data banks that are being developed. Preparation of such an index now when the document is produced will save a later effort when the data banks become operational.

27a. **List of Preparers.** If a consultant is used in preparing an EIS, must the list of preparers identify members of the consulting firm as well as the agency NEPA staff who were primarily responsible?

A. Section 1502.17 requires identification of the names and qualifications of persons who were primarily responsible for preparing the EIS or significant background papers, including basic components of the statement. This means that members of a consulting firm preparing material that is to become part of the EIS must be identified. The EIS should identify these individuals even though the consultant's contribution may have been modified by the agency.

27b. Should agency staff involved in reviewing and editing the EIS also be included in the list of preparers?

A. Agency personnel who wrote basic components of the EIS or significant background papers must, of course, be identified. The EIS should also list the technical editors who reviewed or edited the statements.

27c. How much information should be included on each person listed?

A. The list of preparers should normally not exceed two pages. Therefore, agencies must determine which individuals had primary responsibility and need not identify individuals with minor involvement. The list of preparers should include a very brief

identification of the individuals involved, their qualifications (expertise, professional disciplines) and the specific portion of the EIS for which they are responsible. This may be done in tabular form to cut down on length. A line or two for each person's qualifications should be sufficient.

28. **Advance or Xerox Copies of EIS.** May an agency file xerox copies of an EIS with EPA pending the completion of printing the document?

A. Xerox copies of an EIS may be filed with EPA prior to printing only if the xerox copies are simultaneously made available to other agencies and the public. Section 1506.9 of the regulations, which governs EIS filing, specifically requires Federal agencies to file EISs with EPA no earlier than the EIS is distributed to the public. However, this section does not prohibit xeroxing as a form of reproduction and distribution. When an agency chooses xeroxing as the reproduction method, the EIS must be clear and legible to permit ease of reading and ultimate microfiching of the EIS. Where color graphs are important to the EIS, they should be reproduced and circulated with the xeroxed copy.

29a. **Responses to Comments.** What response must an agency provide to a comment on a draft EIS which states that the EIS's methodology is inadequate or inadequately explained? For example, what level of detail must an agency include in its response to a simple postcard comment making such an allegation?

A. Appropriate responses to comments are described in Section 1503.4. Normally the responses should result in changes in the text of the EIS, not simply a separate answer at the back of the document. But, in addition, the agency must state what its response was, and if the agency decides that no substantive response to a comment is necessary, it must explain briefly why.

An agency is not under an obligation to issue a lengthy reiteration of its methodology for any portion of an EIS if the only comment addressing the methodology is a simple complaint that the EIS methodology is inadequate. But agencies must respond to comments, however brief, which are specific in their criticism of agency methodology. For example, if a commentor on an EIS said that an agency's air quality dispersion analysis or methodology was inadequate, and the agency had included a discussion of that analysis in the EIS, little if anything need be added in response to such a comment. However, if the commentor said that the dispersion analysis was inadequate because of its use of a certain computational technique, or that a dispersion analysis was inadequately explained because computational techniques were not included or referenced, then the agency would have to respond in a substantive and meaningful way to such a comment.

If a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group. Comments may be

summarized if they are especially voluminous. The comments or summaries must be attached to the EIS regardless of whether the agency believes they merit individual discussion in the body of the final EIS.

29b. How must an agency respond to a comment on a draft EIS that raises a new alternative not previously considered in the draft EIS?

A. This question might arise in several possible situations. First, a commentor on a draft EIS may indicate that there is a possible alternative which, in the agency's view, is not a reasonable alternative. Section 1502.14(a). If that is the case, the agency must explain why the comment does not warrant further agency response, citing authorities or reasons that support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response. Section 1503.4(a). For example, a commentor on a draft EIS on a coal fired power plant may suggest the alternative of using synthetic fuel. The agency may reject the alternative with a brief discussion (with authorities) of the unavailability of synthetic fuel within the time frame necessary to meet the need and purpose of the proposed facility.

A second possibility is that an agency may receive a comment indicating that a particular alternative, while reasonable, should be modified somewhat, for example, to achieve certain mitigation benefits, or for other reasons. If the modification is reasonable, the agency should include a discussion of it in the final EIS. For example, a commentor on a draft EIS on a proposal for a pumped storage power facility might suggest that the applicant's proposed alternative should be enhanced by the addition of certain reasonable mitigation measures, including the purchase and setaside of a wildlife preserve to substitute for the tract to be destroyed by the project. The modified alternative including the additional mitigation measures should be discussed by the agency in the final EIS.

A third slightly different possibility is that a comment on a draft EIS will raise an alternative which is a minor variation of one of the alternatives discussed in the draft EIS, but this variation was not given any consideration by the agency. In such a case, the agency should develop and evaluate the new alternative, if it is reasonable, in the final EIS. If it is qualitatively within the spectrum of alternatives that were discussed in the draft, a supplemental draft will not be needed. For example, a commentor on a draft EIS to designate a wilderness area within a National Forest might reasonably identify a specific tract of the forest, and urge that it be considered for designation. If the draft EIS considered designation of a range of alternative tracts which encompassed forest area of similar quality and quantity, no supplemental EIS would have to be prepared. The agency could fulfill its obligation by addressing that specific alternative in the final EIS.

As another example, an EIS on an urban housing project may analyze the alternatives of constructing 2,000, 4,000, or 6,000 units. A commentor on the draft

EIS might urge the consideration of constructing 5,000 units utilizing a different configuration of buildings. This alternative is within the spectrum of alternatives already considered, and, therefore, could be addressed in the final EIS.

A fourth possibility is that a commentor points out an alternative which is not a variation of the proposal or of any alternative discussed in the draft impact statement, and is a reasonable alternative that warrants serious agency response. In such a case, the agency must issue a supplement to the draft EIS that discusses this new alternative. For example, a commentor on a draft EIS on a nuclear power plant might suggest that a reasonable alternative for meeting the projected need for power would be through peak load management and energy conservation programs. If the permitting agency has failed to consider that approach in the Draft EIS, and the approach cannot be dismissed by the agency as unreasonable, a supplement to the Draft EIS, which discusses that alternative, must be prepared. (If necessary, the same supplement should also discuss substantial changes in the proposed action or significant new circumstances or information, as required by Section 1502.9(c)(1) of the Council's regulations.)

If the new alternative was not raised by the commentor during scoping, but could have been, commentors may find that they are unpersuasive in their efforts to have their suggested alternative analyzed in detail by the agency. However, if the new alternative is discovered or developed later, and it could not reasonably have been raised during the scoping process, then the agency must address it in a supplemental draft EIS. The agency is, in any case, ultimately responsible for preparing an adequate EIS that considers all alternatives.

30. Adoption of EISs. When a cooperating agency with jurisdiction by law intends to adopt a lead agency's EIS and it is not satisfied with the adequacy of the document, may the cooperating agency adopt only the part of the EIS with which it is satisfied? If so, would a cooperating agency with jurisdiction by law have to prepare a separate EIS or EIS supplement covering the areas of disagreement with the lead agency?

A. Generally, a cooperating agency may adopt a lead agency's EIS without recirculating it if it concludes that its NEPA requirements and its comments and suggestions have been satisfied. Section 1506.3(a), (c). If necessary, a cooperating agency may adopt only a portion of the lead agency's EIS and may reject that part of the EIS with which it disagrees, stating publicly why it did so. Section 1506.3(a).

A cooperating agency with jurisidiction by law (e.g., an agency with independent legal responsibilities with respect to the proposal) has an independent legal obligation to comply with NEPA. Therefore, if the cooperating agency determines that the EIS is wrong or inadequate, it must prepare a supplement to the EIS, replacing or adding any needed information, and must circulate the supplement as a draft for public and agency review and comment. A final supplemental EIS would be required before the

agency could take action. The adopted portions of the lead agency EIS should be circulated with the supplement. Section 1506.3(b). A cooperating agency with jurisdiction by law will have to prepare its own Record of Decision for its action, in which it must explain how it reached its conclusions. Each agency should explain how and why its conclusions differ, if that is the case, from those of other agencies which issued their Records of Decision earlier.

An agency that did not cooperate in preparation of an EIS may also adopt an EIS or portion thereof. But this would arise only in rare instances, because an agency adopting an EIS for use in its own decision normally would have been a cooperating agency. If the proposed action for which the EIS was prepared is substantially the same as the proposed action of the adopting agency, the EIS may be adopted as long as it is recirculated as a final EIS and the agency announces what it is doing. This would be followed by the 30-day review period and issuance of a Record of Decision by the adopting agency. If the proposed action by the adopting agency is not substantially the same as that in the EIS (i.e., if an EIS on one action is being adapted for use in a decision on another action), the EIS would be treated as a draft and circulated for the normal public comment period and other procedures. Section 1506.3(b).

31a. Application of Regulations to Independent Regulatory Agencies. Do the Council's NEPA regulations apply to independent regulatory agencies like the Federal Energy Regulatory Commission (FERC) and the Nuclear Regulatory Commission?

A. The statutory requirements of NEPA's Section 102 apply to "all agencies of the federal government." The NEPA regulations implement the procedural provisions of NEPA as set forth in NEPA's Section 102(2) for all agencies of the federal government. The NEPA regulations apply to independent regulatory agencies, however, they do not direct independent regulatory agencies or other agencies to make decisions in any particular way or in a way inconsistent with an agency's statutory charter. Sections 1500.3, 1500.6, 1507.1, and 1507.3.

31b. Can an Executive Branch agency like the Department of the Interior adopt an EIS prepared by an independent regulatory agency such as FERC?

A. If an independent regulatory agency such as FERC has prepared an EIS in connection with its approval of a proposed project, an Executive Branch agency (e.g., the Bureau of Land Management in the Department of the Interior) may, in accordance with Section 1506.3, adopt the EIS or a portion thereof for its use in considering the same proposal. In such a case the EIS must, to the satisfaction of the adopting agency, meet the standards for an adequate statement under the NEPA regulations (including scope and quality of analysis of alternatives) and must satisfy the adopting agency's comments and suggestions. If the independent regulatory agency fails to comply with the NEPA regulations, the cooperating or adopting agency may find that

it is unable to adopt the EIS, thus forcing the preparation of a new EIS or EIS Supplement for the same action. The NEPA regulations were made applicable to all federal agencies in order to avoid this result, and to achieve uniform application and efficiency of the NEPA process.

32. **Supplements to Old EISs.** Under what circumstances do old EISs have to be supplemented before taking action on a proposal?

A. As a rule of thumb, if the proposal has not yet been implemented, or if the EIS concerns an ongoing program, EISs that are more than 5 years old should be carefully reexamined to determine if the criteria in Section 1502.9 compel preparation of an EIS supplement.

If an agency has made a substantial change in a proposed action that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts, a supplemental EIS must be prepared for an old EIS so that the agency has the best possible information to make any necessary substantive changes in its decisions regarding the proposal. Section 1502.9(c).

33a. **Referrals.** When must a referral of an interagency disagreement be made to the Council?

A. The Council's referral procedure is a pre-decision referral process for interagency disagreements. Hence, Section 1504.3 requires that a referring agency must deliver its referral to the Council not later than 25 days after publication by EPA of notice that the final EIS is available (unless the lead agency grants an extension of time under Section 1504.3(b)).

33b. May a referral be made after this issuance of a Record of Decision?

A. No, except for cases where agencies provide an internal appeal procedure which permits simultaneous filing of the final EIS and the record of decision (ROD). Section 1506.10(b)(2). Otherwise, as stated above, the process is a pre-decision referral process. Referrals must be made within 25 days after the notice of availability of the final EIS, whereas the final decision (ROD) may not be made or filed until after 30 days from the notice of availability of the EIS. Sections 1504.3(b), 1506.10(b). If a lead agency has granted an extension of time for another agency to take action on a referral, the ROD may not be issued until the extension has expired.

34a. **Records of Decision.** Must Records of Decision (RODs) be made public? How should they be made available?

A. Under the regulations, agencies must prepare a "concise public record of decision," which contains the elements specified in Section 1505.2. This public record may be integrated into any other decision record prepared by the agency, or it may be separate if decision documents are not normally made public. The Record of Decision is intended by the Council to be an environmental document (even though it is not explicitly mentioned in the definition of "environmental document" in Section 1508.10). Therefore, it must be made available to the public through appropriate public notice as required by Section 1506.6(b). However, there is no specific requirement for publication of the ROD itself, either in the Federal Register or elsewhere.

34b. May the **summary section** in the final Environmental Impact Statement substitute for or constitute an agency's Record of Decision?

A. No. An environmental impact statement is supposed to inform the decisionmaker before the decision is made. Sections 1502.1, 1505.2. The Council's regulations provide for a 30-day period after notice is published that the final EIS has been filed with EPA before the agency may take final action. During that period, in addition to the agency's own internal final review, the public and other agencies can comment on the final EIS prior to the agency's final action on the proposal. In addition, the Council's regulations make clear that the requirements for the summary in an EIS are not the same as the requirements for a ROD. Sections 1502.12 and 1505.2.

34c. What provisions should **Records of Decision** contain pertaining to **mitigation and monitoring?**

A. Lead agencies "shall include appropriate conditions [including mitigation measures and monitoring and enforcement programs] in grants, permits or other approvals" and shall "condition funding of actions on mitigation." Section 1505.3. Any such measures that are adopted must be explained and committed in the ROD.

The reasonable alternative mitigation measures and monitoring programs should have been addressed in the draft and final EIS. The discussion of mitigation and monitoring in a Record of Decision must be more detailed than a general statement that mitigation is being required, but not so detailed as to duplicate discussion of mitigation in the EIS. The Record of Decision should contain a concise summary identification of the mitigation measures which the agency has committed itself to adopt.

The Record of Decision must also state whether all practicable mitigation measures have been adopted, and if not, why not. Section 1505.2(c). The Record of Decision

must identify the mitigation measures and monitoring and enforcement programs that have been selected and plainly indicate that they are adopted as part of the agency's decision. If the proposed action is the issuance of a permit or other approval, the specific details of the mitigation measures shall then be included as appropriate conditions in whatever grants, permits, funding or other approvals are being made by the federal agency. Section 1505.3 (a), (b). If the proposal is to be carried out by the federal agency itself, the Record of Decision should delineate the mitigation and monitoring measures in sufficient detail to constitute an enforceable commitment, or incorporate by reference the portions of the EIS that do so.

34d. What is the **enforceability of a Record of Decision?**

A. Pursuant to generally recognized principles of federal administrative law, agencies will be held accountable for preparing Records of Decision that conform to the decisions actually made and for carrying out the actions set forth in the Records of Decision. This is based on the principle that an agency must comply with its own decisons and regulations once they are adopted. Thus, the terms of a Record of Decision are enforceable by agencies and private parties. A Record of Decision can be used to compel compliance with or execution of the mitigation measures identified therein.

35. **Time Required for the NEPA Process.** How long should the NEPA process take to complete?

A. When an EIS is required, the process obviously will take longer than when an EA is the only document prepared. But the Council's NEPA regulations encourage streamlined review, adoption of deadlines, elimination of duplicative work, eliciting suggested alternatives and other comments early through scoping, cooperation among agencies, and consultation with applicants during project planning. The Council has advised agencies that under the new NEPA regulations even large complex energy projects would require only about 12 months for the completion of the entire EIS process. For most major actions, this period is well within the planning time that is needed in any event, apart from NEPA.

The time required for the preparation of program EISs may be greater. The Council also recognizes that some projects will entail difficult long-term planning and/or the acquisition of certain data which of necessity will require more time for the preparation of the EIS. Indeed, some proposals should be given more time for the thoughtful preparation of an EIS and development of a decision which fulfills NEPA's substantive goals.

For cases in which only an environmental assessment will be prepared, the NEPA process should take no more than 3 months, and in many cases substantially less, as part of the normal analysis and approval process for the action.

36a. **Environmental Assessments (EA).** How long and detailed must an environmental assessment (EA) be?

A. The environmental assessment is a concise public document which has three defined functions. (1) It briefly provides sufficient evidence and analysis for determining whether to prepare an EIS; (2) it aids an agency's compliance with NEPA when no EIS is necessary, i.e., it helps to identify better alternatives and mitigation measures; and (3) it facilitates preparation of an EIS when one is necessary. Section 1508.9(a).

Since the EA is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted. Section 1508.9(b).

While the regulations do not contain page limits for EA's, the Council has generally advised agencies to keep the length of EAs to not more than approximately 10-15 pages. Some agencies expressly provide page guidelines (e.g., 10-15 pages in the case of the Army Corps). To avoid undue length, the EA may incorporate by reference background data to support its concise discussion of the proposal and relevant issues.

36b. Under what circumstances is a lengthy EA appropriate?

A. Agencies should avoid preparing lengthy EAs except in unusual cases, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed.

37a. **Findings of No Significant Impact (FONSI).** What is the level of detail of information that must be included in a finding of no significant impact (FONSI)?

A. The FONSI is a document in which the agency briefly explains the reasons why an action will not have a significant effect on the human environment and, therefore, why an EIS will not be prepared. Section 1508.13. The finding itself need not be detailed, but must succinctly state the reasons for deciding that the action will have no significant environmental effects, and, if relevant, must show which factors were weighted most heavily in the determination. In addition to this statement, the FONSI must include, summarize, or attach and incorporate by reference, the environmental assessment..

37b. What are the criteria for deciding whether a FONSI should be made available for public review for 30 days before the agency's final determination whether to prepare an EIS?

A. Public review is necessary, for example, (a) if the proposal is a borderline case, i.e., when there is a reasonable argument for preparation of an EIS; (b) if it is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion of even a minor development into a pristine area; (c) when there is either scientific or public controversy over the proposal; or (d) when it involves a proposal which is or is closely similar to one which normally requires preparation of an EIS. Sections 1501.4(e)(2), 1508.27. Agencies also must allow a period of public review of the FONSI if the proposed action would be located in a floodplain or wetland. E.O. 11988, Sec. 2(a)(4); E.O. 11990, Sec. 2(b).

38. **Public Availability of EAs v. FONSIs.** Must (EAs) and FONSIs be made public? If so, how should this be done?

A. Yes, they must be available to the public. Section 1506.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSIs. These are public "environmental documents" under Section 1506.6(b), and, therefore, agencies must give public notice of their availability. A combination of methods may be used to give notice, and the methods should be tailored to the needs of particular cases. Thus, a Federal Register notice of availability of the documents, coupled with notices in national publications and mailed to interested national groups might be appropriate for proposals that are national in scope. Local newspaper notices may be more appropriate for regional or site-specific proposals.

The objective, however, is to notify all interested or affected parties. If this is not being achieved, then the methods should be reevaluated and changed. Repeated failure to reach the interested or affected public would be interpreted as a violation of the regulations.

39. **Mitigation Measures Imposed in EAs and FONSIs.** Can an EA and FONSI be used to impose enforceable mitigation measures, monitoring programs, or other requirements, even though there is no requirement in the regulations in such cases for a formal Record of Decision?

A. Yes. In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist agency planning and decisionmaking" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary."

Section 1501.3(b), 1508.9(a)(2). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases.

40. **Propriety of Issuing EA When Mitigation Reduces Impacts.** If an environmental assessment indicates that the environmental effects of a proposal are significant but that, with mitigation, those effects may be reduced to less than significant levels, may the agency make a finding of no significant impact rather than prepare an EIS? Is that a legitimate function of an EA and scoping?

[**N.B.:** The 1987-88 CEQ Annual Report stated that CEQ intended to issue additional guidance on this topic. Ed. note.]

A. Mitigation measures may be relied upon to make a finding of no significant impact only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal. As a general rule, the regulations contemplate that agencies should use a broad approach in defining significance and should not rely on the possibility of mitigation as an excuse to avoid the EIS requirement. Sections 1508.8, 1508.27.

If a proposal appears to have adverse effects which would be significant, and certain mitigation measures are then developed during the scoping or EA stages, the existence of such possible mitigation does not obviate the need for an EIS. Therefore, if scoping or the EA identifies certain mitigation possibilities without altering the nature of the overall proposal itself, the agency should continue the EIS process and submit the proposal, and the potential mitigation, for public and agency review and comment. This is essential to ensure that the final decision is based on all the relevant factors and that the full NEPA process will result in enforceable mitigation measures through the Record of Decision.

In some instances, where the proposal itself so integrates mitigation from the beginning that it is impossible to define the proposal without including the mitigation, the agency may then rely on the mitigation measures in determining that the overall effects would not be significant (e.g., where an application for a permit for a small hydro dam is based on a binding commitment to build fish ladders, to permit adequate down stream flow, and to replace any lost wetlands, wildlife habitat and recreational potential). In those instances, agencies should make the FONSI and EA available for 30 days of public comment before taking action. Section 1501.4(e)(2).

Similarly, scoping may result in a redefinition of the entire project, as a result of mitigation proposals. In that case, the agency may alter its previous decision to do an EIS, as long as the agency or applicant resubmits the entire proposal and the EA and FONSI are available for 30 days of review and comment. One example of this

would be where the size and location of a proposed industrial park are changed to avoid affecting a nearby wetland area.

[This memorandum was filed in the Federal Register and appears at 46 Fed. Reg. 18026 (Mar. 23, 1981).]

ENDNOTES

The first endnote appeared in the original Federal Register. The other endnote, which refers to subsequent CEQ actions, is for information only.

1. References throughout the document are to the Council on Environmental Quality's Regulations For Implementing The Procedural Provisions of the National Environmental Policy Act. 40 CFR Parts 1500-1508.

2. Q20 Worst Case Analysis was withdrawn by final rule issued at 51 Fed. Reg. 15618 (Apr. 25. 1986); textual errors corrected 51 F.R. p. 16,846 (May 7, 1986). The preamble to this rule is published at ELR Admin. Mat. 35055.

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THURSDAY, MARCH 29, 1979



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COUNCIL ON ENVIRONMENTAL QUALITY

ENVIRONMENTAL EFFECTS ABROAD OF MAJOR FEDERAL ACTIONS

Executive Order 12144; Implementing and Explanatory Documents

MARCH 21, 1979.

AGENCY: Council on Environmental Quality, Executive Office of the President.

ACTION: Information Only: Publication of Implementing Documents Concerning Executive Order 12114.

SUMMARY: On January 4, 1979, the President signed Executive Order 12114, Environmental Effects Abroad of Major Federal Actions (44 FR 1957 (Jan. 9, 1979)). The Council has received numerous requests for the implementing and explanatory documents. In order efficiently to respond to such public requests, the relevant documents are reprinted in this issue of the FEDERAL REGISTER. They include: (1) Memorandum for Heads of Agencies With International Activities, from Charles Warren, Chairman, Council on Environmental Quality, and Thomas R. Pickering, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs (February 27, 1979), and (2) White House Fact Sheet, Executive Order on Environmental and Scientific Effects Abroad (January 5, 1979).

FOR FURTHER INFORMATION CONTACT:

Nicholas C. Yost, General Counsel, Council on Environmental Quality, 722 Jackson Place, NW., Washington, D.C.; 202-395-5750.

NICHOLAS C. YOST,
General Counsel.

FEBRUARY 27, 1979.

MEMORANDUM FOR HEADS OF AGENCIES WITH INTERNATIONAL ACTIVITIES

From: Charles Warren, Chairman, Council on Environmental Quality; Thomas R. Pickering, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs.

Subject: Implementation of Executive Order 12114.

On January 4, 1979, President Carter signed Executive Order 12114, entitled Environmental Effects Abroad of Major Federal Actions. The purpose of this memorandum is to initiate the consultation process required by this Executive Order.

Section 2-1 of the Order provides that every Federal agency taking major federal actions encompassed by and not exempted from the Order, which have significant effects on the environment outside the geographical borders of the United States, its territories and possessions, shall within 8 months after January 4, 1979, have in effect procedures for implementing the Order. This Section requires agencies to consult with the Department of State and the Council on Environmental Quality concerning their implementing procedures before placing them in effect.

Categories of federal activities or programs encompassed by the Order are listed below. The Executive Order defines the activities or programs as those which significantly harm the natural and physical environment even though on balance the agency believes the action to be beneficial to the environment.

1. Major Federal actions significantly affecting the environment of the global commons outside the jurisdiction of any nation. This category includes major federal actions significantly affecting Antarctica, and the oceans and weather and stratospheric conditions in areas outside the jurisdiction of any nation. Section 2-3(a).

2. Major Federal actions significantly affecting the environment of a foreign nation which is not participating with the United States in the activity and which is not otherwise involved in the action. This would include, *inter alia*, planning, financing, programming or implementing the action. Section 2-3(b).

3. Major Federal actions significantly affecting the environment of a foreign nation which provide to that nation:

(a) A product, or physical project producing a principal product or an emission or effluent, which is prohibited or strictly regulated by Federal law in the United States because its toxic effects on the environment create a serious public health risk. Attached to this memorandum is an illustrative list showing the kinds of products, emissions or effluents which are covered by the Order and those that are not. Section 2-3(c)(1).

(b) A physical project which in the United States is prohibited or strictly regulated by Federal law to protect the environment against radioactive substances except for actions exempted by Section 2-5(a)(v). This category includes nuclear reactors and nuclear waste management facilities, and excludes nuclear fuel. The Department of State will act as lead agency for conducting environmental reviews for this category of actions. Section 2-3(c)(2).

4. Major Federal action outside the United States, its territories and possessions significantly affecting natural or ecological resources of global importance that are designated for protec-

tion by the President or, in the case of such a resource protected by international agreement binding on the United States by the Secretary of State. There have been no designations by the President or the Secretary of State as yet. Any agency making a recommendation to the President under Section 2-3(d) shall first consult with the Council on Environmental Quality and the Department of State. Agencies will be promptly advised of any designations made by the President and the Secretary of State under Section 2-3(d)

The State Department and the Council on Environmental Quality will be available to assist agencies in preparing their implementing procedures. Questions should be directed to: Foster Knight, 395-4616, Council on Environmental Quality; William H. Mansfield, 632-2418, Department of State.

It would be helpful in planning the consultations under the Executive Order if agencies would inform the Department of State and the Council on Environmental Quality as soon as feasible if they determine their authorities, programs, and activities are not encompassed by the Order.

ILLUSTRATIVE LIST[1] for Determining Compliance With Section 2-3(c)(1) OF EXECUTIVE ORDER 12114

1. The following is an illustrative list of the products, emissions, and effluents encompassed by Section 2-3(c)(1): asbestos, vinyl chloride, acrylonitrile, isocyanates, polychlorinated biphenyls, pesticides, mercury, beryllium, arsenic, cadmium, and benzene.

2. The following is an illustrative list of the products, emissions and effluents not encompassed by Section 2-3(c)(1): chlorine, caustic soda, ammonia, sulphuric acid, phosphoric acid, nitric acid, sulfur dioxide, nitrogen oxides, and sulfate and sulfite liquors.

[For Immediate Release, January 5, 1979]

Office of the White House Press Secretary

WHITE HOUSE FACT SHEET—EXECUTIVE ORDER ON ENVIRONMENTAL EFFECTS ABROAD

Better understanding of the effects which U.S. actions may have on the world's environment is important both for the nation's welfare and for the welfare of present and future generations of mankind. The President has signed an Executive Order which will help to carry out his Administration's strong commitment to global environmental protection through environmental review of U.S. actions affecting the rest of the world.

This Executive Order establishes for the first time government wide procedures for review of environmental effects abroad of major federal actions. The Order reconciles competing but legitimate goals of environmental protection and those of foreign and export policy and national security. The Order is based on my independent Constitutional authority, and also furthers the purpose of the National Environmental Policy Act and other environmental laws.

There is growing concern that governments are undertaking major actions without enough consideration of the environmental consequences. The unintended results may be to endanger health, safety, and the human environment. Under this Executive Order, federal agencies taking certain kinds of actions which may have significant environmental effects abroad will now establish procedures for taking these effects into consideration before taking action. When appropriate, agencies will make this information available to affected foreign nations.

At the same time, consideration of environmental impacts abroad bears on important foreign, economic and national security policy goals and interests. The Order is designed to minimize any adverse effects upon U.S. exports and to further the Administration's nuclear non-proliferation, national security and other foreign policy objectives.

The Executive Order applies to all federal agencies with activities outside the United States. Within eight months these agencies are to put into effect procedures for implementing the Order. The Council on Environmental Quality and the Department of State will work with agencies in preparing their implementing procedures, and will remain available to provide any advice or information that agencies may request to help them review environmental effects of their actions.

TYPES OF FEDERAL ACTIONS COVERED BY THE ORDER

For the *global commons* (such as oceans or Antarctica), the Order provides that environmental impact statements will be prepared for all major federal actions having significant environmental effects.

For *foreign countries* when their environments are significantly affected by major federal actions, agency procedures are to provide for the preparation of environmental review documents in the following situations:

—When the foreign nation affected is not participating with the United States and is not otherwise involved in the project (for example, a U.S.-financed dam in one country that cuts off water to another "innocent bystander" country);

—When the federal action provides a facility which is prohibited or strictly regulated in the United States to protect against radioactive hazards (for example, U.S. exports of nuclear reactors);

—When the federal action provides products or facilities whose principal products, emissions or effluents are prohibited or strictly regulated in the United States because their toxic effects on the environment create a serious public health risk. To clarify the kinds of products and discharges in this category, the President has directed the Export-Import Bank and the Council on Environmental Quality to prepare illustrative lists;

—When the federal action significantly affects natural or ecological resources of global importance that may in the future be designated by the President, or, in the case of resources protected by International agreement, by the Secretary of State.

Where the environmental effects of federal actions are within foreign countries, agencies have flexibility under the Executive Order to prepare either concise environmental reviews of the issues involved, or to undertake bilateral or multilateral environmental studies. Environmental Impact Statements will not be required in these circumstances. The Order does not limit agencies from providing in their procedures for measures in addition to the government-wide requirements in the Order to further the purpose of the National Environmental Policy Act and other environmental laws.

The Order provides agencies with flexibility in developing their procedures. Certain kinds of actions or categories of actions are exempted by the Order altogether. Agencies will also be able to provide for categorical exclusions. Thus, for example, Eximbank may exclude its Exporter Credits, Guarantee and Insurance Program from the procedures that it establishes to implement the Order. The Order also allows agencies to modify their procedures for individual actions to take account of certain important national interests and considerations which are specified in the Order. These decisions will be made by each agency for its own actions. In addition, agencies may provide for other exemptions to meet emergency circumstances or situations involving exceptional foreign policy or national security sensitivities.

The Executive Order clarifies the kinds of environmental reviews required for U.S. actions abroad, and removes uncertainties faced by the agencies and exporters. The Order states that it is not be be construed to create a cause of action. A minor fraction of the dollar volume of U.S. exports will require environmental reviews under this Order. The Order's procedures define and focus on those export actions which should receive special scrutiny because of their serious impacts on the environment and public health.

Nuclear reactors are subject to the environmental review requirements of the Order, but exports of nuclear fuel are not. The President has designated the Department of State as the lead agency to work with other relevant agencies to develop unified procedures for environmental reviews of nuclear exports covered by the Order. These procedures will provide for consideration of environmental issues without impairing U.S. reliability as a nuclear supplier.

This Executive Order supplements the United States efforts to promote international measures to protect the environment. Very recently, Secretary Vance signed the new Great Lakes Water Quality Agreement with Canada—a major element in our continuing cooperation with Canada in environmental protection. Earlier this year, in response to an administration initiative, the major shipping nations undertook stringent new obligations in the protection of the marine environment from oil pollution. The treaty embodying these obligations has been forwarded to the Senate for its action. We have made similar efforts—and progress—in the draft law of the sea treaty. In negotiations now under way, the United States has been pressing strongly for protection of porpoises by all countries involved in Pacific tuna fishing. We are currently working on a number of other international programs in the environmental area, such as

[1] These illustrative lists are non-inclusive, for guidance in complying with Section 2-3(c)(1) of E.O. 12114. At the request of the White House these lists were prepared and agreed on by the Council on Environmental Quality and the Export-Import Bank.

transboundary pollution with Canada and the European states, prevention of desertification with Mexico and implementation of Senate Resolution 49. International cooperation in environmental protection has proved increasingly effective, and the United States intends to continue its strong role in this sphere.

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COUNCIL ON ENVIRONMENTAL QUALITY

Publishing of Three Memoranda for Heads of Agencies

August 20, 1980.

The Council on Environmental Quality is publishing three Memoranda for Heads of Agencies.

The first memorandum, dated August 11, 1980, on Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act was developed in cooperation with the Department of Agriculture. It updates and supersedes the Council's previous memorandum on this subject of August 1976.

The second memorandum, dated August 11, 1980, requests information on agency agriculatural land policies and other information related to the implementation of the first memorandum.

The third memorandum, dated August 10, 1980, on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory is intended to assist federal agencies in meeting their responsibilities under the President's August 2, 1979 directive.

Edward L. Strohbehn, Jr.,

Executive Director.

Executive Office of the President,
Council on Environmental Quality,
722 Jackson Place, NW., Washington, D.C.

August 11, 1980.

Memorandum for Head of Agencies

Subject: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act

Approximately one million acres of prime or unique agricultural lands [1] are being converted irreversibly to nonagricultural uses each year. Actions by federal agencies such as construction activities, development grants and loans, and federal land management decisions frequently contribute to the loss of prime and unique agricultural lands directly or indirectly. Often these losses are unintentional and are not necessarily related to accomplishing the agency mission.

On August 30, 1976, CEQ, in cooperation with the Department of Agriculture, issued a memorandum to the heads of federal agencies on the need for analysis of prime or unique farmlands in the preparation and review of environmental impact statements. The memorandum also recommended steps for agencies to take in making such analyses. Since that memorandum was issued, federal agencies' environmental impact statements have begun to include references to the presence of prime or unique farmlands that would be affected by the propsed federal action. Moreover, they have clearly indicated that many federal and federally assisted projects have direct and indirect adverse impact on prime or unique farmlands.

Recent studies by the Council and the General Accounting Office indicate that federal agencies have not adequately accounted for the impacts of their proposed actions on agricultural land through the environmental assessment process. Furthermore, agency project plans and decisions have frequently not reflected the need and opportunities to protect these lands. The purpose of this memorandum is to alert federal agenices to the need and the opportunities to analyze agricultural land impacts more effectively in the project planning process and under the National Environmental Policy Act (NEPA).

Agencies can substantially improve their analysis of impacts on prime or unique agricultural lands by following closely our recently established NEPA regulations (40 CFR 1500-1508, Nov. 29, 1978). The regulations apply to these lands in several specific respects. Determining the effects of a proposed federal agency action on prime or unique agricultural lands must be an integral part of the environmental assessment process, and must be a factor in deciding whether or not to prepare an environmental impact statement. For examle, when an agency begins planning any action, it should, in the development of alternative actions, assess whether the alternatives will affect prime or unique agricultural lands. Then, recognizing the importance of these lands and any significant impacts that might affect them, it must study, develop, and describe appropriate alternative uses of available resources. (Sec. 1501.2(c).)

In determining whether to prepare an environmental impact statement, the regulations note that the "Unique characteristics of the geographic area such as * * * prime farmlands * * *" (Sec. 1508.27(b)(3)) must be considered, among others. If an agency determines that a proposal significantly affect the quality of the human environment, it must initiate the scoping process (Sec. 1501.7) to identify those issues, including effects on prime or unique agricultural lands, that will be analyzed and considered, along with the alternatives available to avoid or mitigate adverse effects. An environmental impact statement must include a description of the area that will be affected by the proposed action (Sec. 1502.15) and an analysis of the environmental consequences of the proposal, including a discussion of "natural or depletable resource requirements and conservation potential or various alternative and mitigation measures" (Sec. 1502.16(f)). These resource requirements include prime or unique agricultural lands. The effects to be studied encompass indirect effects that may include "growth inducing effects and other effects related to induced changes in the pattern of land use * * *" (Sec. 1508.8(b)). The cumulative effects of a proposal must be studied (Secs. 1508.7, 1508.8(b)), as must any mitgation measures that could be taken to lessen the impact on prime or unique agricultural lands (Secs. 1505.2(c), 1508.20). Agencies must also cooperate with state or local governments in their efforts to help retain these lands (Secs. 1502.16(c), 1506.2(d).)

Federal agencies with technical data on the occurence, value, or potential impacts of federal actions on these lands will provide the lead agency with data that may be useful in preparing environmental assessments or impact statements. The U.S. Department of Agriculture will cooperate with all agencies in planning projects or developments, in assessing impacts on prime or unique agricultural lands, and in defining alternatives. Technical data as assistance regarding agricultural land may be obtained by contacting the Chairperson of the USDA Land Use Committee (list attached) or any USDA office. In addition to providing technical data and assistance, the USDA will continue to emphasize the review of EISs on federal actions likely to have significant effects on prime and unique farmlands. Under Section 1504 of the regulations, USDA should refer to CEQ those proposed federal actions which it believes will be environmentally unsatisfactory because of unacceptable effects on prime or unique farmlands. CEQ will review such referrals, and take necessary steps in accordance with Section 1504 of our regulations.

Because prime and unique agricultural lands are a limited and valuable resource, the Council urges all agencies to make a particularly careful effort to apply the goals and policies of the National Environmental Policy Act to their actions and to obtain necessary assistance in their planning processes so that these lands will be maintained to meet our current national needs and the needs of future generations of Americans.

Gus Speth,

Chairman.

Attachments.

U.S. Department of Agriculture State Land Use Committee Chairpersons

Mr. William B. Lingle, State Conservationist, Soil Conservation Service, P.O. Box 311, Auburn, Alabama 36830

Mr. Marvin C. Meier, Director, State and Private Forestry, 2221 E. Northern Lights Blvd., Box 6606, Anchorage, Alaska 99502

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Mr. James H. Hansen, State Resource Conservationist, Soil Conservation Service,

[1] As used in this memorandum, prime and unique agricultural land is cropland, pastureland, rangeland, forest land or other land, but not urban built-up land, which is capable of being used as prime and unique farmland as defined by the Department of Agriculture (see attachement) [The attachment to this memorandum was § 657.5 of title 7 CFR.]

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Executive Office of the President,
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722 Jackson Place, NW., Washington, D.C.

August 11, 1980.

Memorandum for Heads of Agencies

Subject: Prime and Unique Agricultural Lands and the National Environmental Policy Act (NEPA)

The accompanying memorandum on Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act was developed in cooperation with the Department of Agriculture. It updates and supersedes the Council's previous memoradnum on this subject of August 1976.

In order to review agency progress or problems in implementing this memorandum the Council will request periodic reports from Federal agencies as part of our ongoing oversight of agency implementation of NEPA and the Council's regulations. At this time we would appreciate receiving from your agency by November 1, 1980, the following information:

- identification and brief summary of existing or proposed agency policies, regulations and other directives specifically intended to preserve or mitigate the effects of agency actions on prime or unique agricultural lands, including criteria or methodology used in assessing these impacts.
- identification of specific impact statements and, to the extent possible, other documents prepared from October 1, 1979 to October 1, 1980 covering actions deemed likely to have significant direct or indirect effects on prime or unique agricultural lands.
- the name of the policy-level official responsible for agricultural land policies in your agency, and the name of the staff-level official in your agency's NEPA office who will be responsible for carrying out the actions discussed in this memorandum.

Gus Speth,
Chairman.

Executive Office of the President,
Council on Environmental Quality,
722 Jackson Place, NW., Washington, D.C.

August 10, 1980.

Memorandum for Heads of Agencies

Subject: Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory

In his second Message on the Environment, issued in August 1979, the President underscored the need to strengthen the National Wild and Scenic Rivers System and to take particular care not to harm rivers

which may qualify for inclusion in the System.

The President issued a directive on August 2, 1979 in conjunction with his Message which required that:

"Each Federal agency shall, as part of its normal planning and environmental review process, take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory prepared by the Heritage Conservation and Recreation Service in the Department of the Interior. Agencies shall, as part of their normal environmental review process, consult with the Heritage Conservation and Recreation Service prior to taking actions which could effectively foreclose wild, scenic, or recreational river status on rivers in the Inventory."

This memorandum is intended to assist your agency in meeting its responsibilities under the President's directive. A brief set of procedures is attached which provides guidance on how to integrate these responsibilities with your normal environmental analysis process under the National Environmental Policy Act (NEPA). The objective is to ensure that the President's directive is met promptly and efficiently.

Development along our rivers continues to outpace our ability to protect those rivers that might qualify for designation in the National Wild and Scenic Rivers System. The Heritage Conservation and Recreation Service (HCRS) in the Department of the Interior has been preparing a Nationwide Inventory of river segments that, after preliminary review, appear to qualify for inclusion in the System. It is therefore essential that federal agencies proceed carefully and limit any adverse effects of their actions on rivers identified in the Nationwide Inventory. Otherwise, the Inventory could be depleted before the identified rivers can be fully assessed to determine the desirability of including them as components of the National Wild and Scenic Rivers System.

Although the President's directive does not prohibit an agency from taking, supporting or allowing an action which would adversely affect wild and scenic values of a river in the Inventory, each agency is responsible for studying, developing and describing all reasonable alternatives before acting, and for avoiding and mitigating adverse effects on rivers identified in the Inventory. Where agency action could effectively foreclose the designation of a wild, scenic, or recreational river segment, the President has directed the agency to consult with HCRS. It is difficult to restore a river and its immediate environment once its wild and scenic qualities have been lost.

The purpose of this consultation requirement, which is meant to be part of the normal environmental analysis process, is to provide the opportunity for HCRS experts to assist other agencies in meeting program objectives without irreparably damaging potential wild, scenic, and recreational river areas. Consultation with HCRS should encourage better planning *at an early stage* in order to reduce resource management conflicts or to avoid them altogether. The consultation requirement also provides an opportunity to seek early resolution of problems by policy-level officials if necessary.

Completed portions of the Nationwide Inventory—those for the Eastern half of the country—were sent to you from HCRS Director Chris T. Delaporte on November 13, 1979. Forthcoming portions of the Inventory will be transmitted as they are completed. You should ensure that the list of rivers in the Inventory and the attached procedures receive wide distribution in your agency.

Copies of orders, guidance, or memoranda which you use to adopt or to transmit the attached procedures within your agency should be sent to the Council on Environmental Quality (Attention: Larry Williams) and to the Interagency Wild and Scenic Rivers Study Group (Attention: Jack Hauptman, HCRS, 440 G Street, N.W., Washington, D.C. 20243).

Gus Speth,

Chairman.

Attachment.

Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory

These procedures are designed to assist federal officials in complying with the President's directive (attached) to protect rivers in the Nationwide Inventory through the normal environmental analysis process. NEPA, E.O. 11514, CEQ's NEPA Regulations, and agency implementing procedures should be used to meet the President's directive.

Although the steps outlined below pertain to wild and scenic river protection, they also fit clearly within agencies' existing environmental analysis processes. Agencies are already required: to identify and analyze the environmental effects of their actions; to consult with agencies with jurisdiction by law or special expertise (in this case, HCRS); to develop and study alternatives; and to use all practicable means and measures to preserve important historic, cultural, and natural aspects of our national heritage.

The procedures outlined below simply link the appropriate elements of the normal environmental analysis process with the President's directive "to take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory." Federal officials should promptly take steps to incorporate the actions specified below into their planning and decisionmaking activities and the conduct of their environmental analyses.

1. *Determine whether the proposed action could affect an Inventory river.*

Check the current regional Inventory lists to determine whether the proposed action could affect an Inventory river.

If an Inventory river could be affected by the proposed action, an environmental assessment or an environmental impact statment may be required depending upon the significance of the effects.

If the action would not affect an Inventory river, no further action is necessary under these procedures. (The agency is still required to fulfill any other responsibilities under NEPA).

2. *Determine whether the proposed action could have an adverse effect on the natural, cultural and recreational values of the Inventory river segment.*

Using the Guide for Identifying Potential Adverse Effects, which is appended to these procedures, you should determine whether the proposed action could *adversely* affect the natural, cultural, or recreational values of the Inventory river segment. Adverse effects on inventoried rivers may occur under conditions which include, but are not limited to:

(1) Destruction or alteration of all or part of the free flowing nature of the river;

(2) Introduction of visual, audible, or other sensory intrusions which are out of character with the river or alter its setting;

(3) Deterioration of water quality; or

(4) Transfer or sale of property adjacent to an inventoried river without adequate conditions or restrictions for protecting the river and its surrounding environment.

If you have prepared a document which finds that there would be no adverse effects—such as a Finding of No Significant Impact under the CEQ NEPA regulations—you should send a courtesy copy to the HCRS field office in your region.

3. *Determine whether the proposed action could foreclose options to classify any portion of the Inventory segment as wild, scenic or recreational river areas.*

In some cases, impacts of a proposed action could be severe enough to preclude inclusion in the Wild and Scenic Rivers System, or lower the quality of the classification (e.g. from wild to recreational). If the proposed undertaking would effectively downgrade any portion of the Inventory segment you should consult with HCRS.

Proposed actions (whether uses or physical changes), which are theoretically reversible, but which are not likely to be reversed in the short terms, should be considered to have the effect of foreclosing for all practical purposes wild and scenic river status. This is because a river segment, when studied for a possible inclusion in the Wild and Scenic River System, must be judged as it is found to exist at the time of the study, rather than as it may exist at some future time.

If a proposal, including one or more alternatives, could have an adverse effect on a river in the Inventory, an environmental assessment or, if the effects are significant, an environmental impact statement must be prepared. HCRS staff is available to assist you in determing the significance or severity of the effects in connection with your assessment, scoping process, and EIS, if one is needed. A detailed analysis of each of the rivers in the Inventory is available from HCRS for your use.

You should request assistance in writing from HCRS, as early as you can, providing sufficient information about the proposal to allow HCRS to assist you in determining whether any of the alternatives under consideration would foreclose designation. HCRS will in turn provide you with an analysis of the impacts on natural, cultural and recreational values which should enable you to make a determination as to whether or not designation would be foreclosed. HCRS is available to assist you in developing appropriate avoidance/mitigation measures.

When environmental assessments are prepared on proposals that affect Inventory

rivers, copies should be sent in a timely fashion to the HCRS field office in your area before a proposed action is taken and while there is still time to avoid or mitigate adverse effects. When environmental impact statements are prepared on proposals that affect Inventory rivers the lead agency should request HCRS and the affected land managing agency to be cooperating agencies as soon as the Notice of Intent to prepare an EIS has been published.

If HCRS does not respond to your request for assistance within 30 days, you may proceed with completing preparation and circulation of the environmental assessment or EIS as planned. Even where HCRS has been unable to comment on the environmental assessment or Draft EIS, you are still obligated by the President's directive to ". . . take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory . . ."

4. *Incorporate avoidance/mitigation measures into the proposed action to maximum extent feasible within the agency's authority.*

Any environmental documents prepared on the proposed action should identify the impacts on natural, cultural and recreational values, address the comments submitted by HCRS, and state the avoidance/mitigation measures adopted. Any disagreements will be resolved through existing procedures. For projects requiring environmental impact statements, the record of decision must adopt appropriate avoidance/mitigation measures and a monitoring and enforcement program as required by the CEQ regulations. (40 CFR 1505.2(c)).

A Note on the Meaning of "Federal Actions"

The above procedures are meant to apply to all federal actions that could adversely affect a river in the Nationwide Inventory (see Section 1508.18 of CEQ's NEPA Regulations (40 CFR 1508.18) for the meaning of "major federal actions"). For actions which are known in advance to require an environmental assessment or environmental impact statement these procedures would be followed in the normal course of NEPA compliance. If a federal action would *not* normally require an environmental assessment or an environmental impact statement, but could adversely affect a river in the Nationwide Inventory, the action should either (1) not be "categorically excluded" under agency implementing procedures, or (2) be considered an "extraordinary circumstance" in which a normally excluded action must be subjected to environmental analysis (see Section 1508.4 of NEPA Regulations).

The above procedures should be used for any proposals (including the evaluation of alternative courses of action) for which the NEPA process is not yet completed. The above procedures should therefore also be applied to a proposed modification or supplement to a previously authorized or implemented action.

For Futher Information or Guidance

The HCRS regional office will usually provide the best source of information on rivers in the Nationwide Inventory and on specific ways that these rivers could be protected. For general assistance on policy and procedural matters, please contact the Chairman of the Interagency Wild and Scenic Rivers Study Group (202/343-4793), or contact the Council on Environmental Quality (202/395-4540).

Appendix I.

Guide for Identifying Potential Adverse Effects

The impact of a propose action should be assessed in relation to the eligibility and classification criteria of the Wild and Scenic Rivers Act, 16 U.S.C. 1271-1287, as amended.

In order to be eligible for inclusion in the National System, a river must:

1. Be "free-flowing," i.e., "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, or low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: *Provided*, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of national wild and scenic rivers system." (16 U.S.C. Sec. 1288)

2. Possess "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." (16 U.S.C. Sec. 1271)

Eligible river segments are classified according to the extent of evidence of man's activity as one of the following:

1. "Wild river areas—Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America."

2. "Scenic river areas—Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."

3. "Recreational river areas—Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past." (16 U.S.C. Sec. 1273(b))

Any action which could alter the river segment's ability to meet the above eligibility and classification criteria should be considered an adverse impact. Actions which diminish the free-flowing characteristics or outstandingly remarkable values of a river segment could prevent the segment from qualifying for inclusion in the national system. Actions which increase the degree of evidence of man's activity, i.e., level of development, could change the classification of the river segment.

The effect of all proposed developments within the river corridor should be assessed in terms of severity of effect and extent of area affected. Development outside the corridor which would cause visual, noise, or air quality impacts on the river corridor should also be examined.

Only proposed new construction or proposed expansion of existing developments need be considered in assessing impacts. Repair or rehabilitation of existing structures would not have a negative impact except if the action would result in significant expansion of the facility or if the construction process itself would cause an irreversible impact on the environment.

Placement of navigation aids such as buoys and channel markers will not be considered as causing adverse effects.

The following are examples of types of developments which would generally require consultation with HCRS because of the potential for adverse effects on the values of a potential wild, scenic, or recreational river. The list is not exhaustive.

Small dock	Road
Small bulkhead	Railroad
Clearing and snagging	Building (any type)
Drainage canal, culvert or outfall	Pipeline, transmission line
Irrigation canal	Bridge or ford
Levee or dike	Gas, oil or water well
Rip-rap, bank stabilization or erosion control structure	Sub-surface mine opening
Small reservoir	Quarry
Increase in commercial navigation	Power substation
Dredging or filling	Recreation area
Run-of-the-river dam or diversion structure	Dump or junkyard
	Change in flow regime
	Clear-cut timber harvest
	Radio tower, windmill

The following are examples of types of development which appear most likely to cause serious adverse effects if they are constructed adjacent to or in close proximity to an Inventory river. Such development proposals will almost always require consultation with HCRS because their effects are likely to conflict with the values of a potential wild, scenic or recreational river. These effects could be severe enough to foreclose designation of the affected river segment. This list is not exhaustive.

Impoundment	Major highway
Channelization	Railroad yard
Instream or surface mining	Power plant
	Sewage treatment plant
Lock and dam	Housing development
Airport	Shopping center
Landfill	Industrial park
Factory	Marina
Gas or oil field	Commercial dock

Appendix II

[For a memorandum from the President on Wild and Scenic Rivers and National Trails dated August 2, 1979, see the *Weekly Compilation of Presidential Documents* (Vol. 15, page 1379).]

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N.W.
WASHINGTON, D.C. 20006

November 17, 1980

MEMORANDUM FOR HEADS OF AGENCIES

SUBJECT: Guidance on Applying Section 404(r) of the Clean Water Act To Federal Projects Which Involve the Discharge of Dredged or Fill Materials into Waters of the U.S., Including Wetlands

I. Introduction

This memorandum establishes procedures for coordinating agency views and formulating Administration policy prior to requesting Congressional action on projects that may be subject to Section 404(r) of the Clean Water Act (Federal Water Pollution Control Act, as amended). The memorandum is also in furtherance of Executive Order 12088, Federal Compliance with Pollution Control Standards. The Order establishes a policy that the heads of federal agencies will ensure that all necessary actions are taken for the prevention, control and abatement of environmental pollution with respect to federal facilities and activities under the control of the agency.

The above procedures will ensure that timely and adequate environmental information is available and is considered by an agency before an agency requests authorization or funding from the Congress for federal projects involving the discharge of dredged or fill material and before an agency actually discharges any dredged or fill material. These procedures will also ensure that the Corps and EPA, the two agencies with special expertise and jurisdiction over Section 404 of the Clean Water Act, will carefully review each proposed project which may be subject to the provisions of Section 404(r) of the Clean Water Act, and that the written views of these two agencies will be transmitted to OMB and to the Congress. Finally, these procedures will ensure that a coordinated Administration position can be developed prior to initiating projects which may be subject to Section 404(r), in part through CEQ's predecision referral process for environmentally unsatisfactory proposals and OMB's legislative and budget processes.

II. Section 404(r)

Section 404(r) provides that federal construction projects which are specifically authorized by Congress must comply with Section 307; effluent standards or prohibitions but are not subject to regulation under Sections 301, 402, or 404 of the Act (the U.S. Army Corps of Engineers permit program for the discharge of dredged or fill material) if:

"...information on the effects of such discharge, including consideration of the guidelines developed under subsection (b)(1) of this section, is included in an environmental impact statement for such project pursuant to the National Environmental Policy Act of 1969 and such environmental impact statement has been submitted to Congress before the actual discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for such construction."

In order to satisfy this provision, it is important that the environmental impact statement process be completed before requests for authorizations and appropriations are approved by Congress for federal projects which will involve the discharge of dredged or fill material in waters of the United States, including wetlands, and before actual discharges occur. Completion of the environmental impact statement process includes resolution of any predecision referrals under the NEPA Regulations (40 CFR 1504), E.O. 11514, as amended, and related policies and procedures.

Federal projects not specifically authorized by Congress are not candidates for exemption under Section 404(r) and can be prohibited by or otherwise subject to regulation under nationwide, general, or individual permit requirements.

III. Guidance

Agencies shall therefore take the following actions, where applicable, to meet requirements of the Clean Water Act and the National Environmental Policy Act:

1. As part of their responsibilities under the National Environmental Policy Act (NEPA), the Army Corps of Engineers and the Environmental Protection Agency shall review all environmental impact statements on direct federal proposals involving discharge of dredged or fill material to examine: (a) whether the environmental impact statement contains the requisite information on proposed discharges; and (b) whether the proposal is consistent with the guidelines developed by EPA in conjunction with the Corps under subsection 404(b)(1) of the Clean Water Act. In addition to filing draft and final environmental impact statements with the Office of Environmental Review of EPA, therefore, each agency shall also send copies of the relevant impact statements directly to the appropriate EPA Regional Administrator(s) shall be consulted regarding Section 404 matters during preparation of an EIS by a District or Division Engineer, and both the Regional Administrator(s) and District Engineer(s) shall be consulted concerning such matters during preparation of an EIS by another Federal agency.

2. If an agency wishes to apply Section 404(r) to a proposal which has been the subject of an environmental impact statement filed prior to the date of this memorandum, the agency shall, prior to requesting any further OMB clearance or Congressional approval, request EPA and the Corps of Engineers to review the environmental impact statement (for adequacy and consistency as specified in Paragraph 1 above). EPA and Corps officials shall normally transmit their comments within 15 days of receiving the statement for this purpose. Upon completion of the review and before seeking further OMB clearance or Congressional action on the proposal, the requesting agency shall allow an additional 15 days for either EPA or the Corps to refer any environmentally unsatisfactory proposals or parts thereof to CEQ for its predecision referral process under 40 CFR Part 1504.

3. If, in the judgment of the EPA or the Corps, or both agencies, an impact statement (draft, final, or supplement) does not contain the requisite information or is inconsistent with the Section 404(b)(1) guidelines, these conclusions shall be forwarded in writing to the agency proposing the project. These conclusions should be included in EPA's or the Corps's overall comments on the environmental impact statement. The proponent agency shall consider and address these written conclusions and, if appropriate, reevaluate or revise its proposed action and alternatives.

   In some cases, the environmental impact statement contains adequate information on the effects of the discharge, but EPA or the Corps state in their comments that the proposal is not consistent or otherwise in compliance with Section 404(b)(1) guidelines. In such cases, for statements filed after the date of this memorandum, the Cover Sheet and Summary of the environmental impact statement shall contain the following sentence:

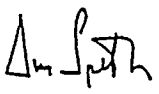
   > "The EPA/the Corps (as appropriate) has determined that this project as proposed is not consistent or otherwise in compliance with the Section 404(b)(1) guidelines of the Clean Water Act."

In all cases, the proponent agency shall ensure that the written conclusions of EPA or the Corps are included in or attached to the environmental impact statement, clearly identified, circulated with the statement, and submitted to the Congress prior to requesting either authorization or appropriation of funds and prior to actual discharge.

4. In some cases, an environmental impact statement will not provide a sufficient basis to determine whether the Section 404(r) exemption applies to a proposal (for example, an authorization proposal which occurs long before the project is designed). In other cases the proponent agency does not intend for the requisite Section 404(r) information to be included in the EIS, or the proponent agency agrees with EPA or the Corps that impact statement does not include adequate information about or otherwise comply with the Section 404(b)(1) guidelines. In all such cases, for statements filed after the date of this memorandum, the Cover Sheet and the Summary of the environmental impact statement shall contain the following sentence:

> "The information in this environmental impact statement does not constitute adequate information on the effects of such discharge, within the meaning of Section 404(r) of the Clean Water Act, including consideration of the guidelines developed under subsection 404(b)(1)."

When this sentence is made part of an EIS, discharges are subject to the Section 404 permit requirements or to future authorizations or appropriations with the application of Section 404(r). If the agency plans to utilize Section 404(r) to obtain an exemption from the Section 404 permit process for such discharge, the EIS shall provide an estimate of when such authorization will be sought. The possibility of a project becoming exempt under Section 404(r) remains open in such cases as long as the discharge has not occurred, provided that the EIS can be revised to contain adequate information within the meaning of Section 404(r) related to the Section 404(b)(1) guidelines and that the project is consistent with the Section 404(b)(1) guidelines.



GUS SPETH
Chairman

COUNCIL ON ENVIRONMENTAL QUALITY

40 CFR Parts 1501, 1502, and 1508

Scoping Guidance

May 1, 1981.

AGENCY: Council on Environmental Quality, Executive Office of the President.

ACTION: Information only; Publication of Notice of Availability of Memorandum to Agencies Containing Scoping Guidance.

SUMMARY: The Council on Environmental Quality, as part of its oversight of implementation of the National Environmental Policy Act, investigated agency and public experiences with the scoping process. This guidance document summarizes a series of recommendations which were distilled from this research. It contains no new legal requirements beyond those in the NEPA regulations. Notice is being published in the **Federal Register** in order to make the fruits of this project generally available and to encourage the use of better techniques for ensuring public participation and efficiency in the scoping process.

ADDRESS: Copies of the memorandum may be obtained from Michael Kane, Council on Environmental Quality, 722 Jackson Place, NW., Washington, D.C. 20006; 202–395–5750.

FOR FURTHER INFORMATION CONTACT: Michael Kane; 202–395–5750.

Nicholas Yost,

General Counsel.

[FR Doc. 81–13820 Filed 5–6–81; 8:45 am]

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

April 30,-1981

MEMORANDUM FOR GENERAL COUNSELS, NEPA LIAISONS AND PARTICIPANTS IN SCOPING

SUBJECT: Scoping Guidance

As part of its continuing oversight of the implementation of the NEPA regulations, the Council on Environmental Quality has been investigating agency experience with scoping. This is the process by which the scope of the issues and alternatives to be examined in an EIS is determined. In a project led by Barbara Bramble of the General Counsel's staff, the Council asked federal agencies to report their scoping experiences; Council staff held meetings and workshops in all regions of the country to discuss scoping practice; and a contract study was performed for the Council to investigate what techniques work best for various kinds of proposals.

Out of this material has been distilled a series of recommendations for successfully conducting scoping. The attached guidance document consists of advice on what works and what does not, based on the experience of many agencies and other participants in scoping. It contains no new legal requirements beyond those in the NEPA regulations. It is intended to make generally available the results of the Council's research, and to encourage the use of better techniques for ensuring public participation and efficiency in the scoping process.

NICHOLAS C. YOST
General Counsel

Note: Reproduced from the best available copy.

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SCOPING GUIDANCE

I. Introduction

A. Background of this document.

In 1978, with the publication of the proposed NEPA regulations (since adopted as formal rules, 40 C.F.R. Parts 1500-1508), the Council on Environmental Quality gave formal recognition to an increasingly used term — scoping. Scoping is an idea that has long been familiar to those involved in NEPA compliance: In order to manage effectively the preparation of an environmental impact statement (EIS), one must determine the scope of the document — that is, what will be covered, and in what detail. Planning of this kind was a normal component of EIS preparation. But the consideration of issues and choice of alternatives to be examined was in too many cases completed outside of public view. The innovative approach to scoping in the regulations is that the process is open to the public and state and local governments, as well as to affected federal agencies. This open process gives rise to important new opportunities for better and more efficient NEPA analyses, and simultaneously places new responsibilities on public and agency participants alike to surface their concerns early. Scoping helps insure that real problems are identified early and properly studied; that issues that are of no concern do not consume time and effort; that the draft statement when first made public is balanced and thorough; and that the delays occasioned by re-doing an inadequate draft are avoided. Scoping does not create problems that did not already exist; it ensures that problems that would have been raised anyway are identified early in the process.

Many members of the public as well as agency staffs engaged in the NEPA process have told the Council that the open scoping requirement is one of the most far-reaching changes engendered by the NEPA regulations. They have predicted that scoping could have a profound positive effect on environmental analyses, on the impact statement process itself, and ultimately on decisionmaking.

Because the concept of open scoping was new, the Council decided to encourage agencies' innovation without unduly restrictive guidance. Thus the regulations relating to scoping are very simple. They state that "there shall be an early and open process for determining the scope of issues to be addressed" which "shall be termed scoping," but they lay down few specific requirements. (Section 1501.7*). They require an open process with public notice; identification of significant and insignificant issues; allocation of EIS preparation assignments; identification of related analysis requirements in order to avoid duplication of work; and the planning of a schedule for EIS preparation that meshes with the agency's decisionmaking

* All citations are to the NEPA regulations, 40 C.F.R. Parts 1500-1508 unless otherwise specified.

schedule. (Section 1501.7(a)). The regulations encourage, but do not require, setting time limits and page limits for the EIS, and holding scoping meetings. (Section 1501.7(b)). Aside from these general outlines, the regulations left the agencies on their own. The Council did not believe, and still does not, that it is necessary or appropriate to dictate the specific manner in which over 100 federal agencies should deal with the public. However, the Council has received several requests for more guidance. In 1980 we decided to investigate the agency and public response to the scoping requirement, to find out what was working and what was not, and to share this with all agencies and the public.

The Council first conducted its own survey, asking federal agencies to report some of their scoping experiences. The Council then contracted with the American Arbitration Association and Clark McGlennon Associates to survey the scoping techniques of major agencies and to study several innovative methods in detail.* Council staff conducted a two-day workshop in Atlanta in June 1980, to discuss with federal agency NEPA staff and several EIS contractors what seems to work best in scoping of different types of proposals, and discussed scoping with federal, state and local officials in meetings in all 10 federal regions.

This document is a distillation of all the work that has been done so far by many people to identify valuable scoping techniques. It is offered as a guide to encourage success and to help avoid pitfalls. Since scoping methods are still evolving, the Council welcomes any comments on this guide, and may add to it or revise it in coming years.

B. What scoping is and what it can do.

Scoping is often the first contact between proponents of a proposal and the public. This fact is the source of the power of scoping and of the trepidation that it sometimes evokes. If a scoping meeting is held, people on both sides of an issue will be in the same room and, if all goes well, will speak to each other. The possibilities that flow from this situation are vast. Therefore, a large portion of this document is devoted to the productive management of meetings and the de-fusing of possible heated disagreements.

Even if a meeting is not held, the scoping process leads EIS preparers to think about the proposal early on, in order to explain it to the public and affected agencies. The participants respond with their own concerns about significant issues and suggestions of alternatives. Thus as the draft EIS is prepared, it will include, from the beginning, a reflection or at least an acknowledgement of the cooperating agencies' and the public's concerns. This reduces the need for changes after the draft is finished, because it

* The results of this examination are reported in "Scoping the Content of EISs: An Evaluation of Agencies' Experiences," which is available from the Council or the Resource Planning Analysis Office of the U.S. Geological Survey, 750 National Center, Reston, Va. 22092.

reduces the chances of overlooking a significant issue or reasonable alternative. It also in many cases increases public confidence in NEPA and thedecisionmaking process, thereby reducing delays, such as from litigation, later on when implementing the decisions. As we will discuss further in this document, the public generally responds positively when its views are taken seriously, even if they cannot be wholly accomodated.

But scoping is not simply another "public relations" meeting requirement. It has specific and fairly limited objectives: (a) to identify the affected public and agency concerns; (b) to facilitate an efficient EIS preparation process, through assembling the cooperating agencies, assigning EIS writing tasks, ascertaining all the related permits and reviews that must be scheduled concurrently, and setting time or page limits; (c) to define the issues and alternatives that will be examined in detail in the EIS while simultaneously devoting less attention and time to issues which cause no concern; and (d) to save time in the overall process by helping to ensure that draft statements adequately address relevant issues, reducing the possibility that new comments will cause a statement to be rewritten or supplemented.

Sometimes the scoping process enables early identification of a few serious problems with a proposal, which can be changed or solved because the proposal is still being developed. In these cases, scoping the EIS can actually lead to the solution of a conflict over the proposed action itself. We have found that this extra benefit of scoping occurs fairly frequently. But it cannot be expected in most cases, and scoping can still be considered successful when conflicts are clarified but not solved. This guide does not presume that resolution of conflicts over proposals is a principal goal of scoping, because it is only possible in limited circumstances. Instead, the Council views the principal goal of scoping to be an adequate and efficiently prepared EIS. Our suggestions and recommendations are aimed at reducing the conflicts among affected interests that impede this limited objective. But we are aware of the possibilities of more general conflict resolution that are inherent in any productive discussions among interested parties. We urge all participants in scoping processes to be alert to this larger context, in which scoping could prove to be the first step in environmental problem-solving.

Scoping can lay a firm foundation for the rest of the decisionmaking process. If the EIS can be relied upon to include all the necessary information for formulating policies and making rational choices, the agency will be better able to make a sound and prompt decision. In addition, if it is clear that all reasonable alternatives are being seriously considered, the public will usually be more satisfied with the choice among them.

II. Advice for Government Agencies Conducting Scoping

A. General context.

Scoping is a process, not an event or a meeting. It continues throughout the planning for an EIS, and may involve a series of meetings, telephone conversations, or written comments from different interested groups. Because it is a process, participants must remain flexible. The scope of an EIS occasionally may need to be modified later if a new issue surfaces,

no matter how thorough the scoping was. But it makes sense to try to set the scope of the statement as early as possible.

Scoping may identify people who already have knowledge about a site or an alternative proposal or a relevant study, and induce them to make it available. This can save a lot of research time and money. But people will not come forward unless they believe their views and materials will receive serious consideration. Thus scoping is a crucial first step toward building public confidence in a fair environmental analysis and ultimately a fair decisionmaking process.

One further point to remember: the lead agency cannot shed its responsibility to assess each significant impact or alternative even if one is found after scoping. But anyone who hangs back and fails to raise something that reasonably could have been raised earlier on will have a hard time prevailing during later stages of the NEPA process or if litigation ensues. Thus a thorough scoping process does provide some protection against subsequent lawsuits.

B. Step-by-step through the process.

1. Start scoping after you have enough information.

Scoping cannot be useful until the agency knows enough about the proposed action to identify most of the affected parties, and to present a coherent proposal and a suggested initial list of environmental issues and alternatives. Until that time there is no way to explain to the public or other agencies what you want them to get involved in. So the first stage is to gather preliminary information from the applicant, or to compose a clear picture of your proposal, if it is being developed by the agency.

2. Prepare an information packet.

In many cases, scoping of the EIS has been preceded by preparation of an environmental assessment (EA) as the basis for the decision to proceed with an EIS. In such cases, the EA will, of course, include the preliminary information that is needed.

If you have not prepared an EA, you should put together a brief information packet consisting of a description of the proposal, an initial list of impacts and alternatives, maps, drawings, and any other material or references that can help the interested public to understand what is being proposed. The proposed work plan of the EIS is not usually sufficient for this purpose. Such documents rarely contain a description of the goals of the proposal to enable readers to develop alternatives.

At this stage, the purpose of the information is to enable participants to make an intelligent contribution to scoping the EIS. Because they will be helping to plan what will be examined during the environmental review, they need to know where you are now in that planning process.

Include in the packet a brief explanation of what scoping is, and what procedure will be used, to give potential participants a context for their involvement. Be sure to point out that you want comments from participants

on very specific matters. Also reiterate that no decision has yet been made on the contents of the EIS, much less on the proposal itself. Thus, explain that you do not yet have a preferred alternative, but that you may identify the preferred alternative in the draft EIS. (See Section 1502.14(e)). This should reduce the tendency of participants to perceive the proposal as already a definite plan. Encourage them to focus on recommendations for improvements to the various alternatives.

Some of the complaints alleging that scoping can be a waste of time stem from the fact that the participants may not know what the proposal is until they arrive at a meeting. Even the most intelligent among us can rarely make useful, substantive comments on the spur of the moment. Don't expect helpful suggestions to result if participants are put in such a position.

3. Design the scoping process for each project.

There is no established or required procedure for scoping. The process can be carried out by meetings, telephone conversations, written comments, or a combination of all three. It is important to tailor the type, the timing and the location of public and agency comments to the proposal at hand.

For example, a proposal to adopt a land management plan for a National Forest in a sparsely populated region may not lend itself to calling a single meeting in a central location. While people living in the area and elsewhere may be interested, any meeting place will be inconvenient for most of the potential participants. One solution is to distribute the information packet, solicit written comments, list a telephone number with the name of the scoping coordinator, and invite comments to be phoned in. Otherwise, small meetings in several locations may be necessary when face-to-face communication is important.

In another case, a site-specific construction project may be proposed. This would be a better candidate for a central scoping meeting. But you must first find out if anyone would be interested in attending such a meeting. If you simply assume that a meeting is necessary, you may hire a hall and a stenographer, assemble your staff for a meeting, and find that nobody shows up. There are many proposals that just do not generate sufficient public interest to cause people to attend another public meeting. So a wise early step is to contact known local citizens groups and civic leaders.

In addition, you may suggest in your initial scoping notice and information packet that all those who desire a meeting should call to request one. That way you will only hear from those who are seriously interested in attending.

The question of where to hold a meeting is a difficult one in many cases. Except for site specific construction projects, it may be unclear where the interested parties can be found. For example, an EIS on a major energy development program may involve policy issues and alternatives to the program that are of interest to public groups all over the nation, and to agencies headquartered in Washington, D.C., while the physical impacts might be expected to be felt most strongly in a particular region of the country. In such a case, if personal contact is desired, several meetings

would be necessary, especially in the affected region and in Washington, to enable all interests to be heard.

As a general guide, unless a proposal has no site specific impacts, scoping meetings should not be confined to Washington. Agencies should try to elicit the views of people who are closer to the affected regions.

The key is to be flexible. It may not be possible to plan the whole scoping process at the outset, unless you know who all the potential players are. You can start with written comments, move on to an informal meeting, and hold further meetings if desired.

There are several reasons to hold a scoping meeting. First, some of the best effects of scoping stem from the fact that all parties have the opportunity to meet one another and to listen to the concerns of the others. There is no satisfactory substitute for personal contact to achieve this result. If there is any possibility that resolution of underlying conflicts over a proposal may be achieved, this is always enhanced by the development of personal and working relationships among the parties.

Second, even in a conflict situation people usually respond positively when they are treated as partners in the project review process. If they feel confident that their views were actually heard and taken seriously, they will be more likely to be satisfied that the decisionmaking process was fair even if they disagree with the outcome. It is much easier to show people that you are listening to them if you hold a face-to-face meeting where they can see you writing down their points, than if their only contact is through written comments.

If you suspect that a particular proposal could benefit from a meeting with the affected public at any time during its review, the best time to have the meeting is during this early scoping stage. The fact that you are willing to discuss openly a proposal before you have committed substantial resources to it will often enhance the chances for reaching an accord.

If you decide that a public meeting is appropriate, you still must decide what type of meeting, or how many meetings, to hold. We will discuss meetings in detail below in "Conducting a Public Meeting." But as part of designing the scoping process, you must decide between a single meeting and multiple ones for different interest groups, and whether to hold a separate meeting for government agency participants.

The single large public meeting brings together all the interested parties, which has both advantages and disadvantages. If the meeting is efficiently run, you can cover a lot of interests and issues in a short time. And a single meeting does reduce agency travel time and expense. In some cases it may be an advantage to have all interest groups hear each others' concerns, possibly promoting compromise. It is definitely important to have the staffs of the cooperating agencies, as well as the lead agency, hear the public views of what the significant issues are; and it will be difficult and expensive for the cooperating agencies to attend several meetings. But if there are opposing groups of citizens who feel strongly on both sides of an issue, the setting of the large meeting may needlessly create tension and an emotional confrontation between the groups. Moreover, some

people may feel intimidated in such a setting, and won't express themselves at all.

The principal drawback of the large meeting, however, is that it is generally unwieldy. To keep order, discussion is limited, dialogue is difficult, and often all participants are frustrated, agency and public alike. Large meetings can serve to identify the interest groups for future discussion, but often little else is accomplished. Large meetings often become "events" where grandstanding substitutes for substantive comments. Many agencies resort to a formal hearing-type format to maintain control, and this can cause resentments among participants who come to the meeting expecting a responsive discussion.

For these reasons, we recommend that meetings be kept small and informal, and that you hold several, if necessary, to accomodate the different interest groups. The other solution is to break a large gathering into small discussion groups, which is discussed below. Using either method increases the likelihood that participants will level with you and communicate their underlying concerns rather than make an emotional statement just for effect.

Moreover, in our experience, a separate meeting for cooperating agencies is quite productive. Working relationships can be forged for the effective participation of all involved in the preparation of the EIS. Work assignments are made by the lead agency, a schedule may be set for production of parts of the draft EIS, and information gaps can be identified early. But a productive meeting such as this is not possible at the very beginning of the process. It can only result from the same sort of planning and preparation that goes into the public meetings. We discuss below the special problems of cooperating agencies, and their information needs for effective participation in scoping.

4. Issuing the public notice.

The preliminary look at the proposal, in which you develop the information packet discussed above, will enable you to tell what kind of public notice will be most appropriate and effective.

Section 1501.7 of the NEPA regulations requires that a notice of intent to prepare an EIS must be published in the Federal Register prior to initiating scoping.* This means that one of the appropriate means of giving

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* Several agencies have found it useful to conduct scoping for environmental assessments. EAs are prepared where answering the question of whether an EIS is necessary requires identification of significant environmental issues; and consideration of alternatives in an EA can often be useful even where an EIS is not necessary. In both situations scoping can be valuable. Thus the Council has stated that scoping may be used in connection with preparation of an EA, that is, before publishing any notice of intent to prepare an EIS. As in normal scoping, appropriate public notice is required, as well as adequate information on the proposal to make scoping worthwhile. But scoping at this early stage cannot substitute for the normal scoping process unless the earlier public notice stated clearly that this would be the case, and the notice of intent expressly provides that written comments suggesting impacts and alternatives for study will still be considered.

public notice of the upcoming scoping process could be the same Federal Register notice. And because the notice of intent must be published anyway, the scoping notice would be essentially free. But use of the Federal Register is not an absolute requirement, and other means of public notice often are more effective, including local newspapers, radio and TV, posting notices in public places, etc. (See Section 1506.6 of the regulations.)

What is important is that the notice actually reach the affected public. If the proposal is an important new national policy in which national environmental groups can be expected to be interested, these groups can be contacted by form letter with ease. (See the Conservation Directory for a list of national groups.**). Similarly, for proposals that may have major implications for the business community, trade associations can be helpful means of alerting affected groups. The Federal Register notice can be relied upon to notify others that you did not know about. But the Federal Register is of little use for reaching individuals or local groups interested in a site specific proposal. Therefore notices in local papers, letters to local government officials and personal contact with a few known interested individuals would be more appropriate. Land owners abutting any proposed project site should be notified individually.

Remember that issuing press releases to newspapers, and radio and TV stations is not enough, because they may not be used by the media unless the proposal is considered "newsworthy." If the proposal is controversial, you can try alerting reporters or editors to an upcoming scoping meeting for coverage in special weekend sections used by many papers. But placing a notice in the legal notices section of the paper is the only guarantee that it will be published.

5. Conducting a public meeting.

In our study of agency practice in conducting scoping, the most interesting information on what works and doesn't work involves the conduct of meetings. Innovative techniques have been developed, and experience shows that these can be successful.

One of the most important factors turns out to be the training and experience of the moderator. The U.S. Office of Personnel Management and others give training courses on how to run a meeting effectively. Specific techniques are taught to keep the meeting on course and to deal with confrontations. These techniques are sometimes called "meeting facilitation skills."

When holding a meeting, the principle thing to remember about scoping is that it is a process to initiate preparation of an EIS. It is not concerned with the ultimate decision on the proposal. A fruitful scoping process leads to an adequate environmental analysis, including all reasonable

** The Conservation Directory is a publication of the National Wildlife Federation, 1421 16th St., N.W., Washington, D.C. 20036, $4.00.

alternatives and mitigation measures. This limited goal is in the interest of all the participants, and thus offers the possibility of agreement by the parties on this much at least. To run a successful meeting you must keep the focus on this positive purpose.

At the point of scoping therefore, in one sense all the parties involved have a common goal, which is a thorough environmental review. If you emphasize this in the meeting you can stop any grandstanding speeches without a heavy hand, by simply asking the speaker if he or she has any concrete suggestions for the group on issues to be covered in the EIS. By frequently drawing the meeting back to this central purpose of scoping, the opponents of a proposal will see that you have not already made a decision, and they will be forced to deal with the real issues. In addition, when people see that you are genuinely seeking their opinion, some will volunteer useful information about a particular subject or site that they may know better than anyone on your staff.

As we stated above, we found that informal meetings in small groups are the most satisfactory for eliciting useful issues and information. Small groups can be formed in two ways: you can invite different interest groups to different meetings, or you can break a large number into small groups for discussion.

One successful model is used by the Army Corps of Engineers, among others. In cases where a public meeting is desired, it is publicized and scheduled for a location that will be convenient for as many potential participants as possible. The information packet is made available in several ways, by sending it to those known to be interested, giving a telephone number in the public notices for use in requesting one, and providing more at the door of the meeting place as well. As participants enter the door, each is given a number. Participants are asked to register their name, address and/or telephone number for use in future contact during scoping and the rest of the NEPA process.

The first part of the meeting is devoted to a discussion of the proposal in general, covering its purpose, proposed location, design, and any other aspects that can be presented in a lecture format. A question and answer period concerning this information is often held at this time. Then if there are more than 15 or 20 attendees at the meeting, the next step is to break it into small groups for more intensive discussion. At this point, the numbers held by the participants are used to assign them to small groups by sequence, random drawing, or any other method. Each group should be no larger than 12, and 8-10 is better. The groups are informed that their task is to prepare a list of significant environmental issues and reasonable alternatives for analysis in the EIS. These lists will be presented to the main group and combined into a master list, after the discussion groups are finished. The rules for how priorities are to be assigned to the issues identified by each group should be made clear before the large group breaks up.

Some agencies ask each group member to vote for the 5 or 10 most important issues. After tallying the votes of individual members, each group would only report out those issues that received a certain number of votes. In this way only those items of most concern to the members would even make the list compiled by each group. Some agencies go further, and only let

each group report out the top few issues identified. But you must be careful not to ignore issues that may be considered a medium priority by many people. They may still be important, even if not in the top rank. Thus instead of simply voting, the members of the groups should rank the listed issues in order of perceived importance. Points may be assigned to each item on the basis of the rankings by each member, so that the group can compile a list of its issues in priority order. Each group should then be asked to assign cut-off numbers to separate high, medium and low priority items. Each group should then report out to the main meeting all of its issues, but with priorities clearly assigned.

One member of the lead agency or cooperating agency staff should join each group to answer questions and to listen to the participants' expressions of concern. It has been the experience of many of those who have tried this method that it is better not to have the agency person lead the group discussions. There does need to be a leader, who should be chosen by the group members. In this way, the agency staff member will not be perceived as forcing his opinions on the others.

If the agency has a sufficient staff of formally trained "meeting facilitators," they may be able to achieve the same result even where agency staff people lead the discussion groups. But absent such training, the staff should not lead the discussion groups. A good technique is to have the agency person serve as the recording secretary for the group, writing down each impact and alternative that is suggested for study by the participants. This enhances the neutral status of the agency representative, and ensures that he is perceived as listening and reacting to the views of the group. Frequently, the recording of issues is done with a large pad mounted on the wall like a blackboard, which has been well received by agency and public alike, because all can see that the views expressed actually have been heard and understood.

When the issues are listed, each must be clarified or combined with others to eliminate duplication or fuzzy concepts. The agency staff person can actually lead in this effort because of his need to reflect on paper exactly what the issues are. After the group has listed all the environmental impacts and alternatives and any other issues that the members wish to have considered, they are asked to discuss the relative merits and importance of each listed item. The group should be reminded that one of its tasks is to eliminate insignificant issues. Following this, the members assign priorities or vote using one of the methods described above.

The discussion groups are then to return to the large meeting to report on the results of their ranking. At this point further discussion may be useful to seek a concensus on which issues are really insignificant. But the moderator must not appear to be ruthlessly eliminating issues that the participants ranked of high or medium importance. The best that can usually be achieved is to "deemphasize" some of them, by placing them in the low priority category.

6. What to do with the comments.

After you have comments from the cooperating agencies and the interested public, you must evaluate them and make judgments about which issues are in

fact significant and which ones are not. The decision of what the EIS should contain is ultimately made by the lead agency. But you will now know what the interested participants consider to be the principal areas for study and analysis. You should be guided by these concerns, or be prepared to briefly explain why you do not agree. Every issue that is raised as a priority matter during scoping should be addressed in some manner in the EIS, either by in-depth analysis, or at least a short explanation showing that the issue was examined, but not considered significant for one or more reasons.

Some agencies have complained that the time savings claimed for scoping have not been realized because after public groups raise numerous minor matters, they cannot focus the EIS on the significant issues. It is true that it is always easier to add issues than it is to subtract them during scoping. And you should realize that trying to eliminate a particular environmental impact or alternative from study may arouse the suspicions of some people. Cooperating agencies may be even more reluctant to eliminate issues in their areas of special expertise than the public participants. But the way to approach it is to seek concensus on which issues are less important. These issues may then be deemphasized in the EIS by a brief discussion of why they were not examined in depth.

If no concensus can be reached, it is still your responsibility to select the significant issues. The lead agency cannot abdicate its role and simply defer to the public. Thus a group of participants at a scoping meeting should not be able to "vote" an insignificant matter into a big issue. If a certain issue is raised and in your professional judgment you believe it is not significant, explain clearly and briefly in the EIS why it is not significant. There is no need to devote time and pages to it in the EIS if you can show that it is not relevant or important to the proposed action. But you should address in some manner all matters that were raised in the scoping process, either by an extended analysis or a brief explanation showing that you acknowledge the concern.

Several agencies have made a practice of sending out a post-scoping document to make public the decisions that have been made on what issues to cover in the EIS. This is not a requirement, but in certain controversial cases it can be worthwhile. Especially when scoping has been conducted by written comments, and there has been no face-to-face contact, a post-scoping document is the only assurance to the participants that they were heard and understood until the draft EIS comes out. Agencies have acknowledged to us that "letters instead of meetings seem to get disregarded easier." Thus a reasonable quid pro quo for relying on comment letters would be to send out a post-scoping document as feedback to the commentors.

The post-scoping document may be as brief as a list of impacts and alternatives selected for analysis; it may consist of the "scope of work" produced by the lead and cooperating agencies for their own EIS work or for the contractor; or it may be a special document that describes all the issues and explains why they were selected.

7. Allocating work assignments and setting schedules.

Following the public participation in whatever form, and the selection of issues to be covered, the lead agency must allocate the EIS preparation work among the available resources. If there are no cooperating agencies, the lead agency allocates work among its own personnel or contractors. If there are cooperating agencies involved, they may be assigned specific research or writing tasks. The NEPA regulations require that they normally devote their own resources to the issues in which they have special expertise or jurisdiction by law. (Sections 1501.6(b)(3), (5), and 1501.7(a)(4)).

In all cases, the lead agency should set a schedule for completion of the work, designate a project manager and assign the reviewers, and must set a time limit for the entire NEPA analysis if requested to do so by an applicant. (Section 1501.8).

8. A few ideas to try.

a. Route design workshop

As part of a scoping process, a successful innovation by one agency involved route selection for a railroad. The agency invited representatives of the interested groups (identified at a previous public meeting) to try their hand at designing alternative routes for a proposed rail segment. Agency staff explained design constraints and evaluation criteria such as the desire to minimize damage to prime agricultural land and valuable wildlife habitat. The participants were divided into small groups for a few hours of intensive work. After learning of the real constraints on alternative routes, the participants had a better understanding of the agency's and applicant's viewpoints. Two of the participants actually supported alternative routes that affected their own land because the overall impacts of these routes appeared less adverse.

The participants were asked to rank the five alternatives they had devised and the top two were included in the EIS. But the agency did not permit the groups to apply the same evaluation criteria to the routes proposed by the applicant or the agency. Thus public confidence in the process was not as high as it could have been, and probably was reduced when the applicant's proposal was ultimately selected.

The Council recommends that when a hands-on design workshop is used, the assignment of the group be expanded to include evaluation of the reasonableness of all the suggested alternatives.

b. Hotline

Several agencies have successfully used a special telephone number, essentially a hotline, to take public comments before, after, or instead of a public meeting. It helps to designate a named staff member to receive these calls so that some continuity and personal relationships can be developed.

c. Videotape of sites

A videotape of proposed sites is an excellent tool for explaining site differences and limitations during the lecture-format part of a scoping meeting.

d. Videotape meetings

One agency has videotaped whole scoping meetings. Staff found that the participants took their roles more seriously and the taping appeared not to precipitate grandstanding tactics.

e. Review committee

Success has been reported from one agency which sets up review committees, representing all interested groups, to oversee the scoping process. The committees help to design the scoping process. In cooperation with the lead agency, the committee reviews the materials generated by the scoping meeting. Again, however, the final decision on EIS content is the responsibility of the lead agency.

f. Consultant as meeting moderator

In some hotly contested cases, several agencies have used the EIS consultant to actually run the scoping meeting. This is permitted under the NEPA regulations and can be useful to de-fuse a tense atmosphere if the consultant is perceived as a neutral third party. But the responsible agency officials must attend the meetings. There is no substitute for developing a relationship between the agency officials and the affected parties. Moreover, if the responsible officials are not prominently present, the public may interpret that to mean that the consultant is actually making the decisions about the EIS, and not the lead agency.

g. Money saving tips

Remember that money can be saved by using conference calls instead of meetings, tape-recording the meetings instead of hiring a stenographer, and finding out whether people want a meeting before announcing it.

C. Pitfalls.

We list here some of the problems that have been experienced in certain scoping cases, in order to enable others to avoid the same difficulties.

1. Closed meetings.

In response to informal advice from CEQ that holding separate meetings for agencies and the public would be permitted under the regulations and could be more productive, one agency scheduled a scoping meeting for the cooperating agencies some weeks in advance of the public meeting. Apparently, the lead agency felt that the views of the cooperating agencies would be more candidly expressed if the meeting were closed. In any event, several members of the public learned of the meeting and asked to be present. The lead agency acquiesced only after newspaper reporters were able to make a

story out of the closed session. At the meeting, the members of the public were informed that they would not be allowed to speak, nor to record the proceedings. The ill feeling aroused by this chain of events may not be repaired for a long time. Instead, we would suggest the following possibilities:

a. Although separate meetings for agencies and public groups may be more efficient, there is no magic to them. By all means, if someone insists on attending the agency meeting, let him. There is nothing as secret going on there as he may think there is if you refuse him admittance. Better yet, have your meeting of cooperating agencies after the public meeting. That may be the most logical time anyway, since only then can the scope of the EIS be decided upon and assignments made among the agencies. If it is well done, the public meeting will satisfy most people and show them that you are listening to them.

b. Always permit recording. In fact, you should suggest it for public meetings. All parties will feel better if there is a record of the proceeding. There is no need for a stenographer, and tape is inexpensive. It may even be better then a typed transcript, because staff and decision-makers who did not attend the meeting can listen to the exchange and may learn a lot about public perceptions of the proposal.

c. When people are admitted to a meeting, it makes no sense to refuse their requests to speak. However, you can legitimately limit their statements to the subject at hand—scoping. You do not have to permit some participants to waste the others' time if they refuse to focus on the impacts and alternatives for inclusion in the EIS. Having a tape of the proceedings could be useful after the meeting if there is some question that speakers were improperly silenced. But it takes an experienced moderator to handle a situation like this.

d. The scoping stage is the time for building confidence and trust on all sides of a proposal, because this is the only time when there is a common enterprise. The attitudes formed at this stage can carry through the project review process. Certainly it is difficult for things to get better. So foster the good will as long as you can by listening to what is being said during scoping. It is possible that out of that dialogue may appear recommendations for changes and mitigation measures that can turn a controversial fight into an acceptable proposal.

2. Contacting interested groups.

Some problems have arisen in scoping where agencies failed to contact all the affected parties, such as industries or state and local governments. In one case, a panel was assembled to represent various interests in scoping an EIS on a wildlife-related program. The agency had an excellent format for the meeting, but the panel did not represent industries that would be affected by the program or interested state and local governments. As a result, the EIS may fail to reflect the issues of concern to these parties.

Another agency reported to us that it failed to contact parties directly because staff feared that if they missed someone they would be accused of

favoritism. Thus they relied on the issuance of press releases which were not effective. Many people who did not learn about the meetings in time sought additional meeting opportunities, which cost extra money and delayed the process.

In our experience, the attempt to reach people is worth the effort. Even if you miss someone, it will be clear that you tried. You can enlist a few representatives of an interest group to help you identify and contact others. Trade associations, chambers of commerce, local civic groups, and local and national conservation groups can spread the word to members.

3. Tiering.

Many people are not familiar with the way environmental impact statements can be "tiered" under the NEPA regulations, so that issues are examined in detail at the stage that decisions on them are being made. See Section 1508.28 of the regulations. For example, if a proposed program is under review, it is possible that site specific actions are not yet proposed. In such a case, these actions are not addressed in the EIS on the program, but are reserved for a later tier of analysis. If tiering is being used, this concept must be made clear at the outset of any scoping meeting, so that participants do not concentrate on issues that are not going to be addressed at this time. If you can specify when these other issues will be addressed it will be easier to convince people to focus on the matters at hand.

4. Scoping for unusual programs.

One interesting scoping case involved proposed changes in the Endangered Species Program. Among the impacts to be examined were the effects of this conservation program on user activities such as mining, hunting, and timber harvest, instead of the other way around. Because of this reverse twist in the impacts to be analyzed, some participants had difficulty focusing on useful issues. Apparently, if the subject of the EIS is unusual, it will be even harder than normal for scoping participants to grasp what is expected of them.

In the case of the Endangered Species Program EIS, the agency planned an intensive 3 day scoping session, successfully involved the participants, and reached accord on several issues that would be important for the future implementation of the program. But the participants were unable to focus on impacts and program alternatives for the EIS. We suggest that if the intensive session had been broken up into 2 or 3 meetings separated by days or weeks, the participants might have been able to get used to the new way of thinking required, and thereby to participate more productively. Programmatic proposals are often harder to deal with in a scoping context than site specific projects. Thus extra care should be taken in explaining the goals of the proposal and in making the information available well in advance of any meetings.

D. Lead and Cooperating Agencies.

Some problems with scoping revolve around the relationship between lead and cooperating agencies. Some agencies are still uncomfortable with these

roles. The NEPA regulations, and the 40 Questions and Answers about the NEPA Regulations, 46 Fed. Reg. 18026, (March 23, 1981) describe in detail the way agencies are now asked to cooperate on environmental analyses. (See Questions 9, 14, and 30.) We will focus here on the early phase of that cooperation.

It is important for the lead agency to be as specific as possible with the cooperating agencies. Tell them what you want them to contribute during scoping: environmental impacts and alternatives. Some agencies still do not understand the purpose of scoping.

Be sure to contact and involve representatives of the cooperating agencies who are responsible for NEPA-related functions. The lead agency will need to contact staff of the cooperating agencies who can both help to identify issues and alternatives and commit resources to a study, agree to a schedule for EIS preparation, or approve a list of issues as sufficient. In some agencies that will be at the district or state office level (e.g., Corps of Engineers, Bureau of Land Management, and Soil Conservation Service) for all but exceptional cases. In other agencies you must go to regional offices for scoping comments and commitments (e.g., EPA, Fish and Wildlife Service, Water and Power Resources Service). In still others, the field offices do not have NEPA responsibilities or expertise and you will deal directly with headquarters (e.g., Federal Energy Regulatory Commission, Interstate Commerce Commission). In all cases you are looking for the office that can give you the answers you need. So keep trying until you find the organizational level of the cooperating agency that can give you useful information and that has the authority to make commitments.

As stated in 40 Questions and Answers about the NEPA Regulations, the lead agency has the ultimate responsibility for the content of the EIS, but if it leaves out a significant issue or ignores the advice and expertise of the cooperating agency, the EIS may be found later to be inadequate. (46 Fed. Reg. 18030, Question 14b.) At the same time, the cooperating agency will be concerned that the EIS contain material sufficient to satisfy its decisionmaking needs. Thus, both agencies have a stake in producing a document of good quality. The cooperating agencies should be encouraged not only to participate in scoping but also to review the decisions made by the lead agency about what to include in the EIS. Lead agencies should allow any information needed by a cooperating agency to be included, and any issues of concern to the cooperating agency should be covered, but it usually will have to be at the expense of the cooperating agency.

Cooperating agencies have at least as great a need as the general public for advance information on a proposal before any scoping takes place. Agencies have reported to us that information from the lead agency is often too sketchy or comes too late for informed participation. Lead agencies must clearly explain to all cooperating agencies what the proposed action is conceived to be at this time, and what present alternatives and issues the lead agency sees, before expecting other agencies to devote time and money to a scoping session. Informal contacts among the agencies before scoping gets underway are valuable to establish what the cooperating agencies will need for productive scoping to take place.

Some agencies will be called upon to be cooperators more frequently than others, and they may lack the resources to respond to the numerous requests. The NEPA regulations permit agencies without jurisdiction by law (i.e., no approval authority over the proposal) to decline the cooperating agency role. (Section 1501.6(c)). But agencies that do have jurisdiction by law cannot opt out entirely and may have to reduce their cooperating effort devoted to each EIS. (See Section 1501.6(c) and 40 Questions and Answers about the NEPA Regulations, 46 Fed. Reg. 18030, Question 14a.) Thus, cooperators would be greatly aided by a priority list from the lead agency showing which proposals most need their help. This will lead to a more efficient allocation of resources.

Some cooperating agencies are still holding back at the scoping stage in order to retain a critical position for later in the process. They either avoid the scoping sessions or fail to contribute, and then raise objections in comments on the draft EIS. We cannot emphasize enough that the whole point of scoping is to avoid this situation. As we stated in 40 Questions and Answers about the NEPA Regulations, "if the new alternative [or other issue] was not raised by the commentor during scoping, but could have been, commentors may find that they are unpersuasive in their efforts to have their suggested alternative analyzed in detail by the [lead] agency." (46 Fed. Reg. 18035, Question 29b.)

III. Advice for Public Participants

Scoping is a new opportunity for you to enter the earliest phase of the decisionmaking process on proposals that affect you. Through this process you have access to public officials before decisions are made and the right to explain your objections and concerns. But this opportunity carries with it a new responsibility. No longer may individuals hang back until the process is almost complete and then spring forth with a significant issue or alternative that might have been raised earlier. You are now part of the review process, and your role is to inform the responsible agencies of the potential impacts that should be studied, the problems a proposal may cause that you foresee, and the alternatives and mitigating measures that offer promise.

As noted above, and in 40 Questions and Answers, no longer will a comment raised for the first time after the draft EIS is finished be accorded the same serious consideration it would otherwise have merited if the issue had been raised during scoping. Thus you have a responsibility to come forward early with known issues.

In return, you get the chance to meet the responsible officials and to make the case for your alternative before they are committed to a course of action. To a surprising degree this avenue has been found to yield satisfactory results. There's no guarantee, of course, but when the alternative you suggest is really better, it is often hard for a decisionmaker to resist.

There are several problems that commonly arise that public participants should be aware of:

A. Public input is often only negative

The optimal timing of scoping within the NEPA process is difficult to judge. On the one hand, as explained above (Section II.B.1.), if it is attempted too early, the agency cannot explain what it has in mind and informed participation will be impossible. On the other, if it is delayed, the public may find that significant decisions are already made, and their comments may be discounted or will be too late to change the project. Some agencies have found themselves in a tactical cross-fire when public criticism arises before they can even define their proposal sufficiently to see whether they have a worthwhile plan. Understandably, they would be reluctant after such an experience to invite public criticism early in the planning process through open scoping. But it is in your interest to encourage agencies to come out with proposals in the early stage because that enhances the possibility of your comments being used. Thus public participants in scoping should reduce the emotion level wherever possible and use the opportunity to make thoughtful, rational presentations on impacts and alternatives. Polarizing over issues too early hurts all parties. If agencies get positive and useful public responses from the scoping process, they will more frequently come forward with proposals early enough so that they can be materially improved by your suggestions.

B. Issues are too broad

The issues that participants tend to identify during scoping are much too broad to be useful for analytical purposes. For example, "cultural impacts" — what does this mean? What precisely are the impacts that should be examined? When the EIS preparers encounter a comment as vague as this they will have to make their own judgment about what you meant, and you may find that your issues are not covered. Thus, you should refine the broad general topics, and specify which issues need evaluation and analysis.

C. Impacts are not identified

Similarly, people (including agency staff) frequently identify "causes" as issues but fail to identify the principal "effects" that the EIS should evaluate in depth. For example, oil and gas development is a cause of many impacts. Simply listing this generic category is of little help. You must go beyond the obvious causes to the specific effects that are of concern. If you want scoping to be seen as more than just another public meeting, you will need to put in extra work.

IV. Brief Points For Applicants.

Scoping can be an invaluable part of your early project planning. Your main interest is in getting a proposal through the review process. This interest is best advanced by finding out early where the problems with the proposal are, who the affected parties are, and where accomodations can be made. Scoping is an ideal meeting place for all the interest groups if you have not already contacted them. In several cases, we found that the compromises made at this stage allowed a project to move efficiently through the permitting process virtually unopposed.

The NEPA regulations place an affirmative obligation on agencies to "provide for cases where actions are planned by private applicants" so that designated staff are available to consult with the applicants, to advise applicants of information that will be required during review, and to insure that the NEPA process commences at the earliest possible time. (Section 1501.2(d)). This section of the regulations is intended to ensure that environmental factors are considered at an early stage in the applicant's planning process. (See 40 Questions and Answers about the NEPA Regulations, 46 Fed. Reg. 18028, Questions 8 and 9.)

Applicants should take advantage of this requirement in the regulations by approaching the agencies early to consult on alternatives, mitigation requirements, and the agency's information needs. This early contact with the agency can facilitate a prompt initiation of the scoping process in cases where an EIS will be prepared. You will need to furnish sufficient information about your proposal to enable the lead agency to formulate a coherent presentation for cooperating agencies and the public. But don't wait until your choices are all made and the alternatives have been eliminated. (Section 1506.1).

During scoping, be sure to attend any of the public meetings unless the agency is dividing groups by interest affiliation. You will be able to answer any questions about the proposal, and even more important, you will be able to hear the objections raised, and find out what the real concerns of the public are. This is, of course, vital information for future negotiations with the affected parties.

COUNCIL ON ENVIRONMENTAL QUALITY

40 CFR Part 1500

Guidance Regarding NEPA Regulations

AGENCY: Council on Environmental Quality, Executive Office of the President.

ACTION: Information Only, Publication of Memorandum to Agencies Containing Guidance on Agency Implementation of NEPA Regulations.

SUMMARY: The Council on Environmental Quality, as part of its oversight of implementation of the National Environmental Policy Act, on August 14, 1981 requested comments from the public on how the various federal agencies are implementing the regulations promulgated by the Council in 1978 (40 CFR 1500 *et seq.*). The Council received 142 comments. Sixty-nine commenters represented business groups; forty represented state and local governments; fifteen represented environmental groups; thirteen represented federal agencies; and, five represented other interest groups or individuals. The Council staff summarized the comments received in a document which was subsequently made available to the public. On July 12, 1982 the Council published notice of the availability of this summary document in the Federal Register. The summary document identified a number of areas in which the comments indicate that agencies need to better manage the NEPA process.

On August 12, 1982 the Council held a public meeting to discuss the issue areas identifed in the summary document. At that time representatives of environmental groups, industry groups, other federal agencies and individuals testified. Subsequent to the meeting the Council received several additional comments addressing the problem areas identifed in the summary document.

Based on the public comments received during this process, the Council is issuing the following guidance document to help officials manage the NEPA process in a more efficient fashion.

DATE: July 22, 1983.

FOR FURTHER INFORMATION CONTACT: Dinah Bear, General Counsel, Council on Environmental Quality, 722 Jackson Place, NW., Washington, D.C. 20006. (202) 395-5754.

A. Alan Hill,
Chairman.

Executive Office of the President

Council on Environmental Quality

722 Jackson Place, N.W.

Washington, D.C. 20006

July 22, 1983.

Memorandum

For: Heads of Federal Agencies
From: A. Alan Hill, Chairman
Re: Guidance Regarding NEPA Regulations

The Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) were issued on November 29, 1978. These regulations became effective for, and binding upon, most federal agencies on July 30, 1979, and for all remaining federal agencies on November 30, 1979.

As part of the Council's NEPA oversight responsibilities it solicited through an August 14, 1981, notice in the **Federal Register** public and agency comments regarding a series of questions that were developed to provide information on the manner in which federal agencies were implementing the CEQ regulations. On July 12, 1982, the Council announced the availability of a document summarizing the comments received from the public and other agencies and also identifying issue areas which the Council intended to review. On August 12, 1982, the Council held a public meeting to address those issues and hear any other comments which the public or other interested agencies might have about the NEPA process. The issues addressed in this guidance were identified during this process.

There are many ways in which agencies can meet their responsibilities under NEPA and the 1978 regulations. The purpose of this document is to provide the Council's guidance on various ways to carry out activities under the regulations.

Scoping

The Council on Environmental Quality (CEQ) regulations direct federal agencies which have made a decision to prepare an environmental impact statement to engage in a public scoping process. Public hearings or meetings, although often held, are not required; instead the manner in which public input will be sought is left to the discretion of the agency.

The purpose of this process is to determine the scope of the EIS so that preparation of the document can be effectively managed. Scoping is intended to ensure that problems are identified early and properly studied, that issues of little significance do not consume time and effort, that the draft EIS is thorough and balanced, and that delays occasioned by an inadequate draft EIS are avoided. The scoping process should identify the public and agency concerns; clearly define the environmental issues and alternatives to be examined in the EIS including the elimination of nonsignificant issues; identify related issues which originate from separate legislation, regulation, or Executive Order (e.g. historic preservation or endangered species concerns); and identify state and local agency requirements which must be addressed. An effective scoping process can help reduce unnecessary paperwork and time delays in preparing and processing the EIS by clearly identifying all relevant procedural requirements.

In April 1981, the Council issued a "Memorandum for General Counsels, NEPA Liaisons and Participants in Scoping" on the subject of Scoping Guidance. The purpose of this guidance was to give agencies suggestions as to how to more effectively carry out the CEQ scoping requirement. The availability of this document was announced in the **Federal Register** at 46 FR 25461. It is still available upon request from the CEQ General Counsel's office.

The concept of lead agency (§ 1508.16) and cooperating agency (§ 1508.5) can be used effectively to help manage the scoping process and prepare the environmental impact statement. The lead agency should identify the potential cooperating agencies. It is incumbent upon the lead agency to identify any agency which may ultimately be involved in the proposed action, including any subsequent permitting

actions. Once cooperating agencies have been identified they have specific responsibility under the NEPA regulations (40 CFR 1501.6). Among other things cooperating agencies have responsibilities to participate in the scoping process and to help identify issues which are germane to any subsequent action it must take on the proposed action. The ultimate goal of this combined agency effort is to produce an EIS which in addition to fulfilling the basic intent of NEPA, also encompasses to the maximum extent possible all the environmental and public involvement requirements of state and federal laws, Executive Orders, and administrative policies of the involved agencies. Examples of these requirements include the Fish and Wildlife Coordination Act, the Clean Air Act, the Endangered Species Act, the National Historic Preservation Act, the Wild and Scenic Rivers Act, the Farmland Protection Policy Act, Executive Order 11990 (Protection of Wetlands), and Executive Order 11998 (Floodplain Management).

It is emphasized that cooperating agencies have the responsibility and obligation under the CEQ regulations to participate in the scoping process. Early involvement leads to early identification of significant issues, better decisionmaking, and avoidance of possible legal challenges. Agencies with "jurisdiction by law" must accept designation as a cooperating agency if requested (40 CFR 1501.6).

One of the functions of scoping is to identify the public involvement/public hearing procedures of all appropriate state and federal agencies that will ultimately act upon the proposed action. To the maximum extent possible, such procedures should be integrated into the EIS process so that joint public meetings and hearings can be conducted. Conducting joint meetings and hearings eliminates duplication and should significantly reduce the time and cost of processing an EIS and any subsequent approvals. The end result will be a more informed public cognizant of all facets of the proposed action.

It is important that the lead agency establish a process to properly manage scoping. In appropriate situations the lead agency should consider designating a project coordinator and forming an interagency project review team. The project coordinator would be the key person in monitoring time schedules and responding to any problems which may arise in both scoping and preparing the EIS. The project review team would be established early in scoping and maintained throughout the process of preparing the EIS. This review team would include state and local agency representatives. The review team would meet periodically to ensure that the EIS is complete, concise, and prepared in a timely manner.

A project review team has been used effectively on many projects. Some of the more important functions this review team can serve include: (1) A source of information, (2) a coordination mechanism, and (3) a professional review group. As an information source, the review team can identify all federal, state, and local environmental requirements, agency public meeting and hearing procedures, concerned citizen groups, data needs and sources of existing information, and the significant issues and reasonable alternatives for detailed analysis, excluding the non-significant issues. As a coordination mechanism, the team can ensure the rapid distribution of appropriate information or environmental studies, and can reduce the time required for formal consultation on a number of issues (e.g., endangered species or historic preservation). As a professional review group the team can assist in establishing and monitoring a tight time schedule for preparing the EIS by identifying critical points in the process, discussing and recommending solutions to the lead agency as problems arise, advising whether a requested analysis or information item is relevant to the issues under consideration, and providing timely and substantive review comments on any preliminary reports or analyses that may be prepared during the process. The presence of professionals from all scientific disciplines which have a significant role in the proposed action could greatly enhance the value of the team.

The Council recognizes that there may be some problems with the review team concept such as limited agency travel funds and the amount of work necessary to coordinate and prepare for the periodic team meetings. However, the potential benefits of the team concept are significant and the Council encourages agencies to consider utilizing interdisciplinary project review teams to aid in EIS preparation. A regularly scheduled meeting time and location should reduce coordination problems. In some instances, meetings can be arranged so that many projects are discussed at each session. The benefits of the concept are obvious: timely and effective preparation of the EIS, early identification and resolution of any problems which may arise, and elimination, or at least reduction of, the need for additional environmental studies subsequent to the approval of the EIS.

Since the key purpose of scoping is to identify the issues and alternatives for consideration, the scoping process should "end" once the issues and alternatives to be addressed in the EIS have been clearly identified. Normally this would occur during the final stages of preparing the draft EIS and before it is officially circulated for public and agency review.

The Council encourages the lead agency to notify the public of the results of the scoping process to ensure that all issues have been identified. The lead agency should document the results of the scoping process in its administrative record.

The NEPA regulations place a new and significant responsibility on agencies and the public alike during the scoping process to identify all significant issues and reasonable alternatives to be addressed in the EIS. Most significantly, the Council has found that scoping is an extremely valuable aid to better decisionmaking. Thorough scoping may also have the effect of reducing the frequency with which proposed actions are challenged in court on the basis of an inadequate EIS. Through the techniques identified in this guidance, the lead agency will be able to document that an open public involvement process was conducted, that all reasonable alternatives were identified, that significant issues were identified and non-significant issues eliminated, and that the environmental public involvement requirements of all agencies were met, to the extent possible, in a single "one-stop" process.

Categorical Exclusions

Section 1507 of the CEQ regulations directs federal agencies when establishing implementing procedures to identify those actions which experience has indicated will not have a significant environmental effect and to categorically exclude them from NEPA review. In our August 1981 request for public comments, we asked the question "Have categorical exclusions been adequately identified and defined?".

The responses the Council received indicated that there was considerable belief that categorical exclusions were not adequately identified and defined. A number of commentators indicated that agencies had not identified all categories of actions that meet the categorical exclusion definition (§ 1508.4) or that agencies were overly restrictive in their interpretations of categorical exclusions. Concerns were expressed that agencies were requiring

too much documentation for projects that were not major federal actions with significant effects and also that agency procedures to add categories of actions to their existing lists of categorical exclusions were too cumbersome.

The National Environmental Policy Act and the CEQ regulations are concerned primarily with those "major federal actions signficantly affecting the quality of the human environment" (42 U.S.C. 4332). Accordingly, agency procedures, resources, and efforts should focus on determining whether the proposed federal action is a major federal action significantly affecting the quality of the human environment. If the answer to this question is yes, an environmental impact statement must be prepared. If there is insufficient information to answer the question, an environmental assessment is needed to assist the agency in determining if the environmental impacts are significant and require an EIS. If the assessment shows that the impacts are not significant, the agency must prepare a finding of no significant impact. Further stages of this federal action may be excluded from requirements to prepare NEPA documents.

The CEQ regulations were issued in 1978 and most agency implementing regulations and procedures were issued shortly thereafter. In recognition of the experience with the NEPA process that agencies have had since the CEQ regulations were issued, the Council believes that it is appropriate for agencies to examine their procedures to insure that the NEPA process utilizes this additional knowledge and experience. Accordingly, the Council strongly encourages agencies to re-examine their environmental procedures and specifically those portions of the procedures where "categorical exclusions" are discussed to determine if revisions are appropriate. The specific issues which the Council is concerned about are (1) the use of detailed lists of specific activities for categorical exclusions, (2) the excessive use of environmental assessments/findings of no significant impact and (3) excessive documentation.

The Council has noted some agencies have developed lists of specific activities which qualify as categorical exclusions. The Council believes that if this approach is applied narrowly it will not provide the agency with sufficient flexibility to make decisions on a project-by-project basis with full consideration to the issues and impacts that are unique to a specific project. The Council encourages the agencies to consider broadly defined criteria which characterize types of actions that, based on the agency's experience, do not cause significant environmental effects. If this technique is adopted, it would be helpful for the agency to offer several examples of activities frequently performed by that agency's personnel which would normally fall in these categories. Agencies also need to consider whether the cumulative effects of several small actions would cause sufficient environmental impact to take the actions out of the categorically excluded class.

The Council also encourages agencies to examine the manner in which they use the environmental assessment process in relation to their process for identifying projects that meet the categorical exclusion definition. A report(*1*) to the Council indicated that some agencies have a very high ratio of findings of no significant impact to environmental assessments each year while producing only a handful of EIS's. Agencies should examine their decisionmaking process to ascertain if some of these actions do not, in fact, fall within the categorical exclusion definition, or, conversely, if they deserve full EIS treatment.

As previously noted, the Council received a number of comments that agencies require an excessive amount of environmental documentation for projects that meet the categorical exclusion definition. The Council believes that sufficient information will usually be available during the course of normal project development to determine the need for an EIS and further that the agency's administrative record will clearly document the basis for its decision. Accordingly, the Council strongly discourages procedures that would require the preparation of additional paperwork to document that an activity has been categorically excluded.

Categorical exclusions promulgated by an agency should be reviewed by the Council at the draft stage. After reviewing comments received during the review period and prior to publication in final form, the Council will determine whether the categorical exclusions are consistent with the NEPA regulations.

Adoption Procedures

During the recent effort undertaken by the Council to review the current NEPA regulations, several participants indicated federal agencies were not utilizing the adoption procedures as authorized by the CEQ regulations. The concept of adoption was incorporated into the Council's NEPA Regulations (40 CFR 1506.3) to reduce duplicative EISs prepared by Federal agencies. The experiences gained during the 1970's revealed situations in which two or more agencies had an action relating to the same project; however, the timing of the actions was different. In the early years of NEPA implementation, agencies independently approached their activities and decisions. This procedure lent itself to two or even three EISs on the same project. In response to this situation the CEQ regulations authorized agencies, in certain instances, to adopt environmental impact statements prepared by other agencies.

In general terms, the regulations recognize three possible situations in which adoption is appropriate. One is where the federal agency participated in the process as a cooperating agency. (40 CFR 1506.3(c)). In this case, the cooperating agency may adopt a final EIS and simply issue its record of decision.(*2*) *However,* the cooperating agency must independently review the EIS and determine that its own NEPA procedures have been satisfied.

A second case concerns the federal agency which was not a cooperating agency, but is, nevertheless, undertaking an activity which was the subject of an EIS. (40 CFR 1506.3(b)). This situation would arise because an agency did not anticipate that it would be involved in a project which was the subject of another agency's EIS. In this instance where the proposed action is substantially the same as that action described in the EIS, the agency may adopt the EIS and recirculate (file with EPA and distribute to agencies and the public) it as a final EIS. However, the agency must independently review the EIS to determine that it is current and that its own NEPA procedures have been satisfied. When recirculating the final EIS the agency should provide information which identifies what federal action is involved.

The third situation is one in which the proposed action is not substantially the same as that covered by the EIS. In this case, any agency may adopt an EIS or a portion thereof by circulating the EIS as a draft or as a portion of the agency's draft and preparing a final EIS. (40 CFR 1506.3(a)). Repetitious analysis and time consuming data collection can be easily eliminated utilizing this procedure.

The CEQ regulations specifically address the question of adoption only in terms of preparing EIS's. However, the objectives that underlie this portion of the regulations—i.e., reducing delays and eliminating duplication—apply with equal force to the issue of adopting other environmental documents. Consequently, the Council encourages agencies to put in place a mechanism for

adopting environmental assessments prepared by other agencies. Under such procedures the agency could adopt the environmental assessment and prepare a Finding of No Significant Impact based on that assessment. In doing so, the agency should be guided by several principles:

—First, when an agency adopts such an analysis it must independently evaluate the information contained therein and take full responsibility for its scope and content.

—Second, if the proposed action meets the criteria set out in 40 CFR 1501.4(e)(2), a Finding of No Significant Impact would be published for 30 days of public review before a final determination is made by the agency on whether to prepare an environmental impact statement.

Contracting Provisions

Section 1506.5(c) of the NEPA regulations contains the basic rules for agencies which choose to have an environmental impact statement prepared by a contractor. That section requires the lead or cooperating agency to select the contractor, to furnish guidance and to participate in the preparation of the environmental impact statement. The regulation requires contractors who are employed to prepare an environmental impact statement to sign a disclosure statement stating that they have no financial or other interest in the outcome of the project. The responsible federal official must independently evaluate the statement prior to its approval and take responsibility for its scope and contents.

During the recent evaluation of comments regarding agency implementation of the NEPA process, the Council became aware of confusion and criticism about the provisions of Section 1506.5(c). It appears that a great deal of misunderstanding exists regarding the interpretation of the conflict of interest provision. There is also some feeling that the conflict of interest provision should be completely eliminated.*(3)*

Applicability of § 1506.5(c)

This provision is only applicable when a federal lead agency determines that it needs contractor assistance in preparing an EIS. Under such circumstances, the lead agency or a cooperating agency should select the contractor to prepare the EIS.*(4)*

This provision does not apply when the lead agency is preparing the EIS based on information provided by a private applicant. In this situation, the private applicant can obtain its information from any source. Such sources could include a contractor hired by the private applicant to do environmental, engineering, or other studies necessary to provide sufficient information to the lead agency to prepare an EIS. The agency must independently evaluate the information and is responsible for its accuracy.

Conflict of Interest Provisions

The purpose of the disclosure statement requirement is to avoid situations in which the contractor preparing the environmental impact statement has an interest in the outcome of the proposal. Avoidance of this situation should, in the Council's opinion, ensure a better and more defensible statement for the federal agencies. This requirement also serves to assure the public that the analysis in the environmental impact statement has been prepared free of subjective, self-serving research and analysis.

Some persons believe these restrictions are motivated by undue and unwarranted suspicion about the bias of contractors. The Council is aware that many contractors would conduct their studies in a professional and unbiased manner. However, the Council has the responsibility of overseeing the administration of the National Environmental Policy Act in a manner most consistent with the statute's directives and the public's expectations of sound government. The legal responsibilities for carrying out NEPA's objectives rest solely with federal agencies. Thus, if any delegation of work is to occur, it should be arranged to be performed in as objective a manner as possible.

Preparation of environmental impact statements by parties who would suffer financial losses if, for example, a "no action" alternative were selected, could easily lead to a public perception of bias. It is important to maintain the public's faith in the integrity of the EIS process, and avoidance of conflicts in the preparation of environmental impact statements is an important means of achieving this goal.

The Council has discovered that some agencies have been interpreting the conflicts provision in an overly burdensome manner. In some instances, multidisciplinary firms are being excluded from environmental impact statements preparation contracts because of links to a parent company which has design and/or construction capabilities. Some qualified contractors are not bidding on environmental impact statement contracts because of fears that their firm may be excluded from future design or construction contracts. Agencies have also applied the selection and disclosure provisions to project proponents who wish to have their own contractor for providing environmental information. The result of these misunderstandings has been reduced competition in bidding for EIS preparation contracts, unnecessary delays in selecting a contractor and preparing the EIS, and confusion and resentment about the requirement. The Council believes that a better understanding of the scope of § 1506.5(c) by agencies, contractors and project proponents will eliminate these problems.

Section 1506.5(c) prohibits a person or entity entering into a contract with a federal agency to prepare an EIS when that party has at that time and during the life of the contract pecuniary or other interests in the outcomes of the proposal. Thus, a firm which has an agreement to prepare an EIS for a construction project cannot, at the same time, have an agreement to perform the construction, nor could it be the owner of the construction site. However, if there are no such separate interests or arrangements, and if the contract for EIS preparation does not contain any incentive clauses or guarantees of any future work on the project, it is doubtful that an inherent conflict of interest will exist. Further, § 1506.5(c) does not prevent an applicant from submitting information to an agency. The lead federal agency should evaluate potential conflicts of interest prior to entering into any contract for the preparation of environmental documents.

Selection of Alternatives in Licensing and Permitting Situations

Numerous comments have been received questioning an ageney's obligation, under the National Environmental Policy Act, to evaluate alternatives to a proposed action developed by an applicant for a federal permit or license. This concern arises from a belief that projects conceived and developed by private parties should not be questioned or second-guessed by the government. There has been discussion of developing two standards to determining the range of alternatives to be evaluated: The "traditional" standard for projects which are initiated and developed by a Federal agency, and a second standard of evaluating only those alternatives presented by an applicant for a permit or license.

Neither NEPA nor the CEQ regulations make a distinction between actions initiated by a Federal agency and by applicants. Early NEPA case law, while emphasizing the need for a rigorous examination of alternatives, did

not specifically address this issue. In 1981, the Council addressed the question in its document, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations".(5) The answer indicated that the emphasis in determining the scope of alternatives should be on what is "reasonable". The Council said that, "Reasonable alternatives include those that are *practical or feasible* from the technical and economic standpoint and using common sense rather than simply *desirable* from the standpoint of the applicant."

Since issuance of that guidance, the Council has continued to receive requests for further clarification of this question. Additional interest has been generated by a recent appellate court decision. *Roosevelt Campobello International Park Commission* v. *E.P.A.*(6) dealt with EPA's decision of whether to grant a permit under the National Pollutant Discharge Elimination System to a company proposing a refinery and deep-water terminal in Maine. The court discussed both the criteria used by EPA in its *selecting* of alternative sites to evaluate, and the substantive standard used to *evaluate* the sites. The court determined that EPA's choice of alternative sites was "focused by the primary objectives of the permit applicant . . ." and that EPA had limited its consideration of sites to only those sites which were considered feasible, given the applicant's stated goals. The court found that EPA's criteria for selection of alternative sites was sufficient to meet its NEPA responsibilities.

This decision is in keeping with the concept that an agency's responsibilities to examine alternative sites has always been "bounded by some notion of feasibility" to avoid NEPA from becoming "an exercise in frivolous boilerplate".(7) NEPA has never been interpreted to require examination of purely conjectural possibilities whose implementation is deemed remote and speculative. Rather, the agency's duty is to consider "alternatives as they exist and are likely to exist."(8) In the *Roosevelt Campobello* case, for example, EPA examined three alternative sites and two alternative modifications of the project at the preferred alternative site. Other factors to be developed during the scoping process—comments received from the public, other government agencies and institutions, and development of the agency's own environmental data—should certainly be incorporated into the decision of which alternatives to seriously evaluate in the EIS. There is, however, no need to disregard the applicant's purposes and needs and the common sense realities of a given situation in the development of alternatives.

Tiering

Tiering of environmental impact statements refers to the process of addressing a broad, general program, policy or proposal in an initial environmental impact statement (EIS), and analyzing a narrower site-specific proposal, related to the initial program, plan or policy in a subsequent EIS. The concept of tiering was promulgated in the 1978 CEQ regulations; the preceding CEQ guidelines had not addressed the concept. The Council's intent in formalizing the tiering concept was to encourage agencies, "to eliminate repetitive discussions and to focus on the actual issues ripe for decisions at each level of environmental review."(9)

Despite these intentions, the Council perceives that the concept of tiering has caused a certain amount of confusion and uncertainty among individuals involved in the NEPA process. This confusion is by no means universal; indeed, approximately half of those commenting in response to our question about tiering (10) indicated that tiering is effective and should be used more frequently. Approximately one-third of the commentators responded that they had no experience with tiering upon which to base their comments. The remaining commentators were critical of tiering. Some commentators believed that tiering added an additional layer of paperwork to the process and encouraged, rather than discouraged, duplication. Some commentators thought that the inclusion of tiering in the CEQ regulations added an extra legal requirement to the NEPA process. Other commentators said that an initial EIS could be prepared when issues were too broad to analyze properly for any meaningful consideration. Some commentators believed that the concept was simply not applicable to the types of projects with which they worked; others were concerned about the need to supplement a tiered EIS. Finally, some who responded to our inquiry questioned the courts' acceptance of tiered EISs.

The Council believes that misunderstanding of tiering and its place in the NEPA process is the cause of much of this criticism. Tiering, of course, is by no means the best way to handle all proposals which are subject to NEPA analysis and documentation. The regulations do not require tiering; rather, they authorize its use when an agency determines it is appropriate. It is an option for an agency to use when the nature of the proposal lends itself to tiered EIS(s).

Tiering does not add an additional legal requirement to the NEPA process. An environmental impact statement is required for proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. In the context of NEPA, "major Federal actions" include adoption of official policy, formal plans, and programs as well as approval of specific projects, such as construction activities in a particular location or approval of permits to an outside applicant. Thus, where a Federal agency adopts a formal plan which will be executed throughout a particular region, and later proposes a specific activity to implement that plan in the same region, both actions need to be analyzed under NEPA to determine whether they are major actions which will significantly affect the environment. If the answer is yes in both cases, both actions will be subject to the EIS requirement, whether tiering is used or not. The agency then has one of two alternatives: Either preparation of two environmental impact statements, with the second repeating much of the analysis and information found in the first environmental impact statement, or tiering the two documents. If tiering is utilized, the site-specific EIS contains a summary of the issues discussed in the first statement and the agency will incorporate by reference discussions from the first statement. Thus, the second, or site-specific statement, would focus primarily on the issues relevant to the specific proposal, and would not duplicate material found in the first EIS. It is difficult to understand, given this scenario, how tiering can be criticized for adding an unnecessary layer to the NEPA process; rather, it is intended to streamline the existing process.

The Council agrees with commentators who stated that there are stages in the development of a proposal for a program, plan or policy when the issues are too broad to lend themselves to meaningful analysis in the framework of an EIS. The CEQ regulations specifically define a "proposal" as existing at, "that stage in the development of an action when an agency subject to [NEPA] has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing the goal *and the effects can be meaningfully evaluated.*"(11) Tiering is not intended to force an agency to prepare an EIS before this stage is reached; rather, it is a technique to be used once meaningful analysis can

be performed. An EIS is not required before that stage in the development of a proposal, whether tiering is used or not.

The Council also realizes that tiering is not well suited to all agency programs. Again, this is why tiering has been established as an *option* for the agency to use, as opposed to a requirement.

A supplemental EIS is required when an agency makes substantial changes in the proposed action relevant to environmental concerns, or when there are signifcant new circumstances or information relevant to environmental concerns bearing on the proposed action, and is optional when an agency otherwise determines to supplement an EIS.(*12*) The standard for supplementing an EIS is not changed by the use of tiering; there will no doubt be occasions when a supplement is needed, but the use of tiering should reduce the number of those occasions.

Finally, some commentators raised the question of courts' acceptability of tiering. This concern is understandable, given several cases which have reversed agency decisions in regard to a particular programmatic EIS. However, these decisions have never invalidated the concept of tiering, as stated in the CEQ regulations and discussed above. Indeed, the courts recognized the usefulness of the tiering approach in case law before the promulgation of the tiering regulation. Rather, the problems appear when an agency determines not to prepare a site-specific EIS based on the fact that a programmatic EIS was prepared. In this situation, the courts carefully examine the analysis contained in the programmatic EIS. A court may or may not find that the programmatic EIS contains appropriate analysis of impacts and alternatives to meet the adequacy test for the site-specific proposal. A recent decision by the Ninth Circuit Court of Appeals (*13*) invalidated an attempt by the Forest Service to make a determination regarding wilderness and non-wilderness designations on the basis of a programmatic EIS for this reason. However, it should be stressed that this and other decisions are not a repudiation of the tiering concept. In these instances, in fact, tiering has *not* been used; rather, the agencies have attempted to rely exclusively on programmatic or "first level" EISs which did not have site-specific information. No court has found that the tiering process as provided for in the CEQ regulations is an improper manner of implementing the NEPA process.

In summary, the Council believes that tiering can be a useful method of reducing paperwork and duplication when used carefully for appropriate types of plans, programs and policies which will later be translated into site-specific projects. Tiering should not be viewed as an additional substantive requirement, but rather a means of accomplishing the NEPA requirements in an efficient manner as possible.

Footnotes

(*1*) Environmental Law Institute, *NEPA In Action Environmental Offices in Nineteen Federal Agencies*, A Report To the Council on Environmental Quality, October 1981.

(*2*) Records of decision must be prepared by each agency responsible for making a decision, and cannot be adopted by another agency.

(*3*) The Council also received requests for guidance on effective management of the third-party environmental impact statement approach. However, the Council determined that further study regarding the policies behind this technique is warranted, and plans to undertake that task in the future.

(*4*) There is no bar against the agency considering candidates suggested by the applicant, although the Federal agency must retain its independence. If the applicant is seen as having a major role in the selection of the contractor, contractors may feel the need to please both the agency and the applicant. An applicant's suggestion, if any, to the agency regarding the choice of contractors should be one of many factors involved in the selection process.

(*5*) 46 FR 18026 (1981).

(*6*) 684 F.2d 1041 (1st Cir. 1982).

(*7*) *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 551 (1978).

(*8*) *Monarch Chemical Works, Inc. v. Exon*, 466 F.Supp. 639, 650 (1979), quoting *Carolina Environmental Study Group v. U.S.*, 510 F.2d 796, 801 (1975).

(*9*) Preamble, FR, Vol. 43, No. 230, p. 55984, 11/29/78.

(*10*) "Is tiering being used to minimizes repetition in an environmental assessment and in environmental impact statements?", 46 FR 41131, August 14, 1981.

(*11*) 40 CFR 1508.23 (emphasis added).

(*12*) 40 CFR 1502.9(c).

(*13*) *California v. Block*, 18 ERC 1149 (1982).

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December 21, 1984

Particular contacts may in some instances be outdated. Refer to the "Directory of Potential Stakeholders" (Tab IV-18).

Part II

Council on Environmental Quality

40 CFR Ch. V

National Environmental Policy Act (NEPA) Implementation Procedures; Appendices I, II, and III; Final Rule

COUNCIL ON ENVIRONMENTAL QUALITY

40 CFR Ch. V

National Environmental Policy Act (NEPA) Implementation Procedures; Appendices I, II, and III

AGENCY: Council on Environmental Quality, Executive Office of the President.

ACTION: Appendices to regulations.

SUMMARY: These appendices are intended to improve public participation and facilitate agency compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's NEPA Regulations.

Appendix I updates and replaces the Federal and Federal-State Agency NEPA Contacts that appeared in Appendix I in the Federal Register of Thursday, August 28, 1980 (45 FR 57488).

Appendix II updates and replaces the compilation of Federal and Federal-State Agencies With Jurisdiction by Law or Special Expertise on Environmental Quality Issues that appeared in Appendix II in the Federal Register of Thursday, August 28, 1980 (45 FR 57491).

Appendix III is reinstated as, and is an update of, the listing of Federal and Federal-State Agency Offices for Receiving and Commenting on Other Agencies' Environmental Documents. Appendix III last appeared in the Federal Register of August 1, 1973 (38 FR 20559).

EFFECTIVE DATE: December 21, 1984.

ADDRESSES: Comments should be addressed to General Counsel, Council on Environmental Quality, 722 Jackson Place, NW., Washington, DC 20006–4978.

FOR INFORMATION CONTACT: Dinah Bear, General Counsel, Council on Environmental Quality, 722 Jackson Place, NW, Washington, DC 20006–4978 (202) 395–5754.

SUPPLEMENTARY INFORMATION:

Appendix I—Federal and Federal-State Agency National Environmental Policy Act (NEPA) Contacts

Section 1507.2 of the Council's regulations for implementing the procedural provisions of the National Environmental Policy Act requires agencies to have an individual responsible for overall NEPA compliance. This appendix identifies the individual within each agency that is responsible for coordinating with the Council on behalf of that agency and for exercising NEPA oversight within that agency. This person can provide basic information about the agency's NEPA activities and about the procedures which the agency has adopted to supplement the Council regulations (40 CFR 1507.3).

To ascertain the proper office in an agency for receiving and commenting on other agencies' environmental documents, refer to Appendix III of this issuance.

Appendix II—Federal and Federal-State Agencies With Jurisdiction by Law or Special Expertise on Environmental Quality Issues

This appendix is a compilation of Federal and Federal-State agencies with jurisdiction by law, a statutorily mandated consultative role, or special expertise on environmental quality issues. Both the public and private sectors and governmental agencies can use this list as a reference guide to facilitate their participation in and compliance with NEPA process.

The appendix is organized into four broad categories: pollution control, energy, land use; and natural resource management. Because most actions involve environmental issues falling into more than one of these categories, users should consult all pertinent entries.

The areas of special expertise are listed in parentheses *following* the agency name. They are intended to provide examples rather than define the limits of an agency's total expertise in that area.

The areas of jurisdiction by law and statutorily mandated consultations are listed *below* each appropriate agency or component. Entries dealing with jurisdiction by law relate to that agency's authority to approve, deny, or finance all or part of a proposal and include permits and licenses. Because experience in implementing NEPA has proven that identification of an agency's statutorily mandated consultative role is of equal significance to users of this list, those responsibilities are now specifically cited and include such authorities as the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470 *et seq.*), the Fish and Wildlife Coordination Act (16 U.S.C. Sec. 661 *et seq.*), and the Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 *et seq.*). Because laws are amended and new laws enacted, the responsibilities identified in this appendix may change or new ones may be added. Hence, the definitive responsibility of an agency depends on the then current law and not on this index.

The Council on Environmental Quality has prepared this list to supplement its NEPA regulations and believes that it will be helpful in the following ways:

First, the Council's NEPA regulations require the Federal agency having primary responsibility for preparing an environmental impact statement (EIS) under NEPA (the lead agency) to determine whether any other Federal agencies have jurisdiction by law or special expertise with respect to any environmental effects involved in a proposal for legislation or other major Federal action significantly affecting the human environment. 40 CFR 1501.5(a), 1501.6(a), 1501.7(a). The Federal lead agency must, early in the NEPA process, request the participation of Federal cooperating agencies with jurisdiction by law or special expertise concerning the proposal. 40 CFR 1501.6(a), 1501.7(a). The lead agency and those involved in the "scoping process" (see 40 CFR 1501.7) may use this list to help determine which other Federal agencies should be requested to participate as cooperating agencies in the NEPA process. The list will also be helpful to the lead agency in determining which agencies should receive copies of the draft environmental impact statement for review and comment. 40 CFR 1503.1.

Second, this compilation will prove useful to those whose activities or proposed actions require Federal regulatory approvals by facilitating the identification of:

a. Those Federal agencies with the authority to issue applicable permits, licenses or other Federal regulatory approvals, and

b. Those Federal agencies that have a statutorily mandated consultative role that must be carried out before a decision is made.

Third, a major goal of NEPA and the CEQ regulations is to encourage public participation in agency decisionmaking. 40 CFR 1500.2(d). Individuals, citizen groups and State and local governments who are interested in an environmental issue may use the list to help identify those agencies that have jurisdiction by law over or special expertise in the subject matter of a proposal. Those interested may then contact the potentially involved agencies to obtain information on the issues and to participate in the NEPA process.

Appendix III—Federal and Federal-State Agency Offices for Receiving and Commenting on Other Agencies' Environmental Documents

Section 1503.1 of the Council's regulations for implementing the procedural provisions of the National Environmental Policy Act requires the agency that has prepared a draft environmental impact statement to "obtain the comments of any Federal

agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce environmental standards." Section 1503.2 discusses the "Duty to Comment" by those Federal agencies. This appendix identifies the location of the Federal and Federal-State agency offices for receiving and commenting on other agencies' environmental documents. The agency distributing the environmental document should give special attention to the instruction immediately following the agency name to ensure that the comment request and document(s) are sent to the correct office, e.g., some agencies ask that documents concerning legislation, regulations, national program proposals and other major policy issues be sent only to its headquarters office with all other documents to be sent to a regional office. If a transmitting agency has questions about where to send a document, consult the Federal agency NEPA contact listed in Appendix I.

Other Information

Since agency responsibilities, legal authorities, programs, and other data appearing in these Appendices change regularly, the Council will update the Appendices periodically. Agencies and the public are strongly encouraged to send comments noting changes or corrections that should be made to any Appendix.

Dated: December 14, 1984.

Dinah Bear,

General Counsel.

Editorial Note: The following appendices will not appear in the CFR.

Appendix I—Federal and Federal-State Agency National Environmental Policy Act (NEPA) Contacts

DEPARTMENTS

Department of Agriculture

Assistant Secretary for Natural Resources and Environment, Department of Agriculture; Attn: Executive Secretary, Natural Resources and Environment Committee; Room 242 W, Administration Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250–0001. (202) 447–5166.

Department of Agriculture Components

Agricultural Research Service: Deputy Administrator, National Program Staff, Agricultural Research Service, Department of Agriculture; Room 125, Bldg. 005, Agricultural Research Center-West, Beltsville, MD 20705–2350. (301) 344–3084.

Agricultural Stabilization and Conservation Service: Chief, Planning and Evaluation Branch, Conservation and Environmental Protection Division; Agricultural Stabilization and Conservation Service, Department of Agriculture, Room 4714, South Agriculture Bldg., 14th St. and Independence Ave., SW, P.O. Box 2415, Wash., D.C. 20013–2415. (202) 447–3264.

Animal and Plant Health Inspection Service: Environmental Coordinator, Animal and Plant Health Inspection Service, Department of Agriculture; Room 600, Federal Bldg., 6505 Belcrest Road, Hyattsville, MD 20782–2058. (301) 436–8896.

Economic Research Service: Director, Natural Resource Economics Division, Economic Research Service, Department of Agriculture, Room 412, GHI Bldg., 500 12th St. SW, Wash., D.C. 20250–0001. (202) 447–8239.

Extension Service: Deputy Administrator, Natural Resources and Rural Development, Extension Service, Department of Agriculture, Room 3909, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250–0001. (202) 447–7947.

Farmers Home Administration: Environmental Protection Specialist, Program Support Staff; Farmers Home Administration, Department of Agriculture, Room 6309, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250–0001. (202) 382–9619.

Food Safety and Inspection Service: Director, Regulations Office, Food Safety and Inspection Service, Department of Agriculture, Room 2940, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250–0001. (202) 447–3317.

Forest Service: Director, Environmental Coordination Staff, Forest Service, Department of Agriculture; Room 4204, South Agriculture Bldg., 14th St. and Independence Ave., SW, P.O. Box 2417, Wash., D.C. 20013–2417. (202) 447–4708.

Rural Electrification Administration: Environmental Policy Specialist, Engineering Standards Division, Rural Electrification Administration, Department of Agriculture, Room 1257, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250–0001. (202) 382–0097.

Soil Conservation Service: National Environmental Coordinator, Environmental Activities Branch, Ecological Sciences Division, Soil Conservation Service, Department of Agriculture, Room 6155, South Agriculture Bldg., 14th St. and Independence Ave., SW, P.O. Box 2890, Wash., D.C. 20013–2890. (202) 447–4912.

Department of Commerce

Chief, Ecology and Conservation Division, Office of Policy and Planning, National Oceanic and Atmospheric Administration, Department of Commerce, Room H–6111, Herbert Hoover Bldg., 14th St. and Constitution Ave., NW, Wash., D.C. 20230–0001. (202) 377–5181.

Department of Commerce Components

Economic Development Administration: Associate Director for Environment, Economic Development Adminstration, Department of Commerce, Room 7319, Herbert Hoover Bldg., 14th St. and Constitution Ave., NW, Wash., D.C. 20230–0001. (202) 377–4208.

National Oceanic and Atmospheric Administration: Chief, Ecology and Conservation Division, Office of Policy and Planning, National Oceanic and Atmospheric Administration, Department of Commerce, Room H–6111, Herbert Hoover Bldg., 14th St. and Constitution Ave., NW, Wash., D.C. 20230–0001. (202) 377–5181.

Department of Defense

Director, Environmental Policy, Office of the Assistant Secretary of Defense (Manpower, Installations and Logistics), Department of Defense, Room 3D833, The Pentagon, Wash., D.C. 20301–0001. (202) 695–7820.

Department of Defense Components

Defense Logistics Agency: Staff Director, Office of Installation Services and Environmental Protection, Defense Logistics Agency, Department of Defense, Cameron Station, Room 4D446, Alexandria, VA 22304–6100. (202) 274–6124.

Department of the Air Force: Deputy for Environment and Safety, Office of the Deputy Assistant Secretary for Installations, Environment and Safety, Department of the Air Force, Room 4C916, The Pentagon, Wash., D.C. 20330–0001. (202) 697–9297.

Department of the Army: Chief, Army Environmental Office, Attn: HQDA (DAEN–ZCE); Department of the Army, Room 1E676, The Pentagon, Wash., D.C. 20310–2600. (202) 694–3434.

Corps of Engineers: Assistant Director of Civil Works, Environmental Programs (DAEN–CWZ–P), Office of the Chief of Engineers, Room 7233, Pulaski Bldg., 20 Massachusetts Avenue, NW., Wash., D.C. 20314–1000. (202) 272–0103.

Department of the Navy: Director, Environmental Protection and Occupational Safety and Health Division (OP–453), Office of the Chief of Naval Operations, Department of the Navy, Bldg. 200, Room S–3, Washington Navy Yard, Wash., D.C. 20374–0001. (202) 433–2428.

U.S. Marine Corps: Head, Land Resources and Environmental Branch, Code: LFL, U.S. Marine Corps, Commonwealth Bldg., Room 614, 1300 Wilson Blvd., Arlington, VA. (202) 694–9237/38. MAILING ADDRESS: Commandant, U.S. Marine Corps, ATTN: Land Resources and Environmental Branch, Code: LFL, Wash., D.C. 20380–0001.

Department of Energy

Director, Office of Environmental Compliance (PE–25), Department of Energy, Room 4G–085, Forrestal Building, 1000 Independence Ave., SW, Wash., D.C. 20585–0001. (202) 252–4600.

Department of Health and Human Services

Departmental Environmental Officer, Office of the Assistant Secretary for Management Analysis and Systems, Department of Health and Human Services, Room 542 E, Hubert H. Humphrey Bldg., 200 Independence Ave., SW, Wash., D.C. 20201–0001. (202) 245–7354.

Department of Health and Human Services Components

Center for Disease Control: Chief, Environmental Affairs Group, Center for Environmental Health, Center for Disease Control, Room 1015, Bldg.: Chamblee–9,

Atlanta, GA 30329–4018. (404) 452–4257; (FTS) 236–4257.

Food and Drug Administration: Chief, Environmental Impact Staff (HFV–310) Food and Drug Administration, Parklawn Bldg., Room 7–89, 5600 Fishers Lane, Rockville, MD 20857–0001. (301) 443–1880.

Health Resources and Services Administration: Chief Environmental Health Branch, Division of Clinical and Environmental Services, Indian Health Service, Health Resources and Services Administration, Parklawn Building, Room 6A–54, 5600 Fishers Lane, Rockville, MD 20857–0001. (301) 443–1043.

National Institutes of Health: Chief, Environmental Protection Branch, National Institutes of Health, Bldg. 13, Room 2E55, 9100 Rockville Pike, Bethesda, MD 20205–0001. (301) 496–3537.

Office of Community Services: Director, Office of State Project Assistance, Office of Community Services, Room 500, Brown Bldg., 1200 19th St., NW., Wash., D.C. 20506–0007. (202) 653–5875.

Department of Housing and Urban Development

Director, Office of Environment and Energy, Department of Housing and Urban Development, Room 7154, HUD Building, 451 Seventh St., SW., Wash., D.C. 20410–0001. (202) 755–7894.

Department of the Interior

Director, Office of Environmental Project Review, Department of the Interior, Room 4260, Interior Bldg., 18th and C Sts., NW. Wash., D.C. 20240–0001. (202) 343–3891.

Department of the Interior Components

Fish and Wildlife Services: Chief, Division of Environmental Coordination, Fish and Wildlife Service, Department of the Interior, Room 402, Hamilton Bldg., 1375 K St., NW. Wash., D.C. (202) 343–5885. MAILING ADDRESS: 18th & C Sts., NW. Wash., D.C. 20240–0001.

Geological Survey: Chief, Review Unit, Environmental Affairs Program (MS–423), U.S. Geological Survey, Department of the Interior, Room 2D318, 12201 Sunrise Valley Drive, Reston, VA 22092–9998. (703) 860–7556.

Bureau of Indian Affairs: Chief, Environmental Services Staff, Office of Trust Responsibilities, Bureau of Indian Affairs, Department of the Interior, Room 4560, Interior Bldg., 18th and C Sts., NW. Wash., D.C. 20245–0001. (202) 343–6574.

Bureau of Land Management: Chief, Office of Planning and Environmental Coordination, Bureau of Land Management, Department of the Interior, Room 906, Premier Bldg., 1725 I St., NW, Wash., D.C. 20240–0001. (202) 653–8830.

Minerals Management Service: Chief, Offshore Environmental Assessment Division, Mineral Management Service, Department of the Interior, Room 2044, Interior Bldg., 18th and C Sts., NW, Wash., D.C. 20240–0001 (202) 343–2097.

Bureau of Mines: Special Assistant for Environmental Assessment, Bureau of Mines, Department of the Interior, Room 1004, Columbia Plaza Bldg., 2401 E St., NW, Wash., D.C. 20241–0001. (202) 634–1310.

National Park Service: Chief, Environmental Compliance Division (762), National Park Service, Department of the Interior, Room 1210, Interior Bldg., 18th and C Sts., NW, Wash., D.C. 20240–0001. (202) 343–2163.

Bureau of Reclamation: Director, Office of Environmental Affairs, Bureau of Reclamation, Department of the Interior, Room 7622, Interior Bldg., 18th and C Sts., NW, Wash., D.C. 20240–0001. (202) 343–4991.

Office of Surface Mining: Chief, Division of Permits and Environmental Analysis, Office of Surface Mining Reclamation and Enforcement, Department of the Interior, Room 134, Interior-South Bldg., 1951 Constitution Ave., NW., Wash., D.C. 20240–0001. (202) 343–5261.

Department of Justice

Assistant Chief, General Litigation Section, Land and Natural Resources Division, Department of Justice, Room 2133, Justice Bldg., 9th St. and Pennsylvania Ave., NW, Wash., D.C. 20530–0001. (202) 633–2704.

Department of Justice Components

Bureau of Prisons: Chief, Office of Facilities Development and Operations, Bureau of Prisons, Department of Justice, 320 First St., NW, Wash., D.C. 20534–0001. (202) 724–3232.

Drug Enforcement Administration: Deputy Assistant Administrator, Office of Science and Technology, Drug Enforcement Administration, Department of Justice, 1405 Eye St., NW, Wash., D.C. 20537–0001. (202) 633–1211.

Immigration and Naturalization Service: Chief, Facilities and Engineering Branch, Immigration and Naturalization Service, Department of Justice, 425 Eye St., NW, Wash., D.C. 20536–0001. (202) 633–4448.

Office of Justice Assistance, Research and Statistics: Director, Office of Justice Assistance, Research and Statistics; Department of Justice, Room 1300, 633 Indiana Ave., NW, Wash., D.C. 20531–0001. (202) 724–5933.

Office of Legal Counsel: Assistant Attorney General, Office of Legal Counsel, Department of Justice, Room 5214, Justice Bldg., 9th St. and Pennsylvania Ave., NW, Wash., D.C. 20530–0001. (202) 633–2041.

Department of Labor

Director, Office of Regulatory Economics, Assistant Secretary for Policy, Department of Labor, Room S–2312, Frances Perkins Bldg., 200 Constitution Ave., NW, Wash., D.C. 20210–0001. (202) 523–6197.

Department of Labor Components

Mine Safety and Health Administration: Chief, Office of Standards, Regulations and Variances, Mine Safety and Health Administration, Department of Labor, Room 627, Ballston Tower #3, 4015 Wilson Blvd., Arlington, VA 22203–1923. (703) 235–1910.

Occupational Safety and Health Administration: Director, Office of Regulatory Analysis, Occupational Safety and Health Administration, Department of Labor, Room N–3635, Frances Perkins Bldg., 200 Constitution Ave., NW, Wash., D.C. 20210–0001. (202) 523–8017.

Department of State

Director, Office of Environment and Health, Department of State, Room 4325, State Department Bldg., 21st and C Sts., NW. Wash., D.C. 20520–0001.(202) 632–9266.

Department of Transportation

Deputy Director for Environment and Policy Review, Office of Economics, Department of Transportation, Room 10309 Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–4357.

Department of Transportation Components

Federal Aviation Administration: Director, Office of Environment and Energy (AEE–1), Federal Aviation Administration, Room 432, FOB–10A, 800 Independence Ave., SW, Wash., D.C. 20591–0001. (202) 426–8406.

Federal Highway Administration: Director, Office of Environmental Policy (HEV–1), Federal Highway Administration, Room 3222, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–0351.

Federal Railroad Administration: Director, Office of Economic Analysis (RRP–30), Federal Railroad Administration, Room 8300, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–7391.

Maritime Administration: Head, Environmental Activities Group (MAR–700.4), Maritime Administration, Room 2120, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–5739.

National Highway Traffic Safety Administration: Assistant Chief Counsel for General Law, Office of Chief Counsel (NOA–33), National Highway Traffic Safety Administration, Room 5219, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–1834.

Research and Special Programs Administration (includes Materials Transportation Bureau): Chief, Environmental Technology Division (DTS–48), Research and Special Programs Administration, US–DOT, Transportation Systems Center, Room 3–55, Kendall Square, Cambridge, MA 02142–1001. (617) 494–2018; (FTS) 837–2018.

St. Lawrence Seaway Development Corporation: Deputy Chief Engineer, St. Lawrence Seaway Development Corporation, Seaway Administration Bldg., 180 Andrews St., P.O. Box 520, Massena, NY 13662–1760. (315) 764–3256; (FTS) 953–0256.

United States Coast Guard: Chief, Environmental Compliance and Review Branch (G–WP–3), Office of Marine Environment and Systems, U.S. Coast Guard, 2100 2nd St., SW, Wash., D.C. 20593–0001. (202) 426–3300.

Urban Mass Transportation Administration: Director, Office of Planning Assistance (UGM–20), Urban Mass Transportation Administration, Room 9311, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–2360.

Department of Treasury

Manager, Environmental Quality, Physical Security and Safety Division, Department of the Treasury, Room 800, Treasury Bldg., 1331 G St., NW, Wash., D.C. 20220–0001. (202) 376–0289.

INDEPENDENT AGENCIES

ACTION

Assistant Director, Office of Policy and Planning, ACTION, Room M-606, 806 Connecticut Ave., NW, Wash., D.C. 20525-0001. (202) 634-9304; WATS #800-424-8580, ext. 81.

Advisory Council on Historic Preservation

Director, Office of Cultural Resource Preservation, Advisory Council on Historic Preservation, Old Post Office Building, Suite 803, 1100 Pennsylvania Ave., NW, Wash., D.C. 20004-2590. (202) 786-0505.

Appalachian Regional Commission

Director, Division of Housing and Community Development, Appalachian Regional Commission, 1666 Connecticut Ave., NW, Wash., D.C. 20235-0001. (202) 673-7845.

Arms Control and Disarmament Agency

General Counsel, Arms Control and Disarmament Agency, Room 5534, 320 21st St., NW, Wash., D.C. 20451-0001. (202) 632-3582.

Central Intelligence Agency

Chief, Real Estate and Construction Division, Office of Logistics, Central Intelligence Agency, Room 2FO9, Page Bldg., 803 Follin Lane, Vienna, VA. (703) 281-8111. MAILING ADDRESS: Washington, D.C. 20505-0001.

Civil Aeronautics Board

Chief, Environmental and Energy Programs (B-60C), Civil Aeronautics Board, Room 909, Universal Bldg., 1825 Connecticut Ave., NW, Wash., D.C. 20428-0001. (202) 426-9622.

Consumer Product Safety Commission

Assistant General Counsel, Office of the General Counsel, Consumer Product Safety Commission, Room 200, 5401 Westbard Ave., Bethesda, MD. (301) 492-6550. MAILING ADDRESS: Washington, D.C. 20207-0001.

Delaware River Basin Commission

Executive Director, Delaware River Basin Commission, 25 State Police Drive, P.O. Box 7360, West Trenton, NJ 08628-0360. (609) 883-9500; (FTS) 483-2077.

Environmental Protection Agency

Director, Office of Federal Activities (A-104), Environmental Protection Agency, Room 2119-I, 401 M St., SW, Wash., D.C. 20460-0001. (202) 382-5053.

Export-Import Bank of the United States

General Counsel, Export-Import Bank of the United States, Room 947, Lafayette Bldg., Room 947, 811 Vermont Ave., NW, Wash., D.C. 20571-0001. (202) 566-8334.

Farm Credit Administration

Deputy Governor—Region I, Office of Examination and Supervision, Farm Credit Administration, 1501 Farm Credit Drive, McLean, VA 22102-5090. (703) 883-4161.

Federal Communications Commission

Staff Attorney, Legal Counsel Division, Office of General Counsel, Federal Communications Commission, Room 621, 1919 M St., NW, Wash., D.C. 20554-0001. (202) 632-6990.

Federal Deposit Insurance Corporation

Director, Division of Accounting and Corporate Services, Federal Deposit Insurance Corporation, Room 6120, 550 Seventeenth St., NW, Wash., D.C. 20429-0001. (202) 389-4691.

Federal Emergency Management Agency

Associate General Counsel, Federal Emergency Management Agency, Room 840, 500 C St., SW, Wash., D.C. 20472-0001. (202) 287-0387.

Federal Energy Regulatory Commission

(1) Legal Matters: Deputy Assistant General Counsel, Division of Rulemaking and Policy Coordination, Office of General Counsel, Federal Energy Regulatory Commission, Room 8600A, 825 N. Capitol St., NE, Wash., D.C. 20426-0001. (202) 357-8033.

(2) Natural Gas Matters: Chief, Environmental Evaluation Branch, Office of Pipeline and Producer Regulation, Federal Energy Regulatory Commission, Room 7102A, 825 N. Capitol St., NE, Wash., D.C. 20426-0001. (202) 357-8098.

(3) Electric and Hydroelectric Matters: Director, Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission, Room 308, Railway Labor Building, 400 First St., NW, Wash., D.C. 20426-0001. (202) 376-1768.

Federal Home Loan Bank Board

Deputy Director for Corporate, Corporate and Securities Division, Office of General Counsel, Federal Home Loan Bank Board, Third Floor, East Wing, 1700 G St., NW, Wash., D.C. 20552-0001. (202) 377-6411.

Federal Maritime Commission

Director, Office of Energy and Environmental Impact, Federal Maritime Commission, 1100 L St., NW, Wash., D.C. 20573-0001. (202) 523-5835.

Federal Reserve Board

Senior Attorney, Office of General Counsel, Federal Reserve Board, Room B-1016E, 20th St. and Constitution Ave., NW, Wash., D.C. 20551-0001. (202) 452-3236.

Federal Trade Commission

Deputy Assistant General Counsel, Federal Trade Commission, Room 582, 6th St. and Pennsylvania Ave., NW, Wash., D.C. 20580-0001. (202) 523-1928.

General Services Administration

Director, Environmental Affairs Staff (PRE), Office of Space Management, Public Buildings Service, General Services Administration, Room 2323, 18th and F Sts., NW, Wash., D.C. 20405-0001. (202) 566-0654.

International Boundary and Water Commission, United States Section

Principal Engineer, Investigations and Planning Division, International Boundary and Water Commission, United States Section, IBWC Bldg., 4110 Rio Bravo, El Paso, TX 79902-1091. (915) 541-7304; (FTS) 572-7304.

Interstate Commerce Commission

Chief, Section of Energy and Environment, Office of Transportation Analysis, Interstate Commerce Commission, Room 4143, 12th St. and Constitution Ave., NW, Wash., D.C. 20423-0001. (202) 275-0800.

Lowell Historic Preservation Commission

Planning Director, Lowell Historic Preservation Commission, 204 Middle Street, Lowell, MA 01852-1815. (617) 458-7653; (FTS) 829-0766.

Marine Mammal Commission

General Counsel, Marine Mammal Commission, Room 307, 1625 Eye St., NW, Wash., D.C. 20006-3064. (202) 653-6237.

National Academy of Sciences

Staff Director, Environmental Studies Board, National Academy of Sciences, Room JH-804, 2101 Constitution Ave., NW, Wash., D.C. 20418-0001. (202) 334-3060.

National Aeronautics and Space Administration

Environmental Compliance Officer, Facilities Engineering Division (NXG), National Aeronautics and Space Administration, Room 5031, 400 Maryland Ave., SW, Wash., D.C. 20546-0001. (202) 453-1958.

National Capital Planning Commission

Environmental/Energy Officer, Division of Planning Services, National Capital Planning Commission, Room 1024, 1325 G St., NW, Wash., D.C. 20576-0001. (202) 724-0179.

National Credit Union Administration

Director, Department of Legal Services, National Credit Union Administration, Room 6261, 1776 G St., NW, Wash., D.C. 20456-0001. (202) 357-1030.

National Science Foundation

Chairman and Staff Associate, Committee on Environmental Matters; Office of Astronomical, Atmospheric, Earth and Ocean Sciences; National Science Foundation, Room 641, 1800 G St., NW, Wash., D.C. 20550-0001. (202) 357-7615.

Nuclear Regulatory Commission

(1) Director, Division of Engineering, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Room P-202, Phillips Bldg., 7920 Norfolk Ave., Bethesda, MD 20814-2587. (301) 492-7207.

(2) Director, Division of Fuel Cycle and Materials Safety, Office of Nuclear Material Safety and Safeguards, Nuclear Regulatory Commission, Room 562, Willste Building, 7915 Eastern Ave., Silver Spring, MD 20910-4896. (301) 427-4485.

Pennsylvania Avenue Development Corporation

Director of Development, Pennsylvania Avenue Development Corporation, Suite 1248, 425 13th St., NW, Wash., D.C. 20004-1856. (202) 523-5477.

Securities and Exchange Commission

Special Counsel, Office of Public Utility Regulation, Securities and Exchange

Commission, Room 7012, 450 Fifth St., NW. Wash., D.C. 20549–0001. (202) 272–7648.

Small Business Administration

Director, Office of Business Loans, Small Business Administration, Room 804–C, 1441 L St., NW, Wash., D.C. 20416–0001. (202) 653–6696.

Susquehanna River Basin Commission

Executive Director, Susquehanna River Basin Commission, 1721 N. Front St., Harrisburg, PA. 17102–2391. (717) 238–0422.

Tennessee Valley Authority

Director, Environmental Quality Staff, Tennessee Valley Authority, 201 Summer Place Building, 309 Walnut St., Knoxville, TN 37902–1411. (615) 632–6578; (FTS) 856–6578.

United States Information Agency

Assistant General Counsel, United States Information Agency, 301 Fourth St., SW, Wash., D.C. 20547–0001. (202) 485–7976.

United States International Development Cooperation Agency

(1) Environmental Affairs Coordinator, Office of External Affairs, U.S. Agency for International Development, Department of State Bldg., 320 21st St., NW, Wash., D.C. 20523–0001. (202) 632–8268.

(2) International Economist/Environmental Officer, Office of Development, Overseas Private Investment Corporation, 1129 20th St., NW, Wash., D.C. 20527–0001. (202) 653–2904.

United States Postal Service

Director, Office of Program Planning, Real Estate and Buildings Department, United States Postal Service, Room 4014, 475 L'Enfant Plaza West, SW, Wash., D.C. 20260–6420. (202) 245–4304.

Veterans Administration

Director, Environmental Affairs, Veterans Administration, Code 005, 810 Vermont Ave. NW, Wash., D.C. 20420–0001. (202) 389–2192.

Appendix II—Federal and Federal-State Agencies With Jurisdiction by Law or Special Expertise on Environmental Quality Issues

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I. POLLUTION CONTROL

A. Air Quality

Department of Agriculture

• Agricultural Research Service (effects of air pollution on vegetative growth).

• Farmers Home Administration (effects of air pollution on housing, community, and business loan programs, and farmer loan programs).

• Forest Service (effects of air pollution on vegetation and visibility; fire smoke management on National Forest and Grasslands).

• Rural Electrification Administration (electric power plant emissions).

• Soil Conservation Service (effects of air pollution on vegetation; wind erosion).

Department of Commerce

• National Bureau of Standards (air quality measurements, standards, data and methods).

• National Oceanic and Atmospheric Administration (meteorological and climatological research and monitoring in relation to urban air pollution; incorporation of national air quality standards in Coastal Zone Management Plans for management and protection of coastal and marine resources).

Department of Defense

• Department of the Air Force (air pollution from military aircraft).

• Department of the Army (emissions from military vehicles).

Department of Energy

• Economic Regulatory Administration (emissions from power plants and other major fuel-burning installations):

—Exemptions from prohibitions against burning of natural gas and oil in power plants and major fuel-burning installations. 42 U.S.C 7101 and 8301 (10 CFR Part 500, *et seq.*).

• Office of Policy, Safety, and Environment (air quality in relation to general energy policies, programs, and projects; emissions from energy sources).

Department of Health and Human Services

• Public Health Service: Center for Disease Control (effects of air pollution on health); National Institutes of Health (effects of air pollution on health).

Department of Housing and Urban Development

• Office of Community Planning and Development (effects of air pollution on the built environment; air pollution abatement; energy costs and State Implementation Plans).

• Office of Housing (effect of air pollution on housing values and marketability; economic impacts).

Department of the Interior

• Fish and Wildlife Service (effects of air pollution, including acid rain, on endangered species and critical habitats; National Wildlife Refuge System areas; and other fish and wildlife resources).

• Geological Survey (effects of acid rain on surface and ground waters).

• Bureau of Indian Affairs (effects of air pollution on Indian lands).

• Bureau of Land Management (effects of air pollution, including smoke from forest fires and prescribed burning, on public lands, vegetation and visibility).

• Minerals Management Service (emissions from outer continental shelf lease operations):

—Oil, gas, and sulphur operations on the outer continental shelf—air quality. 43 U.S.C. 1331, *et seq.*, and 42 U.S.C. 7411 (30 CFR Part 250.57).

• Bureau of Mines (air pollution from mining and minerals processing).

• National Park Service (visibility and other effects of air pollution on National Park System areas; effects of air pollution on recreation areas and historic, archeological and architectural sites).

• Office of Surface Mining Reclamation and Enforcement (air pollution from surface coal mining and reclamation operations; control of wind erosion at surface coal mines; control of coal waste fires).

Department of Labor

• Mine Safety and Health Administration (airborne hazards in mining operations).

• Occupational Safety and Health Administration (airborne hazards in the workplace):

—Air contaminants, toxic and hazardous substances. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910, Subpart Z).

Department of State (international aspects of air pollution).

Department of Transportation

• Coast Guard (cargo tank venting and vapor recovery systems).

• Federal Aviation Administration (aircraft emissions):

—Fuel venting and exhaust emission requirements for turbine engine powered airplanes. Special Federal Aviation Regulation 27 (SFAR). 42 U.S.C. 1857, *et seq.*, 7571 and 7601; 49 U.S.C. 1345, 1348, 1421, 1423 and 1655 (14 CFR Part 11; 40 CFR Part 87).

• Federal Highway Administration (highway related air quality impacts; vehicle emissions):

—Air quality conformity of highway projects. 23 U.S.C. 109; 42 U.S.C. 7401, *et seq.*, and 7506 (23 CFR Part 770).

• Federal Railroad Administration (locomotive emissions).

• Urban Mass Transportation Administration (air quality effects of urban transportation systems):

—Air quality conformity of transit projects. 42 U.S.C. 7401, *et seq.*, and 7506 (49 CFR Part 623).

Advisory Council on Historic Preservation (effects of air pollution on historic districts, buildings and monuments).

Consumer Product Safety Commission (toxic emissions from consumer products and household substances):

—Consumer products and household substances regulations. 15 U.S.C. 1261, *et seq.*, and 2051, *et seq.* (16 CFR Part 1000, *et seq.*).

Environmental Protection Agency (effect of air pollution on public health and welfare; air quality criteria and standards; air pollution control and abatement technologies; transportation emissions and air quality impacts; stationary source emissions; monitoring technology):

—Air quality programs in general. 42 U.S.C. 1857, *et seq.*; 7401, *et seq.*; 7501, *et seq.*; *and 7601, et seq.* (40 CFR Parts 50–87).

—Prevention of significant air quality deterioration. 42 U.S.C. 7470, *et seq.* (40 CFR Parts 51, 52 and 124).

—Approval of State Implementation Plans (SIPs) for National primary and secondary ambient air quality standards. 42 U.S.C. 7410 (40 CFR Parts 51 and 52).

—Approval of State plans for standards of performance for new stationary emission sources (NSPS). 42 U.S.C. 7411 (40 CFR Part 60).

—Applications for primary non-ferrous smelter orders. 42 U.S.C. 7419 (40 CFR Part 57).

—Assuring that Federal projects conform with State Implementation Plans. 42 U.S.C. 7616 (40 CFR Part 20).

—Certification of new emission sources for conformance with National Emission Standards for Hazardous Air Pollutants including radioactive materials. 42 U.S.C. 7412(c) (40 CFR Part 61).

Interstate Commerce Commission (air pollution from trucks and railroads).

National Aeronautics and Space Administration (advanced technology for remote sensing of air quality parameters and for reduction of aircraft engine emissions).

Nuclear Regulatory Commission (radioactive substances in air pollution):

—For jurisdictional responsibilities see Part I.E—Radiation.

Tennessee Valley Authority (air quality in the Tennessee Valley region; measurement and control of air pollution from fossil-fueled steamplants; effects on vegetation).

B. Water Quality

Department of Agriculture

• Agricultural Research Service (research on erosion and sediment control, pesticide degradation and runoff, and salinity).

• Agricultural Stabilization and Conservation Service (water quality on agricultural lands; Water Bank Program).

• Farmers Home Administration (water quality in relation to housing, community, and business loan programs, and farmer loan programs).

• Forest Service (effects of water pollution on National Forests and Grasslands, and on forest and range land in general):

—Consultation regarding effects of pollution on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

—Management of municipal watersheds on National Forest lands. (36 CFR Parts 251.9 and 251.35).

• Soil Conservation Service (water quality in relation to agricultural waste management, erosion and sediment control and stabilization of rural abandoned mines; salinity control; peticides in conservation systems):

—Reclamation of rural abandoned mined land. 30 U.S.C. 1201 *et seq.* (7 CFR Part 632).

—Program for land conservation and utilization, and aquaculture. 7 U.S.C. 1011(e).

Department of Commerce

• National Bureau of Standards (water quality measurements, standards, data, and methods).

• National Oceanic and Atmospheric Administration (water quality in the management and protection of coastal and marine resources, marine pollution research and monitoring for ocean mining):

—National Ocean Pollution Planning Act. 33 U.S.C. 1701, *et seq.*

—Marine Protection, Research, and Sanctuaries Act. 16 U.S.C. 1431, *et seq.* 15 CFR Part 922, *et seq.*).

Department of Defense

• Army Corps of Engineers (water pollution from activities in navigable waters):

—Rules governing work or structure in or affecting navigable waters of the United States. 33 U.S.C. 401 and 403 (33 CFR Parts 321 and 322).

—Authority to enjoin dumping of, or force removal of, refuse placed in or on the banks of a navigable water or tributary of a navigable water. 33 U.S.C. 407 (33 CFR Part 320.2(d)).

—Permits for discharges of dredged or fill materials into waters of the United States. 33 U.S.C. 1344 (33 CFR Part 323).

—Guidelines controlling discharge of dredged or fill material in waters of the U.S. including wetlands. 33 U.S.C. 1344(b) and 1361(a) (40 CFR Part 230).

—Permits for transportation of dredged materials for dumping into ocean waters. 33 U.S.C. 1413 (33 CFR Part 324).

—Regulation of artificial islands, installations and devices on the outer continental shelf. 43 U.S.C. 1333(e). (33 CFR Part 320.2(b)).

• Department of Navy (water pollution control for ships and naval installations; oceanography).

Department of Energy

• Office of Policy, Safety, and Environment (water quality and marine pollution in relation to general energy policies, programs and projects).

Department of Health and Human Services

• Center for desease Control (effects of water quality on health).

• Food and Drug Administration (shellfish sanitation: contamination of fish and shellfish with toxics).

Department of Housing and Urban Development

• Office of Community Planning and Development (effects of water pollution community planning and on sole source aquifers, floodplains, wetlands, and urban coastal zones).

Department of the Interior

• Fish and Wildlife Service (effects of water pollution on National Wildlife Refuge and National Fish Hatchery System areas, endangered species and their critical habitats, migratory waterfowl, floodplains, wetlands, estuarine areas, marine sanctuaries, barrier islands, and sport fisheries and wildlife resources).

• Geological Survey (general hydrology and water quality; National Water Summary; National Stream Quality Accounting Network [NASQAN]).

• Bureau of Indian Affairs (water quality on Indian lands).

• Bureau of Land Management (water quality on public lands):

—Permits and leases for facilities to control/reduce water pollution. 43 U.S.C. 1732(b) and 1761(a)(1) (43 CFR Part 2800).

• Minerals Management Service (effects of marine pollution on the outer continental shelf and coastal waters):

—Control of pollution from mineral mining, including oil and gas development, on the outer continental shelf. 43 U.S.C. 1331–1343. (30 CFR Parts 250, 251, 252 and 256).

• Bureau of Mines (water pollution from mining and mineral processing; acid mine drainage).

• National Park Service (effects of water pollution on National Park System areas including National Seashores and Lakeshores, on outdoor recreational values, and on historic, archeological, and architectural resources):

—Consultations regarding effects of pollution on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Bureau of Reclamation (effects of public works, salinity control, sedimentation, and irrigation on water quality; effects of water developments on estuarine areas; research in weather modification, water quality and quantity, and desalinization).

• Office of Surface Mining Reclamation and Enforcement (effects of surface coal mining and reclamation operations on water quality and hydrologic balance).

Department of State (international aspects of water pollution):

—Facilities for export/import of water and sewage. Executive Order 11423.

Department of Transportation

• Coast Guard (effects of oil spills and ship sanitation on water quality; ocean dumping enforcement; marine resource protection):

—Tanker construction, equipment, manning, operation. 46 U.S.C. 391(a) (33 CFR Part 157).

—Control of pollution by oil and hazardous substance discharges in ports, waterways, and offshore facilities. 33 U.S.C. 1008–1011, 1221, and 1321; 50 U.S.C. 191 (33 CFR Parts 151 and 154–156).

—Certification of marine sanitation devices. 33 U.S.C. 1322 (33 CFR Part 159).

• Federal Highway Administration (effects of highways, traffic and use of salt on water quality).

• Maritime Administration (water pollution from ships; destruction/treatment of wastes at sea):

—Merchant vessels, polluting discharges and dumping. 46 U.S.C. 1101, *et seq.*

—Port operations, polluting discharges and dumping. 46 U.S.C. 867.

• Research and Special Programs Administration: Materials Transportation Bureau (effects of hazardous substances transportation on water quality).

Advisory Council on Historic Preservation (effects of water pollution on historic districts, buildings and monuments).

Environmental Protection Agency (waste water treatment works; effluent limitations; oil and hazardous substance discharges; protection of drinking water supplies; thermal discharges; ocean dumping; monitoring technology):

—Water quality programs in general. 33 U.S.C. 1160, *et seq.*, and 1251, *et seq.*; 42 U.S.C. 300f, *et seq.*, and 6901, *et seq.* (40 CFR Parts 100–149).

—Effluent guidelines and standards. 33 U.S.C. 1251, *et seq.* (40 CFR Part 401, *et seq.*).

—Ocean dumping in general. 33 U.S.C. 1344, 1361 and 1412–1418 (40 CFR Parts 220–231).

—Permits for discharge of specific pollutants from aquaculture projects. 33 U.S.C. 1328 (40 CFR Parts 122–124).

—Review of permits for transportation of dredged material for ocean dumping. 33 U.S.C. 1413 (40 CFR Parts 220–229).

—Permits for transportation of materials (other than dredged material) for ocean dumping. 33 U.S.C. 1412 and 1414 (40 CFR Parts 220–229).

—Permits for disposal of sewage sludge. 33 U.S.C. 1345 (40 CFR Parts 122–125).

—Permits for ocean discharges. 33 U.S.C. 1343 (40 CFR Parts 125.120–125.124).

—Regulation of discharges of oil and hazardous substances in waters of the United States. 33 U.S.C. 1321 and 1361 (40 CFR Part 112).

—Permits for treatment, storage or disposal of hazardous wastes. 2 U.S.C. 6925 (40 CFR Parts 124, 270, and 271).

—Review of permits for discharges of dredged or fill materials into navigable waters. 33 U.S.C. 1344(c) (40 CFR Part 230).

—Guidelines controlling the discharge of dredged or fill material in waters of the U.S. including wetlands. 33 U.S.C. 1344(b) and 1361(a) (40 CFR Part 230).

—Assistance for construction of publicly-owned waste water treatment works. 33 U.S.C. 1281 (40 CFR Parts 30 and 35).

—Underground injection control permits. 42 U.S.C. 300f, *et seq.* (40 CFR Parts 122–124 and 144–146).

—National Pollutant Discharge Elimination System (NPDES) wastewater permits. 33 U.S.C. 1342 (40 CFR Parts 122–125, 129, 133, and 136).

—Designation of Sole Source Aquifers. 42 U.S.C. 300f and h-3(e) (40 CFR Part 148).

Federal Emergency Management Agency (water quality in floodplain management).

Federal Maritime Commission (vessel certification with respect to liability for water pollution):

—Certificates of financial responsibility for water pollution. 33 U.S.C. 1321 (46 CFR Part 542); 42 U.S.C. 1643 (46 CFR Part 543); 43 U.S.C. 1815 (46 CFR Part 544).

International Boundary and Water Commission, United States Section (U.S.-Mexico border water quality, salinity, and sanitation problems).

National Aeronautics and Space Administration (advanced technology for remote sensing of water quality and marine pollution).

Nuclear Regulatory Commission (radioactive substances in water pollution):

—For jurisdictional responsibilities, see PART I. E—Radiation.

Tennessee Valley Authority (water quality in the Tennessee Valley; effects of chemical and thermal effluents).

C. Waste Disposal on Land

Department of Agriculture

• Agricultural Research Service (effects of agricultural wastes and sludge on cropland).

• Agriculture Stabilization and Conservation Service (effects of solid waste, especially sludge disposal, on cropland).

• Forest Service (effects of solid and liquid wastes on National Forests and Grasslands):

—Permits for disposal sites on National Forest System lands. 16 U.S.C. 495, 497, 532–538 and 580 (36 CFR Part 251).

• Rural Electrification Administration (solid waste disposal from electric power plants).

• Soil Conservation Service (agriculture waste management; siting of disposal areas; sludge application on cropland for beneficial purposes).

Department of Commerce

• National Bureau of Standards (measurements, standards, data, and methods relating to solid and liquid wastes).

• National Oceanic and Atmospheric Administration (disposal of solid wastes in the management and protection of coastal and marine resources).

Department of Health and Human Services

• Center for Disease Control (effects of wastes on health).

• Food and Drug Administration (contamination of food resulting from disposal of municipal and industrial waste treatment sludge).

Department of the Interior

• Fish and Wildlife Service (effects of solid wastes on National Wildlife Refuge and National Fish Hatchery System areas, endangered species and their critical habitats, and other fish and wildlife resources).

• Geological Survey (geologic and hydrologic effects of solid and liquid wastes).

• Bureau of Indian Affairs (effects of solid wastes on Indian lands).

• Bureau of Land Management (effects of solid wastes on public lands):

—Sale or lease of land for solid waste disposal sites. 43 U.S.C. 869, *et seq.* (for sale—43 CFR Part 2740; for lease—43 CFR Part 2912).

• Bureau of Mines (mine wastes; mineral processing wastes; tailings stabilization; impoundment structures; municipal solid wastes; recycling).

• National Park Service (effects of solid wastes on National Park System areas).

• Office of Surface Mining Reclamation and Enforcement (surface coal mining and reclamation operation wastes).

Department of Labor

• Mine Safety and Health Administration (mine waste control).

Department of Transportation

• Maritime Administration (destruction/treatment of wastes at sea).

• Research and Special Programs Administration: Materials Transportation Bureau (transport of hazadous wastes):

—Hazardous materials regulations. (49 CFR Part 171, *et seq.*).

Environmental Protection Agency (solid wastes; hazardous waste; resource conservation and recovery; removal and remedial actions; environmental effects):

Solid wastes in general. 42 U.S.C. 3251, *et seq.*, and 6901, *et seq.* (40 CFR Parts 240–271); 42 U.S.C. 9601 *et seq.* (40 CFR Part 300, *et seq.*).

—Permits for disposal of sewage sludge. 33 U.S.C. 1345 (40 CFR Parts 122–125).

—Solid Waste Disposal Act permits. 42 U.S.C. 3251, *et seq.*, and 6901, *et seq.* (40 CFR Parts 124, 257, 270, 271 and 350).

—Criteria for classification of solid waste disposal facilities and practices. 42 U.S.C. 6907(a)(3) and 6944(a); 33 U.S.C. 1345 (40 CFR Part 257).

—Identification and listing of hazardous wastes. 42 U.S.C. 6921 (40 CFR Part 261).

—Standards applicable to generators and transporters of hazardous waste, and for owners and operators of hazardous waste treatment, storage, and disposal facilities. 42 U.S.C. 6922–6924 (40 CFR Parts 260–267)

—Permits for hazardous waste treatment, storage, and disposal facilities. 42 U.S.C. 6925 (40 CFR Parts 123, 124, 270 and 271).

—Preliminary notification of hazardous waste activities. 42 U.S.C. 6930 (40 CFR Parts 261.5, 262.12, and 263.11).

—Removal and remedial actions taken in response to the release or threatened release of hazardous substances. 42 U.S.C. 9601 (23) and (24) 40 CFR Part 300).

—National Contingency plan for the release of oil and hazardous substances into the environment. 42 U.S.C. 9605 (40 CFR Part 300).

—Notification requirements for the release of hazardous substances into the environment. 42 U.S.C. 9605 (40 CFR Part 302).
—Assistance for construction of solid waste disposal facilities. 42 U.S.C. 6981, *et seq.* (40 CFR Parts 30 and 35).

Federal Emergency Management Agency (hazardous materials emergency management and disaster relief assistance).

General Services Administration (wastes in public buildings).

Nuclear Regulatory Commission (radioactive waste disposal):

—For jurisdictional responsibilities, see PART I. E—Radiation.

Tennessee Valley Authority (coal combustion products).

D. Noise

Department of Agriculture

• Farmers Home Administration (noise in relation to housing, community, and business loan programs, and farmer loan programs).
• Forest Service (noise effects on National Forests and Grasslands).
• Rural Electrification Administration (electric generating facility, powerline, and substation noise).

Department of Commerce

• National Oceanic and Atmospheric Administration (effects of noise on marine mammals).

Department of Defense

• Department of the Air Force (military aircraft noise).
• Department of the Army (noise from rotary wing aircraft and other military vehicles).

Department of Health and Human Services

• Public Health Service (effects of noise on health).

Department of Housing and Urban Development

• Office of Community Planning and Development (aircraft and vehicular noise and land use compatibility);
—Noise abatement and control. (24 CFR Part 51, Subpart B).
—Siting of HUD assisted projects in runway clear zones (civil airports) and clear zones and accident potential zones (military airfields). (24 CFR Part 51, Subpart D).
• Office of Housing (noise standards for housing; noise abatement and control).

Department of Interior

• Fish and Wildlife Service (effects of noise on endangered species and their critical habitats, National Wildlife Refuge System areas, and other fish and wildlife resources).
• Bureau of Indian Affairs (noise effects on Indian lands).
• Bureau of Land Management (noise effects on public lands; noise abatement and control).
• Minerals Management Service (effects of noise on marine mammals).
• Bureau of Mines (mine noise, blasting and vibration).
• National Park Service (effects of noise on National Parks system areas, including off-road vehicular noise; effects of noise and vibration on historic, archeological, and architectural sites, and recreational resources).
• Bureau of Reclamation (effects of noise on reclamation project lands).
• Office of Surface Mining Reclamation and Enforcement (noise from surface coal mining and reclamation operations, and from the use of explosives).

Department of Labor

• Mining Safety and Health Administration (noise in mining operations).
• Occupational Safety and Health Administration (noise in the workplace):
—Occupational noise exposure. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910.95).

Department of Transportation

• Federal Aviation Administration (aircraft noise and land use compatibility):
—Airport noise compatibility planning. 49 U.S.C. 1341, 1348, 1354, 1421, 1431, 1655 and 2101–2104 (14 CFR Part 150).
—Noise standards: Aircraft type and airworthiness certification. 49 U.S.C. 1354, 1421, 1423, 1431 and 1655 (14 CFR Part 36).
—Operating noise limits. 49 U.S.C. 1344, *et seq.*; 1421, *et seq.*, and 1655 (14 CFR Part 91, Subpart E).
—Civil aircraft sonic boom. (14 CFR Part 91.55).
• Federal Highway Administration (traffic and motor vehicle noise):
—Procedures for abatement of highway traffic and construction noise. 23 U.S.C. 109 (23 CFR Part 772).
• Federal Railroad Administration (railroad noise):
—Railroad noise emission compliance regulation. 42 U.S.C. 4901, *et seq.* (49 CFR Part 210).
—Noise standards for railroad employees. (49 CFR Parts 228–229).
• Urban Mass Transportation Administration (urban transportation system noise).

Advisory Council on Historic Preservation (effects of noise and vibration on historic districts, buildings and monuments).

Consumer Products Safety Commission (hazardous noise from consumer products):
—Consumer products regulations. 15 U.S.C. 1261, *et seq.*, and 2051, *et seq.* (16 CFR Part 1000, *et seq.*).

Environmental Protection Agency (noise exposure standards; noise abatement and control techniques; noise impact assessment techniques; environmental effects):
—Noise abatement programs. 42 U.S.C. 4901, *et seq.* (40 CFR Part 201, *et seq.*).

Interstate Commerce Commission (noise effects from trucks and railroads).

National Aeronautics and Space Administration (advanced technology for reduction of aircraft noise).

E. Radiation

Department of Agriculture

• Agricultural Research Service (effects of irradiation on insects and microorganisms in food).
• Forest Service (disposal of radioactive materials in National forests and Grasslands; electromagnetic radiation from powerlines and radio transmission systems).
• Rural Electrification Administration (electromagnetic radiation from high voltage sources).

Department of Commerce

• National Bureau of Standards (radiation measurements, standards, methods and data).
• National Oceanic and Atmospheric Administration (electromagnetic radiation from radar systems and telecommunications)

Department of Energy

• Office of Civilian Radioactive Waste Management (storage and disposal of commercial high-level radioactive waste and spent nuclear fuel).
• Office of Defense Programs (storage and disposal of Defense nuclear waste).
• Office of Energy Research (health effects of radiation and nuclear energy).
• Office of Policy, Safety, and Environment (nuclear energy and radioactive waste disposal; radiation effects).

Department of Health and Human Services

• Food and Drug Administration (effects of radiation on health and safety; contamination of food with radioactive materials).
• National Institutes of Health (effects of radiation on health).

Department of Housing and Urban Development

• Office of Community Planning and Development (radiation health and safety factors; siting and distance criteria):
—Policy guidance on problems posed by toxic chemicals and radioactive materials. (HUD Notice 79–33 of Sept. 10, 1979).
• Office of Housing (radiation location factors affecting value and marketability).

Department of the Interior

• Fish and Wildlife Service (effects of radiation on National Wildlife Refuges, endangered species and their critical habitats, and other fish and wildlife resources).
• Geological Survey (effects of radioactive waste disposal).
• Bureau of Indian Affairs (effects of radiation on Indian lands).
• Bureau of Land Management (effects of radiation on public lands):
—Withdrawal of public lands for deep-burial depositories for radioactive waste. 43 U.S.C. 1714 (43 CFR Part 2300, *et seq.*).
• Bureau of Mines (radiation from uranium mines).
• National Park Service (effects of radiation on National Park System areas).

Department of Labor

• Mining Safety and Health Administration (worker protection from radiation exposure in mining).
• Occupational Safety and Health Administration (worker protection from exposure to sources of radiation not covered by other Federal agencies):

—Ionizing and nonionizing radiation. 29 U.S.C. 655, *et seq.* (29 CFR Parts 1910.96 and 1910.97).

Department of Transportation

• Federal Aviation Administration (radiation effects on air traffic; transport of radioactive materials).

• Federal Highway Administration: Bureau of Motor Carrier Safety (radioactive material transportation in interstate commerce):

—Hazardous materials tables and communications regulations. (49 CFR Part 172).

• Research and Special Programs Administration: Materials Transportation Bureau (transportation of radioactive materials):

—Hazardous materials regulations. 49 U.S.C. 1801, *et seq.* (49 CFR Part 171, *et seq.*).

Consumer Product Safety Commission (radiation from consumer products and household substances):

—Consumer products and household substances regulations. 15 U.S.C. 1261, *et seq.*; 2051, *et seq.*, and 2080 (16 CFR Part 1000, *et seq.*).

Environmental Protection Agency (radiation protection standards and guidance; radioactive air emissions; ocean disposal of radioactive waste; radiation limits for drinking water; radiation monitoring):

—Radiation protection programs. 42 U.S.C. 2011, *et seq.* (40 CFR Part 190, *et seq.*).

—Standards for the uranium fuel cycle. 42 U.S.C. 2011, *et seq.* (40 CFR Part 190).

—Standards for uranium mill tailings. 42 U.S.C. 2022. (40 CFR Part 192).

—Radiation standards for drinking water. 42 U.S.C. 300f, *et seq.* (40 CFR Part 141).

—Guidance to other Federal agencies for environmental radiation standards. 42 U.S.C. 2021(h).

Federal Emergency Management Agency (review and approval of state and local nuclear incident emergency response plans; Federal contingency plans; radiation hazards emergency management).

Nuclear Regulatory Commission (radioactive wastes, radiation effects in general):

—Standards for protection against radiation. 42 U.S.C. 2073, *et seq.*, and 5841, *et seq.* (10 CFR Part 20).

—Licensing of byproduct material. 42 U.S.C. 2014, *et seq.*, and 5841, *et seq.* (10 CFR Parts 30–33 and 35).

—Licensing and radiation safety requirements for radiography. 42 U.S.C. 2111, *et seq.*, and 5841, *et seq.* (10 CFR Part 34).

—Licensing of source material. 42 U.S.C. 2014 *et seq.*, and 5841, *et seq.* (10 CFR Part 40).

—Licensing of production and utilization facilities. 42 U.S.C. 2073, *et seq.*, and 5841, *et seq.* (10 CFR Parts 50, 51 and 55).

—Disposal of high level radioactive waste. 42 U.S.C. 2021, *et seq.*, and 5842, *et seq.* (10 CFR Parts 60 and 61).

—Licensing of special nuclear material. 42 U.S.C. 2014, *et seq.*, and 5841, *et seq.* (10 CFR Part 70).

—Packaging and transportation of radioactive material. 42 U.S.C. 2073, *et seq.*, and 5841 *et seq.* (10 CFR Part 71).

—Licensing for storage of spent fuel. 42 U.S.C. 2021, *et seq.*, and 5872 *et seq.* (10 CFR Part 72).

—Reactor site criteria. 42 U.S.C. 2133, *et seq.*, and 5841, *et seq.* (10 CFR Part 100).

—Export and import of nuclear material. 42 U.S.C. 2073, *et seq.*, and 5841 (10 CFR Part 110).

—Licenses for Department of Energy demonstration reactors. 42 U.S.C. 5842 (1) and (2).

—Licenses for receipt and long-term storage of high-level radioactive wastes at Department of Energy facilities. 42 U.S.C. 5842 (3) and (4).

Tennessee Valley Authority (nuclear power plant planning; radiation monitoring).

F. Hazardous Substances

(1) Toxic, Explosive, and Flammable Materials

Department of Agriculture

• Agricultural Marketing Services (toxic materials and consumer protection).

• Animal and Plant Health Inspection Service (toxic materials in the control of plant pests, noxious weeds, animal diseases, and vectors).

• Food Safety and Inspection Service (toxic materials and consumer protection).

• Forest Service (effects of toxic materials on National Forests and Grasslands).

• Soil Conservation Service (toxic materials in the control of insects and other plant pests).

Department of Commerce

• National Bureau of Standards (toxic material measurements, standards, methods and data).

• National Oceanic and Atmospheric Administration (toxic materials in coastal and marine resources management and protection; ocean pollution research and monitoring).

Department of Defense (toxic materials in military operations).

Department of Health and Human Services

• Center for Disease Control (toxic materials and health issues).

• Food and Drug Administration (toxic materials and contamination of food).

• National Institutes of Health (toxic materials and health issues).

Department of Housing and Urban Development

• Office of Community Planning and Development (hazardous waste disposal, treatment, and compatible land use):

—Assurances that HUD assisted projects are located in a safe and healthful environment. 42 U.S.C. 1441, *et seq.*

—Policy guidance on problems posed by toxic chemicals and radioactive materials. (HUD Notice 79–33 of Sept. 10, 1979).

—Siting of HUD assisted projects near hazardous operations handling explosive or flammable materials. (24 CFR Part 51, Subpart C).

• Office of Housing (lead-based paint poisoning prevention; hazardous material storage and effects on property values).

Department of the Interior

• Fish and Wildlife Service (effects of toxic materials, including lead shot, on endangered species and critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources).

• Geological Survey (effects of the disposal of toxic wastes).

• Bureau of Indian Affairs (toxic materials on Indian lands).

• Bureau of Land Management (toxic materials on public lands).

• Minerals Management Service (toxic materials from outer continental shelf mineral, including oil and gas, operations):

—Discharges from outer continental shelf mineral, including oil and gas, operations. 43 U.S.C. 1331, *et seq.* (30 CFR Part 250).

• Bureau of Mines (disposal methods for selected milling and mine wastes).

• National Park Service (effects of toxic materials on National Park System areas).

• Bureau of Reclamation (effects of toxic materials on water storage and delivery projects).

• Office of Surface Mining Reclamation and Enforcement (toxic materials from surface coal mining and reclamation wastes).

Department of Labor

• Mining Safety and Health Administration (toxic materials in mining).

• Occupational Safety and Health Administration (toxic materials in the workplace):

—Hazardous and toxic materials and substances. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910, Subparts H and Z).

Department of Transportation

• Coast Guard (transportation of toxic materials by vessel; discharges to navigable waters):

—Transportation of hazardous materials by vessel. 46 U.S.C. 170, 375, 391(a) and 416(j); 49 U.S.C. 1655, 1803, 1804 and 1806(j); 50 U.S.C. 191 (33 CFR Parts 151, *et seq.*, and 160, *et seq.* (46 CFR Chapter I).

—Hazardous substance discharge in navigable waters. 33 U.S.C. 1321 (33 CFR Parts 25 and 151, *et seq.*; 46 CFR Part 542, *et seq.*).

• Federal Aviation Administration (hazardous aircraft cargo).

• Federal Highway Administration: Bureau of Motor Carrier Safety (hazardous material transportation in interstate commerce):

—Hazardous materials tables and communications regulations. (49 CFR Part 172).

—Transportation of hazardous materials—driving and parking rules. (49 CFR Part 397).

• Federal Railroad Administration (railroad transport of hazardous materials).

• Maritime Administration (port, coastal and ocean pollution from hazardous materials):

—Merchant vessels, polluting discharges, dumping, and destruction/treatment of wastes at sea. 46 U.S.C. 1101, *et seq.*

• Research and Special Programs Administration: Materials Transportation Bureau (hazardous-cargo; hazardous materials in pipelines):
—Transportation of hazardous materials. 49 U.S.C. 1801, *et seq.* (49 CFR Part 171, *et seq.*, and 190, *et seq.*).
—Approval for shipments of Class A explosives. 49 U.S.C. 1707 (7).
—Permits for facilities to handle hazardous materials. 49 U.S.C. 1801, *et seq.*

Consumer Product Safety Commission (toxic consumer products and hazardous household substances):
—Consumer product and household substances regulations. 15 U.S.C. 1261, *et seq.;* 1471, *et seq.;* and 2051, *et seq.* (16 CFR Part 1000, *et seq.*).

Environmental Protection Agency (hazardous material pollution control and environmental effects):
—Permits for the treatment, storage and disposal of hazardous wastes. 42 U.S.C. 6901, *et seq.* (40 CFR Parts 122–124, 257, 270, and 271).
—Criteria for classification of hazardous waste disposal facilities and practices. 42 U.S.C. 6907(a)(3) and 6944(a); 33 U.S.C. 1345 (40 CFR Part 257).
—Identification and listing of hazardous waste. 42 U.S.C. 6921 (40 CFR Part 261).
—Standards applicable to generators and transporters of hazardous wastes and for owners and operators of hazardous waste treatment, storage and disposal facilities. 42 U.S.C. 6901, *et seq.* (40 CFR Parts 260–267).
—Preliminary notification of hazardous waste activities. 42 U.S.C. 6930 (40 CFR Parts 261.5, 262.12 and 263.11).
—National emission standards for hazardous air pollutants (NESHAP). 42 U.S.C. 1857, *et seq.* General provisions: (40 CFR Part 61).
—Hazardous substances in water. 33 U.S.C. 1251, *et seq.* (40 CFR Parts 116 and 117).
—Toxic effluent standards. 33 U.S.C. 1251, *et seq.* (40 CFR Part 129).
—Control of toxic substances in general. 15 U.S.C. 2601, *et seq.* (40 CFR Part 702, *et seq.*).
—Regulation of hazardous chemical substances and mixtures. 15 U.S.C. 2605 (40 CFR Part 750).
—Reporting of toxic substances inventory and retention of information. 15 U.S.C. 2607 (40 CFR Parts 710, 716, 761 and 763).
—Testing of chemical substances and mixtures. 15 U.S.C. 2603.

Federal Emergency Management Agency (evacuations and relocations resulting from hazardous materials released into the environment):
—Temporary evacuation and housing and permanent relocation due to hazardous substances pollution. 42 U.S.C. 9604(a)(1) and 9607 (23) and (24).

(2) Food Additives and Contamination of Food

Department of Agriculture

• Agricultural Research Service (detection of additives and contaminants in food).
• Agricultural Marketing Service (food quality standards).
• Food Safety and Inspection Service (contamination of meat and poultry products).

Department of Commerce

• National Oceanic and Atmospheric Administration (seafood quality).

Department of Health and Human Services

• Food and Drug Administration (effects of food additives and contamination on health).

Department of the Interior

• Fish and Wildlife Service (effects of contaminated food on endangered and threatened species and other Federally protected fish and wildlife).

Environmental Protection Agency (contamination of the environment and food from pesticide use and other toxic materials).

(3) Pesticides

Department of Agriculture

• Agricultural Research Service (biological controls; pesticides in food and fiber production).
• Animal Plant Health and Inspection Service (pesticides in the control of animal and plant pests and exotic noxious weeds).
• Food Safety and Inspection Service (pesticide residues and consumer protection).
• Forest Service (pesticides in the control of animal and plant pests; pesticide use on National Forests and Grasslands).
• Soil Conservation Service (pesticides in conservation systems; watershed resource protection).

Department of Commerce

• National Oceanic and Atmospheric Administration (effects of pesticides on marine life, the coastal zone, and seafood quality; ocean pollution research and monitoring).

Department of Defense

• Armed Forces Pest Management Board (pesticide use on military lands, facilities and equipment; control of disease vectors).

Department of Health and Human Services

• Center for Disease Control (effects of pesticides on health).
• Food and Drug Administration (pesticide contamination of food).

Department of the Interior

• Fish and Wildlife Service (pesticide use on National Wildlife Refuge and National Fish Hatchery System lands; effects of pesticides on endangered species and their critical habitats, and other fish and wildlife resources).
• Geological Survey (effects of pesticides on water quality).
• Bureau of Indian Affairs (pesticide use on Indian lands).
• Bureau of Land Management (pesticide use on public lands).
• Bureau of Reclamation (pesticide use on irrigated lands and other project lands, facilities and rights-of-way).
• National Park Service (pesticide use in National Park System areas).

Department of Labor

• Occupational Safety and Health Administration (worker exposures during manufacture of pesticides):
—Hazardous and toxic materials and substances. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910, Subparts H and Z).

Department of Transportation

• Coast Guard (transportation of pesticides by vessel):
—Permits for transportation of hazardous substances by vessel. 46 U.S.C. 170, and 391a (33 CFR Parts 151, *et seq.*, and 160, *et seq.;* 46 CFR Chapter I).
• Federal Aviation Administration (transport and use of pesticides by aircraft).
• Federal Highway Administation: Bureau of Motor Carrier Safety (pesticide transport in interstate commerce):
—Hazardous materials tables and communications regulations. (49 CFR Part 172).
• Federal Railroad Administration (transport of pesticides by railroads).
• Research and Special Programs Administration: Materials Transportation Bureau (transport of pesticides):
—Transportation of hazardous materials. 49 U.S.C. 1801, *et seq.* (49 CFR Part 171, *et seq.*).

Environmental Protection Agency (pollution control and environmental effects of pesticides):
—Pesticide programs in general. 7 U.S.C. 136, *et seq.;* 21 U.S.C. 346a (40 CFR Part 162, *et seq.*).
—Certification of pesticide applicators. 7 U.S.C. 136b (40 CFR Part 171).
—Registration of pesticides. 7 U.S.C. 136a (40 CFR Part 162).
—Experimental pesticide use permits. 7 U.S.C. 136c (40 CFR Part 172).
—Establishment of pesticide tolerances. 21 U.S.C. 346a (40 CFR Part 180 and 21 CFR Part 193).
—Pesticide disposal and transportation. 7 U.S.C. 136q (40 CFR Part 165).
—Worker protection standards for agricultural pesticides. 7 U.S.C. 136 (40 CFR Part 170).
—Emergency exemptions for pesticides use. 7 U.S.C. 136p (40 CFR Part 166).

Tennessee Valley Authority (pesticide use on public lands and waters in Tennessee Valley region).

II. ENERGY

A. Electric Power (Development, Generation, Transmission, and Use)

Department of Agriculture

• Farmers Home Administration (small hydro, solar, and wind projects):
—Approval of plans and specifications for FMHA funded projects. 7 U.S.C. 1942 (7 CFR Parts 1924, 1942 and 1944).
• Forest Service (power development in National Forests and Grasslands):
—Permits, easements, and leases for power transmission, road, and hydro

developments. 16 U.S.C. 522, *et seq.*; 43 U.S.C. 1761 (36 CFR Part 251.50, *et seq.*).
—Permits for commercial use of existing roads. 16 U.S.C. 537 (37 CFR Part 212)
—Consultations regarding power developments on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Rural Electrification Administration (power development in and for rural areas):
—Electrical generation and transmission projects. 7 U.S.C. 901 *et seq.* (7 CFR Part 1700, *et seq.*

Department of Commerce

• National Oceanic and Atmospheric Administration (coastal energy facility planning and siting):
—Approval of licenses for siting, design, and operation of ocean-thermal energy facilities. 42 U.S.C. 9101, *et seq.* (15 CFR Part 981).

Department of Defense

• Army Corps of Engineers (hydroelectric projects; effects of power development on navigable waters):
—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Economic Regulatory Administration (regulation of power plants and other major fuel-burning installations):
—Exemptions from prohibitions against the burning of natural gas and petroleum in power plants and major fuel burning installations. 42 U.S.C. 7101 and 8301 (10 CFR Part 500, *et seq.*).
—Transmission of electric energy to a foreign country. 16 U.S.C. 824a(e); E.O. 10485 and E.O. 12038 (18 CFR Parts 32.30–32.38 and 10 CFR Parts 205.300–205.309).

• Office of Policy, Safety, and Environment (general energy policies, programs and projects).

• Alaska Power Administration (hydroelectric generation and transmission systems in Alaska).

• Bonneville Power Administration (electric transmission systems in the Pacific northwest).

• Southeastern Power Administration (electric transmission systems in the southeastern States).

• Southwestern Power Administration (electric transmission systems in the southwestern States).

• Western Area Power Administration (electric transmission systems in the western States).

Department of Housing and Urban Development

• Office of Community Planning and Development (energy policy; demonstration programs; research; assistance for community and economic development; assistance for energy efficiency):
—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).

• Office of Housing (energy factors in rehabilitation and retrofitting).

• Office of Policy Development and Research (building energy technology; urban energy studies).

• Office of Solar Energy and Conservation (new technologies and research)

Department of the Interior

• Fish and Wildlife Service (effects of power development, including transmission line and tower construction, on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):
—Easements/permits for transmission line rights-of-way across National Wildlife Refuge and National Fish Hatchery System land. For refuges—16 U.S.C. 668dd; for hatcheries—43 U.S.C. 931 c and d (50 CFR Part 29.21).
—Permits for rights-of-way on National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k)–3 and 742(f) (50 CFR Part 96).
—For additional jurisdictional responsibilities, see PART IV. C— Water Resources Development.

• Geological Survey (geologic and hydrologic siting constraints for power developments; National Water Summary).

• Bureau of Indian Affairs (power development on Indian lands):
—Approval of leases and permits for Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).
—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).
—Specific power systems. (25 CFR Parts 175–177).

• Bureau of Land Management (power development on public lands):
—Easements/permits for rights-of-way. 30 U.S.C. 185 and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 2800–2887).
—Exchange of Federal lands to facilitate energy development. 43 U.S.C. 1716 (43 CFR Parts 2200–2270).

• National Park Service (effects of power development on National Park System lands; on historic archeologic and architectural sites; and on recreational values):
—Easements for rights-of-way across National Park system land. 16 U.S.C. 5 (36 CFR Parts 7 and 14).
—Consultations about extent to which proposed recreational developments at hydroelectric projects conform to and are in accord with the Statewide Comprehensive Outdoor Recreation Plans. 16 U.S.C. 460.
—Consultations regarding power developments on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Bureau of Reclamation (hydroelectric power development in the 17 contiguous western states, impact of power development on State water laws; analysis of cost sharing).
—Easements/permits for powerline rights-of-way. 43 U.S.C. 3871.

Department of Labor

• Occupational Safety and Health Administration (workers safety and health issues):
—Construction, transmission and distribution facilities. 29 U.S.C. 655, *et seq.* (29 CFR Part 1926, Subpart V).

Department of Transportation

• Federal Highway Administration (highways and electric utility facilities);
—Relocation and accommodation of utility facilities on highway rights-of-way. 23 U.S.C. 109(l), 116 and 123 (23 CFR Part 645).

Advisory Council on Historic Preservation (effects of power developments on historic properties).

Environmental Protection Agency (pollution control and environmental effects of power development):
—For jurisdictional responsibilities see PART I.A.—Air Quality, PART I.B.—Water Quality, and PART I.C.—Waste Disposal on Land.

Federal Emergency Management Agency (review and approval of state and local nuclear incident emergency response plans).

Federal Energy Regulatory Commission (hydroelectric power projects; electric transmission; electric supply; facility siting):
—Regulation of interconnection of electric transmission facilities and regulation of enlargement of electric transmission facilities. 16 U.S.C. 824–825K (18 CFR Part 32).
—Regulation of the development of water power including the licensing of non-Federal hydroelectric power projects. 16 U.S.C. 791–825r (18 CFR Parts 4–25, 36, 131 and 141).
—Application for order directing the establishment of physical connection facilities. 16 U.S.C. 824(b).
—Withdrawal of Federal lands for power and powersite development purposes. 16 U.S.C. 818 (43 CFR Part 2344, *et seq.*).

International Boundary and Water Commission, United States Section (hydroelectric power installations on the Rio Grande).

Nuclear Regulatory Commission (nuclear power development in general):
—Licensing of production and utilization facilities. 42 U.S.C. 2073, *et seq.*, and 5841, *et seq.* (10 CFR Parts 50 and 51).
—Nuclear power reactor operators' licenses. 42 U.S.C. 2137, *et seq.*, and 5841, *et seq.* (10 CFR Part 55).
—Reactor site criteria. 42 U.S.C. 2133, *et seq.*, and 5841, *et seq.* (10 CFR Part 100).
—For other jurisdictional responsibilities, see PART I.E.—Radiation.

Tennessee Valley Authority (power development in the Tennessee Valley Region).

B. Oil and Gas (Development, Extraction, Refining, Transport and Use)

Department of Agriculture

• Forest Service (effects of oil and gas development on National Forests and Grasslands):

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 528, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).

Department of Commerce

• National Oceanic and Atmospheric Administration (effects of oil and gas development and coastal and marine resources, management, and protection).

Department of Defense

• Army Corps of Engineers (effects of oil and gas development on navigable waters):

—For jurisdictional responsibilities, see PART I.B—Water Quality.

Department of Energy

• Economic Regulatory Administration (regulation of power plants and other major fuel-burning installations):

—Exemptions from prohibitions against the burning of petroleum in power plants and major fuel-burning installations. 42 U.S.C. 7101 and 8301 (10 CFR Part 500, *et seq.*).

• Office of Policy, Safety, and Environment (general energy policies, programs, and projects).

Department of Housing and Urban Development

• Office of Community Planning and Development (health and safety standards; distance factors for pipeline, storage, and production facilities including sour gas wells; assistance for community and economic development; assistance to conserve petroleum and natural gas energy efficiency):

—Assurances that HUD assisted projects are located in a safe and healthful environment. 42 U.S.C. 1441, *et seq.*

—Siting of HUD assisted projects near hazardous operations handling petroleum products or chemicals of an explosive or flammable nature. (24 CFR Part 51, Subpart C).

—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).

• Office of Housing (siting standards and effects on housing values and marketability).

Department of the Interior

• Fish and Wildlife Service (effects of oil and gas development on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):

—Permits for oil and gas pipeline rights-of-way across National Wildlife Refuge and National Fish Hatchery Systems lands. For refuges—16 U.S.C. 668dd: for hatcheries—43 U.S.C. 931c and d (50 CFR Part 29.21).

—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k):3 and 742(f) (50 CFR Part 96).

• Geological Survey (oil and gas resources in general).

• Bureau of Indian Affairs (oil and gas development on Indian lands):

—Leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).

—Mining leases (including oil and gas) on Indian lands. 25 U.S.C. 376, 396, 476–477 and 509 (25 CFR Parts 211–215 and 226–227).

• Bureau of Land Management (oil and gas development on public lands):

—Leases for oil and gas deposits:

(a) Public domain lands. 30 U.S.C. 181, *et seq.*; 43 CFR Parts 3100, *et seq.*, and 3160.

(b) Acquired lands. 30 U.S.C. 351–359 (43 CFR Parts 3100, *et seq.*, and 3160).

(c) In and under railroad and other rights-of-way acquired under laws of the United States. 30 U.S.C. 301–306 (43 CFR Part 3100).

(d) Indian lands. 25 U.S.C. 396a, *et seq.* (25 CFR Parts 211, 213, 226 and 227).

—Leases and land exchanges for oil shale, native asphalt, solid and semisolid bitumen and bituminous rock. For leases—30 U.S.C. 241 (43 CFR Part 3500); for exchanges—43 U.S.C. 1716 (43 CFR Parts 2200–2270).

—Easements/permits for oil and gas pipeline rights-of-way. 30 U.S.C. 185 and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 2800–2887).

—Easements/leases/permits for use, occupancy and development of public lands. 43 U.S.C. 1732 (43 CFR Subchapters 2000 and 3000).

—Disposal of government royalty oil (non-OCS oil). 30 U.S.C. 189, 192 and 359 (30 CFR Part 208).

—Exchange of non-OCS Federal lands with oil and gas deposits. 43 U.S.C. 1716 (43 CFR Parts 2200–2207).

• Minerals Management Service (oil and gas development on the outer continental shelf):

—Leases for minerals on the outer continental shelf. 43 U.S.C. 1331–1343 (30 CFR Parts 250, 251, 252 and 256).

—Permits/easements for rights-of-way for "common carrier" oil gas pipelines on the outer continental shelf. 43 U.S.C. 1331 (30 CFR Part 256, Subpart N).

—Permits for exploration and development activities on Federal leases on the outer continental shelf. 43 U.S.C. 1331, *et seq.* (30 CFR Parts 250 and 251).

—Easements/rights-of-way for gathering pipelines, artificial islands, platforms, and other fixed structures on any Federal or State outer continental shelf oil and gas lease. 43 U.S.C. 1334–1335 (30 CFR Parts 250.18–250.19).

—Applications for purchase of government royalty oil from the outer continental shelf. 43 U.S.C. 1334 (30 CFR Part 225a).

—Permits for geological and geophysical exploration on the outer continental shelf. 43 U.S.C. 1334 and 1340 (30 CFR Part 251).

—Drilling permits. 43 U.S.C. 1351.

• Bureau of Mines (environmental, health, and safety aspects of mining oil, tar sands, and oil shale; coalbed methane control and recovery; helium conservation).

• National Park Service (effects of oil and gas development on National Park System areas on historic, archeological, and architectural sites, and on recreational values):

—Permits for oil and gas operations on National Park system areas. 16 U.S.C. 1 (36 CFR Part 9).

—Determination of significance of effects for combined hydrocarbon lease conversions in Glen Canyon NRA. (43 CFR Parts 3140.7 and 3141.2).

• Bureau of Reclamation (effects of oil and gas development on water storage and delivery systems):

—Easements/permits for pipeline rights-of-way. 43 U.S.C. 3871.

Department of Labor

• Occupational Safety and Health Administration (general worker safety and health issues):

—Oil and gas well drilling. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910.270).

Department of State (international aspects of oil and gas development):

—Facilities for export/import of petroleum and petroleum products. E.O. 11423.

Department of Transportation

• Coast Guard (oil and gas transport by vessel):

—Tank vessel regulation. 46 U.S.C. 391(a) (33 CFR Part 157).

—Ports and waterways safety. 33 U.S.C. 1221 (33 CFR Part 160, *et seq.*).

—Construction and alteration of bridges for pipelines over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

—Outer continental shelf structures. 43 U.S.C. 1331 (33 CFR Part 140, *et seq.*).

• Maritime Administration (effects of oil and gas development on port, coastal and ocean pollution):

—Merchant vessels, including liquefied natural gas vessels. 42 U.S.C. 1101, *et seq.* (46 CFR Part 250, *et seq.*).

—Port operations, including loading/unloading of liquefied natural gas vessels. 42 U.S.C. 887 (46 CFR Part 346, *et seq.*).

• Federal Highway Administration (pipelines and highway rights-of-way):

—Relocation and accommodation of pipelines on highway rights-of-way. 23 U.S.C. 109(1), 116 and 123 (23 CFR Part 645).

• Federal Railroad Administration (railroad transport of oil and gas).

• Research and Special Programs Administration: Materials Transportation Bureau (pipeline safety; oil and gas shipments; natural gas marine terminals):

—Pipeline safety. 49 U.S.C. 1671, *et seq.*, and 2001, *et seq.* (49 CFR Part 190, *et seq.*).

Advisory Council on Historic Preservation (effects of oil and gas development on historic properties):

Environmental Protection Agency (pollution control and environmental effects of oil and gas development):

—For jurisdictional responsibilities, see PART I.A.—Air Quality, PART I.B.—Water Quality, and PART I.C.—Waste Disposal on Land.

Federal Energy Regulatory Commission (charges/rates for transportation of oil and gas by pipeline; transportation, storage, and sale of natural gas):

—Certificates for natural gas facilities (underground storage fields, LNG facilities, and transmission pipeline facilities); sale, exchange and transportation of gas;

abandonment of facilities and curtailment of natural gas service; authorization to import and export natural gas. 15 U.S.C. 717–717(w); E.O. 10485 and E.O. 12038 (18 CFR Part 152, *et seq.*).

—Authorization compelling the expansion, improvement or connection of natural gas facilities. 15 U.S.C. 717f(a) (18 CFR Part 156).

Interstate Commerce Commission (regulation of petroleum and natural gas carriers).

C. Coal (Development, Mining, Conversion, Processing, Transport and Use)

Department of Agriculture

• Forest Service (effects of coal development on National Forests and Grasslands):

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 525, 528, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).

—Coal leasing. 30 U.S.C. 201–352.

—Surface coal mining operations. 30 U.S.C. 1272.

• Rural Electrification Administration (coal development in relation to rural electrification):

—Financial assistance for purchase of coal mines and mining facilities. 7 U.S.C. 901, *et seq.* (7 CFR Part 1700, *et seq.*).

• Soil Conservation Service (abandoned rural mined land, mine reclamation, and transportation):

—Reclamation of rural abandoned mined land. 30 U.S.C. 1201, *et seq.* (7 CFR Part 632).

Department of Commerce

• National Oceanic and Atmospheric Administration (atmospheric dispersion of effluents; acid rain; management and protection of coastal and marine resources; air and water pollution from mining: offshore and coastal mining; port planning).

Department of Defense

• Army Corps of Engineers (effects of coal development on navigable waters):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Economic Regulatory Administration (regulation of powerplants and other major fuel-burning installations):

—Exemption from prohibitions against burning of natural gas and oil in powerplants and major fuel-burning installations. 42 U.S.C. 7101 and 8301 (10 CFR Part 500, *et seq.*).

• Office of Policy, Safety, and Environment (general energy policies, programs, and projects).

• Office of Fossil Energy (coal research, coal liquification projects, and emerging coal technologies).

Department of Housing and Urban Development

• Office of Community Planning and Development (assistance for community impacts due to rapid development):

—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).

• Office of Housing (subsidence from mining operations and soil factors related to housing).

Department of the Interior

• Fish and Wildlife Service (effects of coal development on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):

—Permits for use of National Wildlife Refuge and National Fish Hatchery System lands. For refuges—16 U.S.C. 668 dd and ee; for hatcheries—43 U.S.C. 931 c and d (50 CFR Parts 25.41 and 29.21).

—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k–3) and 742(f) (50 CFR Part 96).

• Geological Survey (coal resources in general; hydrologic effects of coal mining and reclamation).

• Bureau of Indian Affairs (coal development on Indian lands):

—Leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 328 (25 CFR Part 169).

—Mining leases on Indian lands. U.S.C. 356, 396, 476–477 and 509 (25 CFR Parts 211–215 and 226–227).

—Surface exploration and reclamation. 25 U.S.C. 355, 396, 473 and 501–502 (25 CFR Part 216).

• Bureau of Land Management (coal development on public lands):

—Exploration licenses for coal deposits on unleased lands. 30 U.S.C. 181 and 201(b) (43 CFR Part 3400).

—Leases/permits for recovery of coal deposits. 30 U.S.C. 181, *et seq.*, 201b and 202a; 43 U.S.C. 1701, *et seq.* (43 CFR Parts 3400 and 3480).

—Easements/lease/permits for use, occupancy and development of public lands. 43 U.S.C. 1732 (43 CFR Subchapters 2000 and 3000).

—Permits to mine coal for domestic needs. 30 U.S.C. 208 (43 CFR Part 3440).

—Easements/permits for rights-of-way. 30 U.S.C. 185 and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 2800–2887).

—Exchange of Federal lands with coal or uranium deposits. 43 U.S.C. 1716 (43 CFR Parts 2200–2270).

• Bureau of Mines (mining technology, health and safety, subsidence prediction and control, and land reclamation).

• National Park Service (effects of coal development on National Park System areas and on historic and recreational values):

—Leases, permits and licenses for mining on National Park System lands involved in Wild and Scenic River Systems. 16 U.S.C. 1280.

—Access permits for mining activity within the National Park System. 16 U.S.C. 1902 and 1908 (36 CFR Part 9).

—Easements for rights-of-way across National Park System land. 16 U.S.C. 1, *et seq.* (36 CFR Part 9, *et seq.*).

• Bureau of Reclamation (effects of coal development on water storage and delivery projects):

—Easement/permits for access rights-of-way. 43 U.S.C. 3871.

• Office of Surface Mining Reclamation and Enforcement (surface coal mining and reclamation; general effects of surface coal mining operations):

—Identification of certain lands considered unsuitable for surface coal mining operations. 30 U.S.C. 1272 (30 CFR Chapter 7, Subchapter F).

—Permits for coal exploration operations on Federal lands within an approved mining permit area, and, if there is no approved State Coal Mining Regulatory Program, on non-Federal and non-Indian lands. 30 U.S.C. 1262 (30 CFR Chapter VII and 43 CFR Part 3400).

—Permits for surface coal mining and reclamation operations (includes underground mines with surface effects) on Federal lands except the States may do this when there is both an approved State Coal Mining Regulatory Program and a Cooperative Agreement between the State and the Secretary of the Interior. 30 U.S.C. 1256, 1267, 1266, 1271 and 1273 (30 CFR Chapter VII).

—Permits for surface coal mining and reclamation operations (includes underground mines with surface effects) on non-Federal lands in those States where there is no approved State Coal Mining Regulatory Program. 30 U.S.C. 1256–1262 (30 CFR Chapter VII).

—Permits for surface coal mining and reclamation operations (includes underground mines with surface effects) on Indian lands. 30 U.S.C. 1300 (30 CFR Chapter VII and 25 CFR Part 216).

—Grants for reclamation of abandoned mined lands. 30 U.S.C. 1231–1235 and 1237–1243 (30 CFR Chapter VII).

Department of Labor

• Mining Safety and Health Administration (safety and health issues in mining operations).

• Occupational Safety and Health Administration (worker safety and health issues):

—Coal tar pitch volatiles. 29 U.S.C. 655, *et seq.* (29 CFR Part 1910.1002).

Department of State (international aspects of coal development):

—Facilities for export/import of coal. E.O. 11423.

Department of Transportation

• Coast Guard (vessel transport of coal):

—Construction and alterations of bridges and causeways over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

—Ports and waterways safety. 33 U.S.C. 1221 (33 CFR Part 160, *et seq.*).

• Federal Highway Administration (coal haul roads; effects of railroad coal transport on roads and streets).

• Federal Railroad Administration (railroad transport of coal).

• Maritime Administration (bulk shipping of coal and other minerals in the inland waterways, domestic oceans, Great Lakes, and U.S. foreign trade).

Advisory Council on Historic Preservation (effects of coal development on historic properties).

Environmental Protection Agency (pollution control and environmental effects of coal development):

—For jurisdictional responsibilities see PART I. A.—Air Quality, PART I. B.—Water Quality, and PART I. C.—Waste Disposal on Land.

Interstate Commerce Commission (regulation of coal rail-carriers and rates; impacts from railroad construction for moving coal, including downline impacts).

Tennessee Valley Authority (coal development in the Tennessee Valley region).

D. Uranium (Exploration, Mining, Transport and Use)

Department of Agriculture

• Forest Service (uranium in National Forests and Grasslands):

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 525, 528, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).

—Surface use of public domain lands under U.S. mining laws. 16 U.S.C. 478 and 551 (36 CFR Part 228).

—Mineral development on acquired lands. For solid (hardrock) minerals—16 U.S.C. 520 (43 CFR Part 3500); for phosphate, sodium, potassium and sulphur—30 U.S.C. 351, *et seq.*

• Soil Conservation Service (abandoned mine land, mine reclamation, and transportation).

Department of Commerce

• National Oceanic and Atmospheric Administration (air and water pollution from mining; offshore and coastal mining; port planning; management and protection of coastal and marine resources):

—Approval of licenses for deep seabed hard mineral exploration and development. 30 U.S.C. 1401, *et seq.* (15 CFR Part 970).

Department of Defense

• Army Corps of Engineers (effects of uranium mining on navigable waters):

—For jurisdictional responsibilities, see PART I.B.—Water Quality.

Department of Energy

• Office of Policy, Safety, and Environment (general energy policies, programs and projects).

• Office of Civilian Radioactive Waste Management (management of commercial radioactive wastes).

• Office of Defense Programs (management of Defense radioactive wastes)

• Office of Nuclear Energy (nuclear energy in general).

Department of Housing and Urban Development

• Office of Housing (subsidence from mining operations and soil factors related to housing).

Department of the Interior

• Fish and Wildlife Service (effects of uranium mining on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):

—Easements/permits on National Wildlife Refuge and National Fish Hatchery System land. 16 U.S.C. 668 dd, *et seq.*; 43 U.S.C. 931 c and d (50 CFR Parts 25.41 and 29.21).

—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k–3) and 742(f) (50 CFR Part 96).

• Geological Survey (uranium resources in general).

• Bureau of Indian Affairs (uranium on Indian lands):

—Leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).

—Mining leases on Indian lands. 25 U.S.C. 356, 396, 476–477 and 509 (25 CFR Parts 211–215 and 226–227).

—Surface exploration and reclamation. 25 U.S.C. 355, 396, 473 and 501–502 (25 CFR Part 216).

• Bureau of Land Management (uranium on public lands):

—Exchange of Federal lands with coal or uranium deposits. 43 U.S.C. 1716 (43 CFR Parts 2200–2270).

—Leases for uranium exploration and mining. 30 U.S.C. 181, 351–359 and 1201, *et seq.* (43 CFR Parts 3500–3800).

—Approval of plan of operations in connection with uranium leases. 30 U.S.C. 22, *et seq.*; 30 U.S.C. 181, *et seq.*; and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 3570 and 3802).

—Easements/leases/permits for use, occupancy and development of public lands. 43 U.S.C. 1732 (43 CFR Subchapter 2000 and 3000).

—Exploration licenses to explore for uranium and other leasable minerals on unleased lands. 30 U.S.C. 181, *et seq.*, and 201(b) (43 CFR Parts 3400 and 3480).

—Leases, permits and licenses for mining in Wild and Scenic River System areas. 16 U.S.C. 1280 (each area has special Federal Regulations).

—Concurrence for mining use of public lands withdrawn or reserved for power development or for a power site. 30 U.S.C. 621 (43 CFR Part 3730).

—Easements/permits for rights-of-way. 30 U.S.C. 185 and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 2800–2900).

• Bureau of Mines (uranium mining in general).

• National Park Service (effects of uranium mining on public park and recreation values; on historic, archeological and architectural sites; and on National Park System areas):

—Permits, leases, and easements for rights-of-way. 16 U.S.C. 1, *et seq.* (36 CFR Part 9, *et seq.*).

—Leases, permits and license for mining on National Park System lands involved in Wild and Scenic River Systems. 16 U.S.C. 1280.

—Access permits for mining activity within the National Park System. 16 U.S.C. 1902 and 1903; 30 U.S.C. 21, *et seq.* (36 CFR Part 9).

• Bureau of Reclamation (effects of uranium mining on water storage and delivery projects):

—Easements/permits for access, pipeline, and other rights-of-way. 43 U.S.C. 3871.

Department of Labor

• Mining Safety and Health Administration (safety and health issues in mining operations).

• Occupational Safety and Health Administration (general worker safety and health issues):

—General industrial, and construction standards. 29 U.S.C. 655, *et seq.* (29 CFR Parts 1910 and 1926).

Department of State (international aspects of uranium mining):

—Facilities for export/import of minerals. E.O. 11423.

Department of Transportation

• Coast Guard (vessel transport of minerals):

—Construction and alterations of bridges and causeways over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

—Ports and waterways safety. 33 U.S.C 1221 (33 CFR Part 160, *et seq.*).

Advisory Council on Historic Preservation (effects of uranium mining on historic properties).

Environmental Protection Agency (pollution control and environmental effects of uranium mining):

—For jurisdictional responsibilities, see Part I.A.—Air Quality, PART I. B.—Water Quality, PART I. C.—Waste Disposal on Land, and PART I. E.—Radiation.

Nuclear Regulatory Commission (nuclear power development in general):

—Licensing uranium milling operations. 42 U.S.C. 2091 *et seq.* (10 CFR Part 40).

Tennessee Valley Authority (uranium mining and milling).

E. Geothermal Resources (Development, Transmission, and Use)

Department of Agriculture

• Forest Service (effects of geothermal resource development on National Forests and Grasslands):

—Leases for geothermal resource developments. 30 U.S.C. 1014.

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 525, 538, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).

Department of Commerce

• National Oceanic and Atmospheric Administration (air and water pollution from geothermal development).

Department of Defense

• Army Corps of Engineers (effects of geothermal development on navigable waters):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Office of Policy, Safety, and Environment (general energy policies, programs and projects).

• Office of Conservation and Renewable Energy (research and development on geothermal energy sources).

Department of the Interior

• Fish and Wildlife Service (effects of geothermal development on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):

—Easements/permits on National Wildlife Refuge and National Fish Hatchery System land. For refuges—16 U.S.C. 668 dd, *et seq., for hatcheries—43 U.S.C. 931 c and d (50 CFR Parts 25.41 and 29.21).*

—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k–3) and 742(f) (50 CFR Part 96).

• Geological Survey (geothermal resources in general).

• Bureau of Indian Affairs (geothermal development on Indian lands):

—Leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

—Rights-of-way over Indian lands, 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).

• Bureau of Land Management (geothermal development on public lands):

—Permits for geothermal resources exploration. 30 U.S.C. 1023 (43 CFR Part 3260).

—Leases for geothermal resources recovery. 30 U.S.C. 1001–1025 (43 CFR Parts 3200–3250, 3260 and 3280).

—Licenses for geothermal powerplants. 30 U.S.C. 1001–1025 (43 CFR Part 3250).

—Easements/leases/permits for use, occupancy and development of public lands. 43 U.S.C 1732 (43 CFR Subchapter 2000 and 3000).

Easements/permits for rights-of-way. 30 U.S.C. 185 and 43 U.S.C 1701, *et seq.* (43 CFR Parts 2800–2900).

• Bureau of Mines (recovery of mineral values in geothermal operations; materials for construction of geothermal facilities).

• National Park Service (effects of geothermal development on public park and recreation values, on historic, archeological and architectural sites, and on National Park System areas).

• Bureau of Reclamation (alternative energy studies; coordination of geothermal operations with hydroelectric generation):

—Easements/permits for access, pipeline, and other rights-of-way. 43 U.S.C. 3871.

Department of Labor

• Occupational Safety and Health Administration (worker safety and health issues):

—General industrial and construction standards. 29 U.S.C. 655, *et seq.* (29 CFR Parts 1910 and 1926).

Advisory Council on Historic Preservation (effects of geothermal development on historic properties).

Environmental Protection Agency (pollution control and environmental effects of geothermal development):

—For jurisdictional responsibilities, see PART I. A.—Air Quality, PART I. B.—Water Quality, and PART I. C.—Waste Disposal on Land.

F. Other Energy Sources—Solar, Wind, Biomass, etc. (Development and Use)

Department of Agriculture

• Agricultural Research Service (utilization of biomass, wastes, solar, and wind energy sources in agricultural production).

• Farmers Home Administration (small hydro, solar, and wind projects):

—Approval of plans and specifications for FMHA-funded projects. 7 U.S.C. 1942 (7 CFR Parts 1924, 1942 and 1944).

• Forest Service (uses and rights-of-way on National Forests and Grasslands):

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 525, 528, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).

• Office of Energy (general energy policies related to agriculture):

—Solar and wind energy facility siting. 16 U.S.C. 470 (36 CFR Part 200).

Department of Commerce

• National Oceanic and Atmospheric Administration (coastal energy facility planning and siting; basic weather data and research):

—Approval of licenses for siting, design, and operation of ocean-thermal energy facilities, 42 U.S.C. 9101, *et seq.* (15 CFR Part 981).

Department of Energy

• Office of Policy, Safety, and Environment (general energy policies, programs and projects).

• Office of Conservation and Renewable Energy (research and development programs on alternative energy sources).

Department of Housing and Urban Development

• Office of Community Planning and Development (alternative energy policy, including district heating and cogeneration; demonstration programs; research; technical assistance and feasibility studies; building rehabilitation and retrofit; assistance for community and economic development):

—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).

—Urban Development Action Grant Handbook, HUD 6050.1 of Oct. 1982.

• Solar Energy and Energy Conservation Bank (assistance for energy conservation improvements to residential, commercial, and agricultural buildings, including solar energy systems):

—Energy Security Act of 1980. 12 U.S.C. 3601, *et seq.* (24 CFR Part 1800, *et seq.*).

Department of the Interior

• Fish and Wildlife Service (effects of alternative energy development on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources).

• Geological Survey (geology and hydrologic siting constraints for alternative energy development).

• Bureau of Indian Affairs (alternative energy development on Indian lands).

• Bureau of Land Management (alternative energy development on public lands):

—Licenses for synthetic liquid fuel facilities. 30 U.S.C. 323.

—Solar energy facility siting. 43 U.S.C. 1761.

• National Park Service (effects of alternative energy development on park and recreation values on historic, archeological and architectural sites, and on National Park System areas).

• Bureau of Reclamation (alternative energy studies; coordination of operations with hydroelectric generation).

Department of Labor

• Occupational Health and Safety Administration (worker safety and health issues):

—General industrial and construction standards. 29 U.S.C. 655, *et seq.* (29 CFR Parts 1910 and 1926).

Advisory Council on Historic Preservation (effects of alternative energy development on historic properties).

Environmental Protection Agency (pollution control and environmental effects of alternative energy development):

—For jurisdictional responsibilities, see PART I.—POLLUTION CONTROL.

G. Energy Conservation

Department of Agriculture

• Extension Service (rural family energy conservation).

• Farmers Home Administration (energy conservation in relation to agency funded projects).

• Forest Service (energy conservation in National Forests and Grasslands).

• Office of Energy (general agricultural energy policies).

• Rural Electrification Administration (energy conservation in relation to power development in rural areas).

Department of Commerce

• National Bureau of Standards (energy efficiency objectives and standards).

• National Oceanic and Atmospheric Administration (heating fuel usage forecasting; weather forecasting in relation to energy conservation).

Department of Energy

• Office of Policy, Safety, and Environment (general energy policies, programs and projects).

• Office of Conservation and Renewable Energy (energy efficiency of transportation, building, and industrial systems; assistance programs for energy planning and conservation):

—Energy conservation standards for new buildings. 42 U.S.C. 6834 (10 CFR Part 450. *et seq.*).

• Bonneville Power Administration (energy conservation studies in the Pacific Northwest):

—Regional planning and conservation. 16 U.S.C. 839, *et seq.*

Department of Housing and Urban Development

• Office of Community Planning and Development (energy conservation policy: demonstration and research programs; technical assistance; assistance for community and neighborhood development, economic development, public facilities, residential and commercial rehabilitation and retrofit for energy efficiency; comprehensive energy use strategies):

—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).

—Urban Development Action Grant Handbook. HUD 6050.1 of Oct. 1982.

—Housing Act of 1937. 42 U.S.C. 1401, *et seq.*

• Solar Energy and Energy Conservation Bank (assistance for energy conservation improvements to residential, commercial, and agricultural buildings, including solar energy systems):

—Energy Security Act of 1980. 12 U.S.C. 3601, *et seq.* (24 CFR Part 1800, *et seq.*).

• Office of Manufactured Housing and Construction Standards (building materials; new materials standards and performance criteria).

• Office of Policy Development and Research (building energy technology).

• Office of Public Housing (energy factors in rehabilitation and retrofitting; urban energy studies).

Department of the Interior

• Fish and Wildlife Service (energy conservation in National Wildlife Refuge and National Fish Hatchery System areas, and effects of energy conservation projects on endangered species and critical habitats).

• Bureau of Indian Affairs (energy conservation on Indian lands).

• Bureau of Land Management (energy conservation on public lands).

• National Park Service (energy conservation in National Park System areas; effects of energy conservation on historic, archeological, and architectural sites, and on park and recreation values).

• Bureau of Reclamation (energy conservation in relation to hydroelectric power development, and water storage and delivery systems).

Department of Transportation

• Federal Aviation Administration (aviation energy conservation and energy-use assessments).

• Federal Highway Administration (energy conservation in relation to highway systems).

• National Highway Traffic Safety Administration (fuel economy standards for motor vehicles):

—Fuel economy standards. 15 U.S.C. 2001, *et seq.* (49 CFR Parts 525–527, 531, 533 and 537.

• Research and Special Programs Administration: Transportation Systems Center (energy conservation and transportation systems in general).

• Urban Mass Transportation Administration (energy conservation in relation to urban transportation systems).

Advisory Council on Historic Preservation (effects of energy conservation on historic properties).

Interstate Commerce Commission (assessment of differences in energy efficiencies between transport modes).

Tennessee Valley Authority (energy conservation in general).

III. LAND USE

A. Land Use Planning, Regulation, and Development

Department of Agriculture

• Agricultural Research Service (effects of agricultural practices on resource quality and off-farm pollution).

• Agricultural Stabilization and Conservation Service (Federally subsidized agricultural conservation and land use programs).

• Economic, Research Service and Statistical Reporting Service (data on natural resources; analysis of the economic impacts of agriculturally related pollution and resource degradation; interactions of environmental programs with other Federal farm policy objectives).

• Extension Service (rural and community development).

• Farmers Home Administration (farmland protection; rural and community development):

—Farmland Protection Policy Act. Secretary's Memorandum 9500–2, *Statement on Land Use Policy* (7 CFR Part 1940).

• Forest Service (effects of adjacent land uses on National Forests and Grasslands):

—Coordination with other public planning efforts. (36 CFR Part 219.7).

• Soil Conservation Service (land use data; soil and water resource condition data and related natural resources data; resource management technology and technical planning assistance for watershed protection):

—Soil, water, and related resource data. 7 U.S.C. 1010a.

—Program for land conservation and utilization. 7 U.S.C. 1011(e).

Department of Commerce

• National Oceanic and Atmospheric Administration (management and protection of coastal and marine resources).

Department of Defense

• Army Corps of Engineers (land use in flood plains and wetlands):

—For jurisdictional responsibilities see PART I.B.—Water Quality.

• Department of the Air Force (land use around military airfields).

Department of Energy

• Office of Policy, Safety, and Environment (effects of energy policies, programs, and projects on adjacent land uses).

Department of Housing and Urban Development

• Office of Community Planning and Development (land use planning; environmental criteria and compatible uses near hazards; noise abatement and mitigation measures):

—Assurances that HUD assisted projects are located in a safe and healthful environment. 42 U.S.C. 1441, *et seq.*

—Siting of HUD assisted projects near hazardous operations handling explosive or flammable materials. (24 CFR Part 51, Subpart C).

—Siting of HUD assisted projects in runway clear zones (civil airports) and clear zones and accident potential zones (military airfields). (24 CFR Part 51, Subpart D).

• Office of Interstate Land Sales (subdivided land sales):

—Subdivided land sales, registration, and disclosure statements. 15 U.S.C. 1701 (24 CFR Part 1700, *et seq.*).

Department of the Interior

• Fish and Wildlife Service (effects of land use on endangered species and their critical habitats, other fish and wildlife resources, and components of the National Wildlife Refuge and National Fish Hatchery Systems):

—Approval of conversion of use for State lands acquired, developed or improved with grants under the: (1) Pittman-Robertson Act, (2) Dingell-Johnson Act, (3) Endangered Species Act and/or (4) Anadromous Fish Conservation Act. For (1)–16 U.S.C. 669 (50 CFR Parts 80.4 and 80.14); for (2)–16 U.S.C. 777 (50 CFR Parts 80.4 and 80.14); for (3)–16 U.S.C. 1535; and for (4)–16 U.S.C. 757(a) and (b).

—Consultation regarding any Federal actions that may directly or indirectly affect a designated coastal barrier. 16 U.S.C. 3501 (for advisory guidelines, see 48 FR 45684 of Oct. 6, 1983).

—Consultation concerning the protection of fish and wildlife refuges, which may be impacted by transportation projects. 49 U.S.C. 303.

—For jurisdictional responsibilities of the Fish and Wildlife Service on Federal lands see PART III. B.—Federal Land Management.

• Geological Survey (land use planning; geologic and hydrologic hazards; flood studies; geologic, topographic, land use, and photographic mapping).

• Bureau of Indian Affairs (effects of land uses on Indian lands):

—Approval of leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

—Sale of Indian land. 25 U.S.C. 293–294, 355, 372–73, 378–79, 385–386, 404–405, 463–464, 483 and 608 (25 CFR Parts 152 and 159–160).

—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).

—Permits concessions and leases on lands withdrawn or acquired in connection with Indian irrigation projects. 25 U.S.C. 390 (25 CFR Part 173).

—For jurisdictional responsibilities on Federal lands administered by Bureau of

Indian Affairs, see PART III. B.—Federal Land Management.

•Bureau of Land Management (effects of land uses on public lands):

-For jurisdiction responsibilities on Federal lands administered by the Bureau of Land Management, see PART III. B.—Federal Land Management.

• Bureau of Mines (mineral resources and land use).

• National Park Service (effects of land uses on National Park System areas; National Trails System; Wild and Scenic River System; park and recreation areas and values; and historic, archeological and architectural sites):

—Approval of a conversion to a non-designated use for State and local lands acquired or developed, in whole or in part, with a Land and Water Conservation Fund Act grant. 16 U.S.C. 4601.

—Assistance to State and local agencies, through an Urban Park and Recreation Recovery Act grant, for the development and/or improvement of park and recreation areas. 16 U.S.C. 2504 (36 CFR Part 69).

—Approval of a conversion to other than public recreation uses for State and local areas developed or improved with an Urban Park and Recreation Recovery Act grant. 16 U.S.C. 2504 (36 CFR Part 69).

—Consultations regarding land uses and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

—Permits for use of National Historic and National Scenic Trails administered by the National Park Service. 16 U.S.C. 1246.

—Approval of a conversion to a non-designated use for lands deeded by the Federal government to State and local entities as park demonstration areas, as recreation areas, as wildlife conservation preserves and refuges and as historic monuments and properties under: (1) Recreation Demonstration Act of 1942 and (2) Federal Property and Administrative Services Act of 1949. For (1)–16 U.S.C. 459 (r–t); for (2)–40 U.S.C. 484(k)(2) (41 CFR Part 101–47).

—Approval of a conversion to a non-designated use of abandoned railroad rights-of-way acquired by State and local governments under Section 809(b) of the Railroad Revitalization and Regulatory Reform Act of 1976. 49 U.S.C. 1(a) (36 CFR Part 64).

—Consultation concerning the protection of park, recreation, and cultural resources which may be impacted by transportation projects, 49 U.S.C. 303.

—For other jurisdictional responsibilities of the National Park Service, see PART III. B.—Federal Land Management.

• Bureau of Reclamation (effects of land use on Federal water storage and distribution projects; planning for water development projects; basin-wide water studies and land use aspects of the National Water Summary):

—Sale of farm units on Federal irrigation projects. (Statutory authority appears in individual project authorizations.)

—Administration of excess lands and residency requirements. 43 U.S.C. 371.

• Office of Surface Mining Reclamation and Enforcement (land use and surface coal mining and reclamation operations):

—For jurisdictional responsibilities of the Office of Surface Mining, see PART II. C.—Coal.

Department of Transportation

Office of the Secretary (general effects of transportation projects on land use):

—Approval of transportation programs or projects that require the use of or have significant impacts on park and recreation areas, fish and wildlife refuges, and historic sites. 49 U.S.C. 303.

• Coast Guard (effects of bridges on land use):

—Permits for bridges and causeways over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*; and 535 (33 CFR Part 114 *et seq.*).

• Federal Aviation Administration (airport land use compatibility):

—Airport aid program. 49 U.S.C. 1711–1727 (14 CFR Part 152).

—Acquisition of U.S. land for public airports. 49 U.S.C. 1723 (14 CFR Part 154).

—Notice of construction, alteration, activiation, and deactivation of airports 49 U.S.C. 1350, 1354 and 1355 (14 CFR Part 157).

—Objects affecting navigable airspace. 49 U.S.C. 1655 (14 CFR Part 77).

—Release of airport property from surplus property disposal restrictions. 49 U.S.C. 1101–1119 (14 CFR Part 155).

• Federal Highway Administration (effects of highways on land use):

—Approval of highway projects and programs. 23 U.S.C. 101–156, generally, and 23 U.S.C. 201–219.

—Consultations, in cooperation with the Urban Mass Transportation Administration, with State and local officials concerning urban transportation related systems. 23 U.S.C. 105(d) and 134(a); 49 U.S.C. 1604(g) (23 CFR Part 450).

—Regulation of highway-related land use. For highway beautification—23 U.S.C. 131 (23 CFR Part 750); for junkyard control and acquisition—23 U.S.C. 136 (23 CFR Part 751); for landscape and roadside development—23 U.S.C. 131 and 319 (23 CFR Part 752); for protection of parklands, recreation areas, wildlife refuges, and historic sites—23 U.S.C. 138 (23 CFR Part 771).

• Urban Mass Transportation Administration (effects of urban transportation systems on land use):

—Consultation, in cooperation with the Federal Highway Administration, with State and local officials concerning urban transportation related systems. 23 U.S.C. 105(d) and 134(a); 49 U.S.C. 1604(g) (49 CFR Part 613).

—Approval for substituting mass transit or other transit projects in lieu of an interstate highway project. 23 U.S.C. 103(e)(4).

Advisory Council on Historic Preservation (effects of land use planning on historic properties).

Environmental Protection Agency (effects of land use on pollution control and environmental quality):

—For jurisdictional responsibilities see PART I. A.—Air Quality, PART I. B.—Water Quality, and PART I. C.—Waste Disposal on Land.

Federal Emergency Management Agency (national flood insurance program; disaster relief assistance; mitigation of natural hazards).

Federal Energy Regulatory Commission (effects of power projects on land use):

—Regulation of development of water resources. 16 U.S.C. 791–825(r) (18 CFR Parts 4–25, 36, 131 and 141).

International Boundary and Water Commission, United States Section (land use along international boundary with Mexico).

Interstate Commerce Commission (land use and interstate commerce):

—Approval of Public Convenience and Necessity Certificate for new railroad lines 49 U.S.C. 10901.

National Aeronautics and Space Administration (remote sensing of land use and land cover).

National Capital Planning Commission (land use in the National Capital Region):

—Approval of land use plans and construction in National Capital Region. 40 U.S.C. 74a (DC Code 9–404, DC Code 8–102); 40 U.S.C. 122 (DC Code 8–111, DC Code 5–432).

Tennessee Valley Authority (land use planning on public lands in Tennessee Valley region; assistance to local planning organizations).

B. Federal Land Management

Department of Agriculture

• Forest Service (National Forests and Grasslands management, including fire management):

—National Forest System Management Planning. 16 U.S.C. 1604 and 1613 (36 CFR Part 219).

—Special use permits, archeological permits, leases and easements. 16 U.S.C. 497 and 580(d); 43 U.S.C. 1761 and 48 U.S.C. 341 (36 CFR Parts 251 and 261).

—Easement and road rights-of-way on National Forests and other lands. 16 U.S.C. 533 (36 CFR Part 212.10).

—Permits for commercial use of existing roads. 16 U.S.C. 537 (36 CFR Part 212).

—Bankhead-Jones Farm Tenant Act. Title III permits on National Grasslands. 7 U.S.C. 1010–12 (36 CFR Part 213.3).

Department of Commerce

• National Oceanic and Atmospheric Administration (consistency of Federal land uses with coastal zone management programs).

Department of Defense (overall management of Department of Defense lands).

• Department of the Army (management of Army lands):

—Permits and leases for use of Army reservations.

—Permits and leases for use and occupancy of lands at water development projects of the Corps of Engineers.

• Department of the Air Force (management of Air Force lands):

—Permits and leases for use of Air Force reservations.

• Department of the Navy (management of Navy and Marine Corps lands):

—Permits and leases for uses of naval reservations.

Department of the Interior

• Fish and Wildlife Service (effects of Federal land management on endangered species and their critical habitats and other fish and wildlife resources, management of National Wildlife Refuge and National Fish Hatchery System areas):

—Easements/permits for right-of-way across National Wildlife Refuge and National Fish Hatchery System land. For refuges—16 U.S.C. 668dd, *et seq.*; for hatcheries—43 U.S.C. 931 c and d (50 CFR Parts 25.41 and 29.21).

—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460k–3 and 742(f) (50 CFR Part 96).

—Permits for off-road vehicular use on National Wildlife Refuge System areas. E.O. 11644 (50 CFR Part 26.34).

—Consultation concerning the protection of fish and wildlife refuges which may be impacted by transportation projects. 49 U.S.C. 303.

• Geological Survey (Federal land mineral resource potential; wilderness reviews, land-use planning; geologic and hydrologic hazards; flood studies; geologic, topographic, land use, and photographic mapping).

• Bureau of Indian Affairs (effects of Federal land management on Indian lands; management of Bureau of Indian Affairs lands):

—Sale of Federal land purchased for Indian administrative uses. 25 U.S.C. 293.

—Rights-of-way over Federal lands under BIA jurisdiction. 25 U.S.C. 323–328 (25 CFR Part 160).

—Leases for mining, oil and gas, coal, farming and other uses on Federal lands under BIA jurisdiction. 5 U.S.C. 301 and 25 U.S.C. 393, *et seq.* (25 CFR Part 162).

—For the trust responsibilities of the Bureau of Indian Affairs for Indian lands, see PART III. A.—Land Use Planning, etc.

• Bureau of Land Management (management of Federal lands):

—Easements/permits for rights-of-way. 43 U.S.C. 9 and 1701, *et seq.* (43 CFR Parts 2800–2900).

—Special land-use permits for habitation, occupation and other purposes. 43 U.S.C. 1732(b) (43 CFR Part 2920).

—Conditions and standards for off-road vehicle use on BLM lands. 43 U.S.C. 1201; E.O. 11644 (43 CFR Part 8340).

—Permits for off-road vehicular use special events, i.e., tours and competitions. 43 U.S.C. 1701, *et seq.*, and 16 U.S.C. 460(1–6a) (43 CFR Part 8372).

—Exchange of Federal lands for other property. 43 U.S.C. 1716 (43 CFR Parts 2200–2270).

—Leases/transfers of public lands for a public airport. 43 U.S.C. 1201 and 49 U.S.C. 1115 (43 CFR Part 2640).

—Sales/leases of Federal land to State and local agencies and non-profit groups for recreational and public purposes. 43 U.S.C. 869, *et seq.* for sales—43 CFR Part 2740; for leases—43 CFR Part 2912).

—Permits for commercial recreational use of public lands. 43 U.S.C. 1701, *et seq.* (43 CFR Part 8370).

• Bureau of Mines (mineral land assessment).

• National Park Service (management of National Park System areas; units of the National Wild and Scenic Rivers System; National Trails System):

—Permits, leases, and easements of rights-of-way and other uses of National Park System areas. 16 U.S.C. 1, *et seq.* (36 CFR Parts 9 and 14).

—Permits for commercial operations on National Park System areas. 16 U.S.C. 1, *et seq.* (36 CFR Parts 7, 14, 50 and 51).

—Permits for off-road vehicular use in National Park System areas. E.O. 11644 (36 CFR Part 7).

—Consultations regarding use of and effect on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

—Permits for use of National Historic and National Scenic Trails administered by the National Park Service. 16 U.S.C. 1246.

—Consultation concerning the protection of park, recreation, and cultural resources which may be impacted by transportation projects. 49 U.S.C. 303.

• Bureau of Reclamation (management of public water storage and delivery projects and recreational developments; irrigation; and impacts of Federal land management of State water planning):

—Sale or lease of project lands to a governmental entity or a non-profit group for recreational or other public purposes. 43 U.S.C. 869.

—Lease of project lands for commercial recreational developments. 43 U.S.C. 391, *et seq.*

Department of Transportation

• Office of the Secretary (effects of transportation projects on Federal land):

—Approval of transportation programs and projects which use a publicly owned park and recreation area, wildlife or waterfowl refuge, or any historic site. 49 U.S.C. 303.

• Federal Highway Administration (construction and management of Federal Lands Highways, including forest highways and National Park Service roads and parkways):

—Federal Lands Highways Program. 23 U.S.C. 204 (23 CFR Parts 660 and 667).

Advisory Council on Historic Preservation (effects of Federal land management on historic properties).

Environmental Protection Agency (effects of Federal land management on pollution control and environmental quality; pesticide use and integrated pest management on public lands):

—Underground injection control permits on Indian lands. 42 U.S.C. 300(f), *et seq.*

—Air emissions from Federal facilities. 42 U.S.C. 7418.

—Wastewater discharges from Federal facilities. 33 U.S.C. 1323.

—Solid wastes and hazardous wastes from Federal facilities. 42 U.S.C. 6961.

—Pesticide use of public lands. 7 U.S.C. 136.

—For other jurisdictional responsibilities, see PART I.—POLLUTION CONTROL.

Federal Emergency Management Agency (effects of the National Flood Insurance Program and disaster relief assistance on Federal land management).

General Services Administration

• Public Buildings Service (management of public buildings and property).

• Federal Property Resources Service (public land disposal).

National Aeronautics and Space Administration (advanced technology for remote sensing of land use and land cover).

Tennessee Valley Authority (TVA reservoir property, secondary use of reservoir property, and reservation planning).

C. Coastal Areas

Department of Agriculture

• Farmers Home Administration (housing, community, and business loan programs; and farmer loan programs in coastal areas).

• Forest Service (National Forests in coastal areas).

—Consultations regarding uses and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Soil Conservation Service (coastal soil stabilization).

Department of Commerce

• National Oceanic and Atmospheric Administration (coastal and marine resources and protection):

—Permits for activities in designated marine sanctuaries. 16 U.S.C. 143, *et seq.* (15 CFR Part 922).

—Approval and funding of State coastal management programs. 16 U.S.C. 1451, *et seq.* (15 CFR Parts 923 and 930).

—Establishment of estuarine sanctuaries. 16 U.S.C. 1461 (15 CFR Part 921).

—Determinations to insure Federal development projects and federally permitted or funded projects are consistent with an approved State coastal zone management plan. 16 U.S.C. 1451 (15 CFR Part 930).

—Grants and loans under Coastal Energy Impact Program. 16 U.S.C. 1456(a) (15 CFR Part 931).

Department of Defense

• Army Corps of Engineers (beach erosion and stabilization; dredge and fill permits; ocean dumping; Refuse Act permits):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Office of Policy, Safety, and Environment (effects of energy policies, programs and projects on coastal areas).

Department of Housing and Urban Development

• Office of Housing and Office of Community Planning and Development (development in coastal areas; consistency with coastal zone management plans; consistency with Coastal Barrier Resources Act).

Department of the Interior

• Fish and Wildlife Service (effects of coastal land uses on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery System areas, and other fish and wildlife resources):

—Consultation regarding any Federal actions that may directly or indirectly affect a designated coastal barrier. 16 U.S.C. 3501. (For advisory guidelines, see 48 FR 45664 of Oct. 6, 1983).

—Consultation regarding Federal projects that may affect an estuarine area 15 U.S.C. 1224.

—Consultation regarding Federal or Federally permitted projects that affect fish and wildlife resources under the Fish and Wildlife Coordination Act. 16 U.S.C. 661, *et seq.*

—U.S. Fish and Wildlife Service Mitigation Policy. 16 U.S.C. 661, *et seq.*; 742(a)–754 and 1001–1009 (46 FR 7644 of Jan. 23, 1981).

• Geological Survey (land use planning; geologic and hydrologic hazards; geologic, topographic, land use, and photographic mapping, including areas of the outer continental shelf and Exclusive Economic Zone).

• Bureau of Indian Affairs (Indian lands in coastal areas).

• Bureau of Land Management (public land management in coastal areas).

• Minerals Management Service (coastal zone planning and management; outer continental shelf lands):

—Oil, gas, and sulphur exploration, development, and production on the outer continental shelf. (30 CFR Part 250.34).

• National Park Service (effects of coastal land use on National Park System areas, park and recreation areas, and historical, archeological and architectural sites; barrier island ecology and coastal processes):

—Identification and listing on the National Registry of Natural Landmarks of nationally significant natural areas in the United States. 16 U.S.C. 461 (36 CFR Part 62).

—Consultations regarding use of and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Bureau of Reclamation (water development projects in coastal areas, effects of water developments and irrigation on estuarine areas).

Department of Transportation

• Coast Guard (bridges, pipelines and transmission lines crossing navigable waters; navigation and deep water ports):

—Permits for bridges and causeways over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

—Permits for waterfront facilities. 33 U.S.C. 1221, *et seq.* (33 CFR Parts 125 and 126).

—Deepwater port regulation and licensing. 33 U.S.C. 1503–1524 (33 CFR Parts 148–150).

• Maritime Administration (coastal land use in relation to ports).

Advisory Council on Historic Preservation (effects of coastal land uses on historic properties).

Environmental Protection Agency (effects of coastal land uses on pollution control and environmental quality):

—For jurisdictional responsibilities see PART I.B.—Water Quality.

Federal Emergency Management Agency (National Flood Insurance Program; floodplain management; uses on sand dunes, mangrove forests and barrier islands; disaster relief assistance).

Federal Energy Regulatory Commission (effects of natural gas transportation, storage, and sale on coastal areas).

Marine Mammal Commission (conservation and protection of marine mammals and their habitat in coastal areas):

—Conservation and oversight responsibility for activities affecting marine mammals. 16 U.S.C. 1402.

National Aeronautics and Space Administration (advanced technology for remote sensing of land use and land cover).

D. Environmentally Sensitive Areas (Wilderness Areas, Wild and Scenic Rivers, Floodplains [see Executive Order 11988], Wetlands [see Executive Order 11990], Barrier Islands, Beaches and Dunes, Unstable Soils, Steep Slopes, Aquifer Recharge Areas, Tundra, etc.)

Department of Agriculture

• Agricultural Research Service (research activities to conserve and assist environmentally sensitive areas).

• Agricultural Stabilization and Conservation Service (commodity and land use programs; Water Bank).

• Farmers Home Administration (housing, community, and business loan programs; farmer loan programs in environmentally sensitive areas).

• Forest Service (management of environmentally sensitive areas on National Forest and Grassland System lands, including fire management):

—Permits for use of wilderness areas. 16 U.S.C. 472 and 551 (36 CFR Part 293).

—Consultations regarding use of and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Soil Conservation Service (conservation and protection of environmentally sensitive areas in rural regions).

Department of Commerce

• National Oceanic and Atmospheric Administration (management and protection of environmentally sensitive coastal and marine areas):

—Consultations concerning the protection of threatened and endangered marine species and their critical habitats. 16 U.S.C. 1531, *et seq.* (50 CFR Part 222).

—Permits for activities in designated marine sanctuaries. 16 U.S.C. 1431, *et seq.* (15 CFR Part 922).

—Establishment of estuarine sanctuaries. 16 U.S.C. 1461 (15 CFR Part 921).

—Habitat Conservation Policy (48 FR 53142 of Nov. 25, 1983).

Department of Defense

• Army Corps of Engineers (protection of beaches, wetlands, floodplains, barrier islands):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Health and Human Services

• Public Health Service: Center for Disease Control (environmentally sensitive areas in relation to human health issues).

Department of Housing and Urban Development

• Office of Community Planning and Development (locational criteria for floodplain and wetland development; sole source aquifer and critical habitat; development affecting endangered species and their critical habitats).

• Office of Housing (developable slope and soils criteria).

Department of Interior

• Fish and Wildlife Service (protection of endangered species and their critical habitats; conservation of environmentally sensitive areas in National Wildlife Refuges and National Fish Hatcheries):

—Consultations regarding any Federal actions that may directly or indirectly affect a designated coastal barrier. 16 U.S.C. 3501 (for advisory guidelines, see 48 FR 45664 of Oct. 6, 1983).

—Consultations concerning the protection of endangered species and their critical habitats. 16 U.S.C. 1531–1543 (50 CFR Part 402).

—Determination of critical habitats for endangered and threatened species of fish and wildlife and plants. 16 U.S.C. 1533 (50 CFR Parts 17, 402 and 424).

• Geological Survey (geologic and hydrologic assessments of sensitive areas, including energy and mineral resources in wilderness areas; earthquake, volcanic and other natural hazards).

• Bureau of Indian Affairs (environmentally sensitive areas on Indian lands).

• Bureau of Land Management (environmentally sensitive areas on public lands; management of special areas):

—Leases, permits and licenses for mining in Wild and Scenic Rivers System areas. 16 U.S.C. 1280 (each area has special Federal Regulations).

—Approval of plan of operations for a mining lease in a wilderness study area. 43 U.S.C. 1701, *et seq.*, and 1782; 12 U.S.C. 1201, *et seq.* (43 CFR Part 3802).
—Permits for use of a designated "special area" as defined in 43 CFR Part 8372.0–5(g). 43 U.S.C. 1701, *et seq.*; 16 U.S.C. 460 (1–6a) and 670 (g–n) (43 CFR Part 8370 *et seq.*).
—Restrictions on use of "outstanding natural areas" and "primitive areas." 43 U.S.C. 1701, *et seq.* (43 CFR Subpart 8352).

• National Park Service (historical and recreational values; Wild and Scenic Rivers System; National Trails System; National Park System areas):

—Identification and listing on the National Registry of Natural Landmarks of nationally significant natural areas in the United States. 16 U.S.C. 461 (36 CFR Part 62).
—Leases, permits, and licenses for mining on National Park System lands involved in Wild and Scenic Rivers System. 16 U.S.C. 1280.
—Consultations regarding use of and effect on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*
—Permits for use of National Historic and National Scenic Trails administered by the National Park Service. 16 U.S.C. 1246.

• Bureau of Reclamation (water resource planning and water storage and delivery projects in environmentally sensitive areas; National Water Summary).

• Office of Surface Mining Reclamation and Enforcement (surface coal mining and reclamation operations in environmentally sensitive areas):

—Identification of lands considered unsuitable for all or certain stipulated methods of coal mining involving surface coal mining operations. 30 U.S.C. 1272(e) (30 CFR Chapter 7, Subchapter F).
—Protection of prime farmlands during surface coal mining and reclamation operations. 30 U.S.C. 1265 (30 CFR Parts 785.17 and 823).

Department of Transportation

• Office of Secretary (effects of all types of transportation projects on environmentally sensitive areas).

• Coast Guard (port facilities and bridges in environmentally sensitive areas):

—Establishment of port access routes in environmentally sensitive areas. 33 U.S.C. 1221.

• Federal Highway Administration (highways in environmentally sensitive areas):

—Mitigation of impacts to privately owned wetlands. 23 U.S.C. 109; Executive Order 11990 (23 CFR Part 777).

Advisory Council on Historic Preservation (effects of activities in sensitive areas on historic properties).

Environmental Protection Agency (pollution control and environmental effects on wetlands, floodplains, prime agricultural lands, and other environmentally sensitive areas):

—For jurisdictional responsibilities, see PART I. A.—Air Quality, PART I. B.—Water Quality, and PART I. C.—Waste disposal on Land.

Federal Emergency Management Agency (National Flood Insurance Program; floodplain management; uses on sand dunes, mangrove forests, and barrier islands; disaster relief assistance).

National Science Foundation (conservation of Antarctic animals, plants, and ecosystems):

—Permits for the taking or collecting of Antarctic animals and plants, and for entry into certain designated areas. 16 U.S.C. 2401, *et seq.* (45 CFR Part 670).

Tennessee Valley Authority (Protection and management of environmentally sensitive areas in the Tennessee Valley region).

E. Outdoor Recreation

Department of Agriculture

• Forest Service (recreation in National Forests and Grasslands):

—Use of recreation areas. (36 CFR Parts 291, 292 and 294).
—Permits for use of wilderness areas. 16 U.S.C. 472 and 551 (36 CFR Part 293).
—Conditions and requirements for use of National Forest road and trail system. 16 U.S.C. 537 (36 CFR Part 212).
—Permits for use of National Scenic Trails administered by Forest Service. 16 U.S.C. 1246.
—Permits for hunting and fishing in fish and wildlife refuge lands. 16 U.S.C. 551 and 683.
—Conditions and standards for off-road vehicle use on National Forest System lands. 16 U.S.C. 551; E.O. 11644 (36 CFR Part 295).
—Consultations regarding use of and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Soil Conservation Service (recreation and watershed protection; planning assistance to private landowners):

—Assistance to State and local sponsors, through a Small Watershed Program grant, for reservoir and stream modification projects including development of basic public recreation facilities. 16 U.S.C. 1001, *et seq.* and 33 U.S.C. 701–1.

Department of Commerce

• National Oceanic and Atmospheric Administration (marine recreational fishing; coastal access planning in State coastal zone management programs).

Department of Defense

• Army Corps of Engineers (recreational areas on Corps project lands):

—Permits for activities and developments on water resources development projects. 16 U.S.C. 460(d) (36 CFR Parts 313 and 327).

Department of Health and Human Services

• Public Health Service: Center for Disease Control (outdoor recreation and health).

Department of Housing and Urban Development

• Office of Community Planning and Development (outdoor recreation in urban areas):

—Approval of a conversion to a non-designated use for State and local lands acquired or developed, in whole or in part, with an Open Space Land Program grant. 42 U.S.C. 1500–1500e.

Department of the Interior

• Fish and Wildlife Service (effects of recreation on endangered species and their critical habitats, and other fish and wildlife resources; recreation on National Wildlife Refuge and National Fish Hatchery System lands):

—Permits for special uses including concessions and other recreational facilities on National Wildlife Refuge System lands. 16 U.S.C. 668dd, *et seq.* (50 CFR Part 25.41, *et seq.*).
—Permits for off-road vehicular use on National Wildlife Refuge System lands. E.O. 11644 (50 CFR Part 26.34).
—Consultation concerning the protection of fish and wildlife refuges which may be impacted by transportation projects. 49 U.S.C. 303.

• Geological Survey (effects of water quality and erosion on recreation).

• Bureau of Indian Affairs (outdoor recreation on Indian lands).

• Bureau of Land Management (outdoor recreation on public lands generally, including ORV use and river management):

—Leases and sale of Federal land to State and local agencies and non-profit groups for recreational and public purposes. 43 U.S.C. 869, *et seq.* (For sales—43 CFR Part 2740; for leases—43 CFR Part 2912).
—Conditions and standards for off-road vehicle use on BLM lands. 43 U.S.C. 1201; E.O. 11644 (43 CFR Part 8340).
—Permits for off-road vehicular use special events, i.e., tours and competitions. 43 U.S.C. 1701, *et seq.*, and 16 U.S.C. 460 (1–6a) (43 CFR Part 8372).
—Permits for use of a national trail, developed facility and a designated "special area" as defined in 43 CFR Part 8372.0–5(g). 43 U.S.C. 1701, *et seq.*; 16 U.S.C. 460 (1–6a) and 670 (g–n) (43 CFR Part 8370).
—Permits for commercial recreation use of public lands. 43 U.S.C. 1701, *et seq.* (43 CFR Part 8370).

• National Park Service (outdoor recreation, urban parks, Wild and Scenic Rivers System, National Trails System; recreation in National Park System areas):

—Assistance to State and local agencies, through Land and Water Conservation Fund Act grants, for the acquisition and/or development of park and recreation areas and/or facilities. 16 U.S.C. 4601.
—Approval of a conversion to a non-designated use for State and local lands acquired or developed, in whole or in part, with a Land and Water Conservation Fund Act grant. 16 U.S.C. 4601.
—Assistance to State and local agencies, through Urban Park and Recreation Recovery Act grants, for the development

and/or improvement of park and recreation areas. 16 U.S.C. 2504 (36 CFR Part 1228).
—Approval of a conversion to other than public recreation uses for State and local areas developed or improved with an Urban Park and Recreation Recovery Act grant. 16 U.S.C. 2504 (36 CFR Part 69).
—Consultations regarding use of and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*
—Permits for use of National Historic and National Scenic Trails administered by the National Park Service. 16 U.S.C. 1246.
—Approval of a conversion to a non-designated use for lands deeded by the Federal government to State and local entities as park demonstration areas, recreation areas, wildlife conservation preserves and refuges and as historic monuments and properties under the (1) Recreation Demonstration Act of 1942 and (2) Federal Property and Administrative Services Act of 1949. For (1)—16 U.S.C. 459 r-t; for (2)—40 U.S.C. 484(k)(2) (41 CFR Part 101-47).
—Approval of a conversion to a non-designated use of abandoned railroad rights-of-way acquired by State and local governments under Section 809(b) of the Railroad Revitalization and Regulatory Reform Act of 1976. 49 U.S.C. 1a (36 CFR Part 64).
—Consultation concerning the protection of park, recreation, and cultural resources which may be impacted by transportation projects. 49 U.S.C. 303.
—Consultations about extent to which proposed recreational developments at hydroelectric projects conform to and are in accord with the Statewide Comprehensive Outdoor Recreation Plans. 16 U.S.C. 460.
—Permits for off-road vehicle use on National Park System lands. 16 U.S.C. 1, *et seq.*; E.O. 11644 (36 CFR Part 7).

• Bureau of Reclamation (recreation on water storage and delivery projects):
—Sale or lease of project lands to a governmental entity or a non-profit group for recreational purposes. 43 U.S.C. 869.
—Lease of project lands for commercial recreational developments. 43 U.S.C. 391, *et seq.*
—Permits for organized off-road vehicular events. (43 CFR Part 420.24).

• Office of Surface Mining Reclamation and Enforcement (use of abandoned mined lands for recreational purposes):
—Identification of park and recreation lands considered unsuitable for surface coal mining operations. 30 U.S.C. 1272(e) (30 CFR Chapter 7, Subchapter F).

Department of Transportation

• Office of the Secretary (general effects of transportation projects on parks and recreation areas):
—Approval of transportation programs or projects that require the use of or have significant impact on park and recreation areas. 49 U.S.C. 303.

• Coast Guard (recreational boating):
—Recreational boating regulations and permits. 46 U.S.C. 1451 (33 CFR Part 173, *et seq.*).

• Federal Highway Administration (effects of highways on parks and recreation areas):
—Special protection considerations for public park and recreation areas. 23 U.S.C. 138 and 49 U.S.C. 303 (23 CFR Part 771).
—Access highways to public recreation areas on lakes. 23 U.S.C. 155.

Advisory Council on Historic Preservation (effects of recreational activities and development on historic properties).

Environmental Protection Agency (pollution control and environmental quality in relation to outdoor recreation):
—For jurisdictional responsibilities, see PART I—POLLUTION CONTROL.

National Capital Planning Commission (recreation in the Washington, D.C. area):
—Approval of land use plans and construction in the National Capital Region. 40 U.S.C. 74a (D.C. Code 9-404, D.C. Code 8-102); 40 U.S.C. 122 (D.C. Code 8-11, D.C. Code 5-432).

Tennessee Valley Authority (recreation on public lands and waters in Tennessee Valley Region).

F. Community Development

Department of Agriculture

• Agricultural Stabilization and Conservation Service (rural development and farm programs).

• Extension Service (rural and community development programs).

• Farmers Home Administration (rural and community development programs).

• Forest Service (programs to assist in coordinating development of communities in and adjacent to National Forest System areas; urban forestry).

• Soil Conservation Service (soil and related resource surveys; land conservation and utilization):
—Soil, water, and related resource data. 7 U.S.C. 1010a.
—Program for land conservation and utilization. 7 U.S.C. 1011(e).

Department of Commerce

• Economic Development Administration (community development programs in designated areas).

• National Oceanic and Atmospheric Administration (energy development impacts on communities):
—Approval and funding of State coastal zone management programs. 16 U.S.C. 1451, *et seq.* (15 CFR Parts 130 and 923).

Department of Health and Human Services

• Center for Disease Control (community health issues).

• Office of Human Development Services (problems of handicapped, aged, children and Native Americans).

Department of Housing and Urban Development

• Office of Community Planning and Development (community development; effects on low income populations; economic revitalization in distressed areas; density and congestion mitigation; rehabilitation and urban homesteading):
—Assurances that HUD assisted projects are located in a safe and healthful environment. 42 U.S.C. 1441, *et seq.*
—Housing and Community Development Act of 1974. 42 U.S.C. 5301, *et seq.* (24 CFR Part 570).
—Approval of a conversion to a non-designated use for State and local lands acquired or developed, in whole or in part, with an Open Space Land Program grant. 42 U.S.C. 1500-1500e.

Department of the Interior

• Fish and Wildlife Service (effects of community developments on endangered species and their critical habitats, other fish and wildlife resources, and National Wildlife Refuge and National Fish Hatchery System areas).

• Geological Survey (effects of development on water resources and erosion; geologic and hydrologic hazards, including floods, subsidence, sink holes, landslides, and earthquakes).

• Bureau of Indian Affairs (community development for Indian peoples and on Indian lands).

• Bureau of Land Management (community developments on public lands):
—Leases and sale of Federal land to State and local agencies and non-profit groups for recreational and public purposes. 43 U.S.C. 869, *et seq.* (For sales—43 CFR Part 2740, for leases—43 CFR Part 2912).
—Leases/transfers of public lands for a public airport. 49 U.S.C. 1115 (43 CFR Part 2640).
—Exchange of Federal lands for other property. 43 U.S.C. 1716 (43 CFR Part 2200-2270).

• National Park Service (effects of community developments on natural and historic landmarks, archeological remains, outdoor recreation, urban parks, historic preservation, and National Park System areas):
—Approval of a conversion to a non-designated use for State and local lands acquired or developed, in whole or in part, with a Land and Water Conservation Fund Act grant. 16 U.S.C. 4601.
—Approval of a conversion to other than a public recreation use for State and local areas developed or improved with an Urban Park and Recreation Recovery Act grant. 16 U.S.C. 2504 (36 CFR Part 69).
—Approval of a conversion to a non-designated use for lands deeded by the Federal government to State and local entities as park demonstration areas, recreation areas, wildlife conservation preserves and refuges and as historic monuments and properties under the (1) Recreation Demonstration Act of 1942 and (2) Federal Property and Administrative Services Act of 1949. For (1)—16 U.S.C. 459 r-t; for (2)—40 U.S.C. 484(k)(2) (41 CFR Part 101-47).
—Approval of a conversion to a non-designated use of abandoned railroad right-of-way acquired by State and local governments under Section 809(b) of the

Railroad Revitalization and Regulatory Reform Act of 1976. 49 U.S.C. 1a (36 CFR Part 64).

—Assistance for the acquisition, rehabilitation, restoration and reconstruction of historic properties. 16 U.S.C. 470, *et seq.* (36 CFR Parts 60.3 and 68).

• Bureau of Reclamation (water storage, delivery, and irrigation systems for community development purposes):

—Sales of farm units on Federal irrigation projects (Statutory jurisdiction appears in individual project authorizations).

—Sale or lease of project lands to a governmental entity or nonprofit group for recreational or other public purposes. 43 U.S.C. 869.

• Office of Surface Mining Reclamation and Enforcement (effects of surface mining and reclamation operations on community development).

Department of Transportation

• Federal Aviation Administration (effects of airport development and use on communities):

—Approval of an airport noise compatibility program. 49 U.S.C. 2101, *et seq.* (14 CFR Part 150).

• Federal Highway Administration (effects of highways on communities):

—Relocation assistance in connection with highway projects. 42 U.S.C. 4601 *et seq.* (23 CFR Part 740 and 49 CFR Part 25).

—Grants for economic growth center development highways. 23 U.S.C. 143.

• Urban Mass Transportation Administration (effects of urban transportation systems on communities):

—Grants for Urban Mass Transportation Act projects. 49 U.S.C. 1610, *et seq.*

ACTION (effects of community development on low income populations).

Advisory Council on Historic Preservation (effects of community development on historic properties).

Environmental Protection Agency (air, noise, and water pollution control relating to community development):

—For jurisdictional responsibilities, see PART I.—POLLUTION CONTROL.

Federal Emergency Management Agency (National Flood Insurance Program; disaster relief assistance; mitigation of natural hazards).

General Services Administration

• Public Building Service (building design, construction, and use).

Interstate Commerce Commission (effects of rail line construction and abandonment on community development).

National Capital Planning Commission (community developments in the Washington, D.C. area):

—Approval of land use plans and construction in the National Capital Region. 40 U.S.C. 74a (DC Code 9–404, DC Code 8–102); 40 U.S.C. 122 (D.C. Code 8–111, DC Code 5–432).

National Endowment for the Arts (effects of development on artistic values).

G. Historic, Architectual, and Archeological Resources

Department of Agriculture

• Office of the Secretary (protection of archeological resources):

—Permits and procedures for the recovery and preservation of archeological resources on Department of Agriculture lands. 16 U.S.C. 470 aa–ll (36 CFR Part 296).

• Agricultural Stabilization and Conservation Service (effects on historic and archeological resources from agriculture).

• Farmers Home Administration (effects of housing, community, and business programs, and farmer programs on cultural resources).

• Forest Service (protection of historic and archeological resources in National Forests and Grasslands):

—Special-use permits, archeological permits, leases and easements. 16 U.S.C. 497 and 580(d); 43 U.S.C. 1761; 48 U.S.C. 341 (36 CFR Parts 251 and 261).

• Soil Conservation Service (effects of agriculture on cultural resources).

Department of Commerce

• National Oceanic and Atmospheric Administration (areas for preservation and restoration under State coastal zone management programs):

—National Marine Sanctuaries. 16 U.S.C. 1431 (15 CFR Part 922).

—National Estuarine Sanctuaries. 16 U.S.C. 1461 (15 CFR Part 921).

Department of Defense

• Office of the Secretary (protection of archeological resources):

—Permits/procedures for recovery and preservation of archeological resources on Department of Defense lands. 16 U.S.C. 470 aa–ll (32 CFR Part 229).

Department of Housing and Urban Development

• Office of Community Planning and Development (protection of historic and architectural resources in developed areas):

—Housing and Community Development Act of 1974. 42 U.S.C. 5304(f) (24 CFR Part 58).

Department of the Interior

• Fish and Wildlife Service (cultural resource management on National Wildlife Refuge and National Fish Hatchery System lands, and effects of cultural resource management on endangered species and critical habitats):

—Special use permit for antiquities search and collection activities—in addition to an antiquity permit. 16 U.S.C. 668(dd), *et seq.* (50 CFR Part 25.41); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

• Geological Survey (paleontological resources in general).

• Bureau of Indian Affairs (protection of historic and archeological resources on Indian and Native American lands):

—Concurrence for issuance and supervision of antiquity permits on Indian lands. 16 U.S.C. 432 (25 CFR Part 261); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

—Protection of access to sacred sites, use and possession of sacred objects and other rights of the American Indian, Eskimo, Aleut, and Native Hawaiian. 42 U.S.C. 1996.

• Bureau of Land Management (cultural resource management on public lands):

—Concurrence for issuance and supervision of antiquity permits. 16 U.S.C. 432 (43 CFR Part 3); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

• Minerals Management Service (protection of cultural resources on outer continental shelf lands):

—Outer Continental Shelf Lands Act. 43 U.S.C. 1331 (30 CFR Parts 250 and 251).

• National Park Service (protection of historic, archeological, architectual and paleontological properties; cultural resource management on National Park System lands):

—Nominations to and determinations of eligibility of properties for inclusion in the National Register of Historic Places. 16 U.S.C. 470, *et seq.* (36 CFR Part 60 and 63).

—Approval of procedures in State and local government historic preservation programs 16 U.S.C. 470, *et seq.* (36 CFR Part 61).

—National Historic Landmarks Program—nominations and designations. 16 U.S.C. 461, *et seq.* (36 CFR Part 65).

—Historic Preservation Certifications pursuant to the Tax Reform Act of 1976, the Revenue Act of 1978, the Tax Treatment Extension Act of 1980, and the Economic Recovery Tax Act of 1981. 16 U.S.C. 470, *et seq.*; 90 Stat. 1519; 92 Stat. 2828; 94 Stat. 3204; 95 Stat. 172 (36 CFR Part 67).

—The Secretary of the Interior's Standards and Guidelines for Historic Preservation Projects. 16 U.S.C. 470, *et seq.*; Executive Order 11593 (36 CFR Part 68).

—The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation pursuant to Sections 101 and 110 of the National Historic Preservation Act. 16 U.S.C. 470, *et seq.* (48 FR 44716 of Sept. 29, 1983).

—Waiver of Federal Agency Responsibilities under Section 110 of the National Historic Preservation Act. 16 U.S.C. 470, *et seq.* (36 CFR Part 78).

—Protection of the world's cultural and natural heritage: the World Heritage Convention. 16 U.S.C. 470a–1 and 2–2d (36 CFR Part 73).

—Permits and procedures for the recovery and preservation of archeological resource on Department of the Interior lands. 16 U.S.C. 470 aa–ll (43 CFR Part 7).

—Permits to examine ruins, excavate archeological sites and gather objects of antiquity on Federal and Indian lands (Antiquity permits issued by the Departmental Consulting Archeologist). 16 U.S.C. 432 (43 CFR Part 3; 36 CFR Parts 2.20 and 2.25); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

—Approval of a conversion to a non-designated use for lands deeded by the Federal government to State and local entities as park demonstration areas, recreation areas, wildlife conservation preserves and refuges and as historic monuments and properties under the (1) Recreation Demonstration Act of 1942 and (2) Federal Property and Administrative

Services Act of 1949. For (1)—16 U.S.C. 459 r–t; for (2)—40 U.S.C. 484(k)(2) (41 CFR Part 101–47).

—Consultation concerning the protection of any historic site which may be impacted by a transportation project. 49 U.S.C. 303.

• Bureau of Reclamation (protection of cultural resources on water storage and delivery project lands):

—Procedures for the administration and protection of cultural resources. E.O. 11593 (43 CFR Part 422).

—Concurrence for issuance and supervision of antiquity permits. 16 U.S.C. 432 (43 CFR Part 3); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

• Office of Surface Mining Reclamation and Enforcement (protection of important historic, cultural, scientific, and aesthetic resources in surface coal mining and reclamation operations):

—Concurrence for issuance and the supervision of antiquity permits. 16 U.S.C. 432 (43 CFR Part 3); also see 16 U.S.C. 470 aa–ll (43 CFR Part 7).

Department of Transportation

• Office of the Secretary (general effects of transportation projects on cultural resources):

—Approval of transportation programs or projects that require the use of or have significant impacts on historic sites. 49 U.S.C. 303.

• Coast Guard (effects of bridges on cultural resources):

—Construction and alterations on bridges and causeways over navigable waters that are or require the use of or have significant impacts on historic sites. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

• Federal Aviation Administration (effects of airport developments and air traffic on cultural resources; sonic boom impacts).

• Federal Highway Administration (effects of highway projects on cultural resources):

—Approval of transportation programs or projects that require the use of or have significant impacts on historic sites. 23 U.S.C. 138 and 49 U.S.C. 303 (23 CFR Part 771).

—Archeological and paleontological salvage on Federal and Federal-aid highway projects. 23 U.S.C. 305.

• Federal Railroad Administration (effects of railroad projects on cultural resources).

• Urban Mass Transportation Administration (effects of urban transportation projects on architectural and historic resources).

Advisory Council on Historic Preservation (effects of development or other actions on historic properties):

—Consultation concerning the effects of any Federal, federally assisted, or federally regulated activity on historic properties. 16 U.S.C. 470, *et seq.* (36 CFR Part 800).

General Services Administration

• Public Buildings Service (effects of development and pollution on architectural and historic resources in urban areas).

Interstate Commerce Commission (effects of rail line construction and abandonment on cultural resources).

National Capital Planning Commission (effects of development and pollution on architectural, historic and archeological resources in the Washington, D.C. area):

—Approval of land use plans and construction in the National Capital Region. 40 U.S.C. 74a (D.C. Code 9–404, D.C. Code 8–102); 40 U.S.C. 122 (D.C. Code 8–111, D.C. Code 5–432).

Tennessee Valley Authority (effects of development and other actions on historic and archeological resources in the Tennessee Valley region):

—Permits and procedures for the recovery and preservation of archeological resources on TVA lands. 16 U.S.C. 470 aa–ll (18 CFR Part 1312).

IV. NATURAL RESOURCES MANAGEMENT

A. Weather Modification

Department of Agriculture

• Forest Service (effects of weather modification on National Forests and Grasslands).

• Soil Conservation Service (snow surveys and soil moisture monitoring).

• World Agricultural Outlook Board (data relating to weather and agricultural commodities).

Department of Commerce

• National Oceanic and Atmospheric Administration (weather research and development):

—Records and reports or weather modification activities. 85 Stat. 735 (15 CFR Part 908).

Department of Defense

• Department of the Air Force (fog dissipation).

Department of the Interior

• Bureau of Indian Affairs (effects of weather modification on Indian Lands).

• Bureau of Land Management (effects of weather modification on public lands).

• Fish and Wildlife Service (effects of weather modification on endangered species and their critical habitats, other fish and wildlife resources, and National Wildlife Refuge and National Fish Hatchery System areas).

• Geological Survey (effects of weather modification on water resources; paleoclimatic studies).

• National Park Service (effects of weather modification on National Park System areas).

• Bureau of Reclamation (effects of weather modification on water storage and delivery projects; research in relation to water resources):

—Precipitation augmentation through cloud seeding. 43 U.S.C. 377.

Environmental Protection Agency (effects of weather modification on pollution control and environmental quality).

B. Marine Resources

Department of Commerce

• National Oceanic and Atmospheric Administration (meteorological and oceanographic research and monitoring; management and protection of coastal and marine resources; marine pollution research and monitoring; ocean pollution; ocean mining; ocean dumping; seafood quality; regulation of marine fisheries):

—Establishment of estuarine sanctuaries. 16 U.S.C. 1461 (15 CFR Part 921).

—Permits for activities in designated marine sanctuaries. 16 U.S.C. 1431, *et seq.* (15 CFR Part 922).

—Consultations regarding Federal or federally permitted projects affecting fish and wildlife habitat in coastal and offshore areas under the Fish and Wildlife Coordination Act. 16 U.S.C. 661, *et seq.*

—Consultations regarding projects which may affect any threatened or endangered marine species or its critical habitat. 16 U.S.C. 1531, *et seq.* (50 CFR Parts 222 and 402).

—Permits for scientific research and display of marine mammals. 16 U.S.C. 1374 (50 CFR Parts 216.31, 220 and 618).

—Permits to enhance the propagation or survival of endangered or threatened marine species. 16 U.S.C. 1531 (50 CFR Part 222.21).

—Control of fishing by foreign and domestic vessels in the 3–200 mile Fishery Conservation Zone. 16 U.S.C. 1801, *et seq.* (50 CFR Chapter VI).

—Permits for importing marine mammals or products thereof. 16 U.S.C. 1361 and 1371–74 (50 CFR Parts 18 and 216).

—Licenses for siting, design, and operation of ocean-thermal energy facilities. 42 U.S.C. 9101, *et seq.* (15 CFR Part 981).

—Licenses and permits for deep seabed hard mineral resource exploration or recovery. 30 U.S.C. 1401, *et seq.* (15 CFR Part 970).

—Approval of fishery management plans. 16 U.S.C. 1801, *et seq.* (50 CFR Part 601).

—Permits for scientific research, propagation and survival of marine reptiles. 16 U.S.C. 1538 (50 CFR Part 223.23).

—Permits for whaling for scientific and subsistence purposes. 16 U.S.C. 916 (50 CFR Part 216).

Department of Defense

• Army Corps of Engineers (effects of activities in navigable waters on marine resources):

—Regulation of artificial islands, installations and devices on the outer continental shelf. 43 U.S.C. 1333(e) (33 CFR Part 320.2(b)).

—For other jurisdictional responsibilities, see PART I. B.—Water Quality.

• Department of the Navy (oceanography and hydrographic mapping; ship pollution).

Department of Energy

• Office of Policy, Safety, and Environment (effects of energy programs on marine resources).

Department of Health and Human Services

• Public Health Service (effects of marine pollution on health).

• Food and Drug Administration (shellfish sanitation; contamination of fish and shellfish with toxics).

Department of the Interior

• Fish and Wildlife Service (effects of marine pollution on endangered species and their critical habitats, estuarine areas, marine sanctuaries, sport fisheries, migratory waterfowl, barrier islands, and coastal National Wildlife Refuges):

—Consultation regarding Federal projects that may affect an estuarine area. 15 U.S.C. 1224.

—Habitat acquisition and improvement for designated marine mammals. 16 U.S.C. 136, *et seq.*

• Geological Survey (marine geophysical surveys, including assessment of marine energy and mineral deposits; offshore geologic studies).

• Minerals Management Service (emissions from outer continental shelf lease operations; effects of pollution from outer continental shelf mineral lease operations; protection of marine biological resources on outer continental shelf leases; management of outer continental shelf lands):

—For jurisdictional responsibilities see PART II. B.—Oil and Gas and PART IV. G—Non-energy Mineral Resources.

• Bureau of Mines (pollution from ocean mining).

• National Park Service (marine pollution affecting National Park System areas, especially National Seashores; marine recreational resources; historic and archeological sites in coastal areas and on the continental shelf).

• *Department of State* (international aspects of water pollution and marine resources, including migratory birds and marine mammals).

Department of Transportation

• Coast Guard (ocean dumping enforcement and marine resource protection; discharges of toxic materials in navigable waters; recreational boating):

—Transportation of hazardous materials by vessel. 46 U.S.C. 170, 375, 391(a) and 416(j); 49 U.S.C. 1655, 1803, 1804 and 1808(j); 50 U.S.C. 191 (33 CFR Parts 151, *et seq.;* and 160, *et seq.*; 46 CFR Chapter I).

—Hazardous substance discharge to navigable waters. 33 U.S.C. 1321 (33 CFR Parts 25 and 151, *et seq.;* 46 CFR Part 542, *et seq.*).

—Navigation and waterfront facility regulation. 33 U.S.C. 1221, *et seq.*(33 CFR Parts 125 and 126).

—Outer continental shelf structures. 43 U.S.C. 1331 (33 CFR Part 140, *et seq.*).

—Ports and waterways safety. 33 U.S.C. 1221 (33 CFR Part 160, *et seq.*).

—Deepwater port regulation and licensing. 33 U.S.C. 1503–1524 (33 CFR Parts 148–150).

—Recreational boating regulation. 46 U.S.C. 1451 (33 CFR Part 173, *et seq.*).

• Maritime Administration (port, coastal, and ocean pollution; marine pollution from ships; destruction/treatment of wastes at sea):

—Merchant vessels: polluting, discharging and dumping. 46 U.S.C. 1101, *et seq.*

—Port operations: polluting, discharging and dumping. 46 U.S.C. 867.

Advisory Council on Historic Preservation (effects of activities in coastal and marine areas on historic properties).

Environmental Protection Agency (marine discharges, oil spills, ocean dumping; environmental effects; ocean disposal of radioactive waste and hazardous materials):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Federal Maritime Commission (vessel certification with respect to liability for water pollution):

—Certificates of financial responsibility for water pollution. 33 U.S.C. 1321 (46 CFR Part 542); 42 U.S.C. 1643 (46 CFR Part 543); 43 U.S.C. 1815 (46 CFR Part 544).

Marine Mammal Commission (conservation and protection of marine mammals and their habitat):

—Consultation and oversight responsibility for activities affecting marine mammals. 16 U.S.C. 1402.

—Review of permit applications for taking and importation of marine mammals and marine mammal products. 16 U.S.C. 1371(a).

National Aeronautics and Space Administration (advanced technology for remote sensing in oceanography and marine resource conservation).

Nuclear Regulatory Commission (radioactive substances in the marine environment).

C. Water Resources Development and Regulation

Department of Agriculture

• Agricultural Stabilization and Conservation Service (water resource conservation; Water Bank program).

• Animal and Plant Health Inspection Service (control of exotic noxious weeds in waterways and streams).

• Forest Service (effects of water resource developments on National Forests and Grasslands):

—Water resource development in wilderness areas. (36 CFR Part 293.15).

—Consultations regarding water resource development and effects on rivers established as units of the National Wild and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

• Agricultural Research Service (research on soil and water conservation).

• Soil Conservation Service (watershed protection; river basin studies, flood prevention, and habitat analysis):

—Assistance to State and local sponsors, through a Small Watershed Program grant, for watershed, reservoir, flood-control and drainage projects. 16 U.S.C. 1001, *et seq.;* 33 U.S.C. 701–1 and 42 U.S.C. 1962, *et seq.* (7 CFR Parts 620, *et seq.;* and 660).

Department of Commerce

• National Oceanic and Atmospheric Administration (estuarine and anadromous fish habitat; review of Federal permits affecting water resources and management; protection of coastal and marine resources; river and flood forecasting).

Department of Defense

• Army Corps of Engineers (water resource development and regulation activities in water of the United States):

—Rules governing work or structures in or affecting navigable waters of the United States. 33 U.S.C. 401, 403, and 419 (33 CFR Part 322).

—Permits for discharges of dredged or fill materials into waters of the United States. 33 U.S.C. 1344 (33 CFR Part 323).

—Guidelines controlling the discharge of dredged or fill material in waters of the United States including wetlands. (40 CFR Part 230).

—Permits for uses at Corps reservoirs managed by a lakeshore management plan. 33 U.S.C. 1251.

—Permits for use of river or harbor improvements built by United States. 33 U.S.C. 408 (33 CFR Part 320.2(e).

—For other jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Office of Policy, Safety, and Environment (effect of energy policies, programs, and projects).

Department of the Interior

• Fish and Wildlife Service (effects of water resource developments on endangered species and their critical habitats, other fish and wildlife resources, and National Wildlife Refuge and National Fish Hatchery System areas):

—Consultation regarding Federal or Federally permitted projects which affect streams and water bodies. 16 U.S.C. 661, *et seq.*

—U. S. Fish and Wildlife Service Mitigation Policy. 16 U.S.C. 661–667(e), 742(a)–754 and 1001–1009 (46 FR 7644 of Jan. 23, 1981).

—Consultation regarding Federal projects that may affect an estuarine area under the Estuarine Protection Act. 15 U.S.C. 1224.

• Geological Survey (hydrologic research; collection, analysis, and dissemination of data on quantity and quality of surface and ground water; National Water Summary).

• Bureau of Indian Affairs (effects of water resources developments on Indian lands):

—Permits, concessions, and leases on lands withdrawn or acquired in connection with Indian irrigation projects. 25 U.S.C. 390 (25 CFR Part 173).

• Bureau of Land Management (effects of water resource developments on public lands):

—Permits, leases, and easements for water control projects. 43 U.S.C. 1732(b) and 1761(a)(1) (43 CFR Part 2800).

• Bureau of Mines (effects of water resource developments and regulation on mineral resources, production and transportation).

• National Park Service (effects of water resource developments on Wild and Scenic River System, outdoor recreation areas, and National Park System areas):

—Consultations regarding water resource developments and effects on rivers established as units of the National Wild

and Scenic Rivers System and on those rivers designated for study as potential additions to that System. 16 U.S.C. 1278, *et seq.*

—Consultations about extent to which proposed recreational developments at hydroelectric projects conform to and are in accord with the State Comprehensive Outdoor Recreation Plan. 16 U.S.C. 470.

• Bureau of Reclamation (water storage and delivery projects and their effects; water policy analysis; impacts on State water management):

—Construction and operation of works and structures for storage, diversion and development of waters, including flood control, navigation and river-flow regulation and control in the 17 contiguous western States. 43 U.S.C. 391 *et seq.*

• Office of Surface Mining Reclamation and Enforcement (effects of water resource developments on surface coal mining and reclamation operations).

Department of Transportation

• Coast Guard (vessel, bridge, port, and waterway regulation and safety; navigational aids):

—Ports and waterways safety. 33 U.S.C. 1221 (33 CFR Part 160, *et seq.*).

—Construction and alterations of bridges and causeways over navigable waters. 33 U.S.C. 491, *et seq.*; 511, *et seq.*; 525, *et seq.*, and 535 (33 CFR Part 114, *et seq.*).

• Federal Highway Administration (effects of water resource developments on highways):

—Approval of Federal-aid highway and bridge projects involving navigable waters and channel changes. 23 U.S.C. 144 (23 CFR Part 650).

—Approval of toll bridge and ferry projects. 23 U.S.C. 129.

• Saint Lawrence Seaway Development Corporation (Seaway regulation):

—Construction, development, operation, and maintenance of the United States part of the Seaway. 33 U.S.C. 981–990 (33 CFR Parts 401–403).

Advisory Council on Historic Preservation (effects of water resource developments on historic properties).

Delaware River Basin Commission (management of water resources in the Delaware River basin):

—Review and approval of water resource projects. 75 Stat. 708 (18 CFR Parts 401–430).

Environmental Protection Agency (effects of water resource developments on pollution control):

—Review of permits for discharge of dredged or fill materials into waters of the United States. 33 U.S.C. 1344 (40 CFR Part 230).

—Guidelines controlling the discharge of dredged or fill material in waters of the U.S. including wetlands. (40 CFR Part 230).

—For other jurisdictional responsibilities, see PART I. B.—Water Quality.

Federal Emergency Management Agency (floodplain mapping and floodplain management; dam and levee safety; mitigation of natural hazards).

Federal Energy Regulatory Commission (effects of power projects):

—Regulation of development of water resources. 16 U.S.C. 791–825(r) (18 CFR Parts 4–25, 36, 131 and 141).

International Boundary and Water Commission, United States Section (maintenance, restoration and protection of banks of Rio Grande and Colorado River where they form the international boundary with Mexico; construction and operation of works and structures for storage and diversion of waters, including flood control on the Rio Grande and Colorado Rivers).

National Capital Planning Commission (water resource developments in Washington, D.C. area):

—Approval of taking lines and general development plans for parks in stream valleys in Maryland and Virginia tributaries to the Potomac and Anacostia Rivers. Act of May 29, 1930; 46 Stat. 432 as amended.

Susquehanna River Basin Commission (management of water resources in the Susquehanna River basin):

—Review and approval of water resource projects. 84 Stat. 1509 *et seq.* (18 CFR Parts 801–803).

Tennessee Valley Authority (water resource developments and regulation in the Tennessee Valley region):

—Construction of dams, appurtenant works, or other waterway improvement activities affecting navigation, flood control, public lands or reservations on the Tennessee River System. 16 U.S.C. 831(y–1).

D. Watershed Protection and Soil Conservation

Department of Agriculture

• Agricultural Research Service (technical aspects of water and soil conservation).

• Agricultural Stabilization and Conservation Service (soil conservation; cost-sharing farm and forest conservation programs).

• Extension Service (extension programs in agricultural conservation).

• Farmers Home Administration (effects of housing, community, and business programs, and farmer programs on soil and water conservation; conservation loan programs).

• Forest Service (soil and water conservation, and their effects on National Forests and Grasslands; forest and range soil rehabilitation):

—Emergency soil and water conservation programs. 16 U.S.C. 2202, *et seq.*

• Soil Conservation Service (soil surveys; technical assistance in areas of soil, water, and related resource conservation for landowners and landusers through several multi-functional programs):

—Grants for Watershed Protection and Flood Prevention Act activities. 16 U.S.C. 1001, *et seq.* (7 CFR Part 620, *et seq.*, and 660).

—Land conservation and land utilization program. 7 U.S.C. 1010, *et seq.*

Department of Commerce

• National Oceanic and Atmospheric Administration (weather research, river and flood forecasting).

Department of Defense

• Army Corps of Engineers (dredging, flood control, control of aquatic plants, shoreline stabilization):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

• Office of Policy, Safety, and Environment (effects of energy policies, programs and projects on watersheds).

Department of the Interior

• Fish and Wildlife Service (effects of soil erosion and watershed protection on endangered species and critical habitats, and on fish and wildlife resources in general):

—Consultation regarding small watershed projects of the Soil Conservation Service under the Watershed Protection and Flood Protection and Flood Prevention Act. 16 U.S.C. 1008.

• Geological Survey (geology and hydrology in general; National Water Summary; erosion and sedimentation; engineering geology).

• Bureau of Indian Affairs (soil conservation and watershed protection on Indian lands).

• Bureau of Land Management (watershed protection and soil conservation on public lands).

• Bureau of Mines (hydraulic impacts of mining; revegetation and reclamation after mining).

• National Park Service (watershed protection and soil conservation on National Park System lands):

—Special use permits, grazing permits, permits to collect soil, rock, water, and plant specimens. 16 U.S.C. 1, *et seq.* (36 CFR Parts 1, 2 and 7).

• Bureau of Reclamation (soil and moisture conservation; hydrology; erosion control on public lands; water storage and delivery project; water resources research; analysis of Federal role in groundwater management).

• Office of Surface Mining Reclamation and Enforcement (effects of surface coal mining and reclamation operations on erosion, aquifers and alluvial valley floors).

Department of Transportation

• Federal Highway Administration (erosion control on highway projects; vegetation management on highway rights-of-way; highway drainage problems on watersheds).

Advisory Council on Historic Preservation (effects of watershed protection activities on historic properties).

Environmental Protection Agency (watershed protection and soil conservation in relation to pollution control).

Federal Emergency Management Agency (floodplain mapping and management, mitigation of natural hazards).

Federal Energy Regulatory Commission (effects of power projects):

—Regulation of development of water resources. 16 U.S.C. 791–825(r) (18 CFR Parts 4–25, 36, 131 and 141).

National Aeronautics and Space Administration (advanced technology for remote sensing of watersheds and soils).

Tennessee Valley Authority (watershed protection and soil conservation in the Tennessee Valley region).

E. Forest, Range, and Vegetative Resources (Includes Development, Production, Harvest and Transport of These Renewable Resources)

Department of Agriculture

- Agricultural Research Service (forest and range management).
- Agricultural Stabilization and Conservation Service (renewable resource conservation programs; Forestry Incentives Program; Water Bank Program).
- Economic Research Service and Statistical Reporting Service (economic and statistical data on renewable resources).
- Extension Service (rural extension programs in renewable resource conservation and management).
- Farmers Home Administration (resource conservation and development loan programs).
- Forest Service (forest and grassland productivity in general; fire management; timber sale, free use of timber and other renewable resources, timber management activities and grazing habitat management in National Forests and Grasslands):

—Timber management. 16 U.S.C. 472, 528–531 and 1600–1614 (36 CFR Part 222).
—Grazing permits. 43 U.S.C. 1901 (36 CFR Part 222).
—Management and disposal of wild free-roaming horses and burros. 16 U.S.C. 1331–1340 (36 CFR Part 222, Subpart B).

- Soil Conservation Service (watershed resources protection; soil conservation technology).

Department of Commerce

- National Oceanic and Atmospheric Administration (coastal and marine resources management and development).

Department of Defense

- Army Corps of Engineers (effects of activities in the waters of the U.S. on renewable resources):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Energy

- Bonneville Power Administration (renewable resource development in the Pacific Northwest):

—Regional planning and conservation. 16 U.S.C. 839, *et seq.*

Department of the Interior

- Fish and Wildlife Service (effects of agriculture, forestry, and other renewable resource activities on endangered species and their critical habitats, National Wildlife Refuges and National Fish Hatchery systems, and other fish and wildlife resources).
- Geological Survey (effects of renewable resource activities on water resources and erosion; remote sensing of vegetation).
- Bureau of Indian Affairs (forest, range, and vegetative resources on Indian lands):

—Permits for grazing on Indian lands and on Federal lands under BIA jurisdiction. 5 U.S.C. 301; 25 U.S.C. 179, 345, 380, 393–394, 397, 402–403 and 413 (25 CFR Parts 166–168).
—Sale of timber from tribal and allotted lands. 25 U.S.C. 406–407, 413 and 466 (25 CFR Part 163).
—Permits, concessions, and leases on lands withdrawn or acquired in connection with Indian irrigation projects. 25 U.S.C. 390 (25 CFR Part 173).
—Leases for farming and other uses on Federal lands under BIA jurisdiction. 5 U.S.C. 301; 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).

- Bureau of Land Management (forest, range and vegetative resources on public lands):

—Permits for use of rangelands. 43 U.S.C. 315 (43 CFR Group 4100).
—Sale by contract of timber and other forest products. 30 U.S.C. 601, *et seq.*; 43 U.S.C. 315, 423, and 118(a) (43 CFR Group 5400).
—Permits for free use of timber. 16 U.S.C. 604, *et seq.*; 30 U.S.C. 189; 48 U.S.C. 423 (43 CFR Part 5510).
—Management and control of wild free-roaming horses and burros and agreements for their adoption. 16 U.S.C. 1331–1340 (43 CFR Group 4700).

- National Park Service (effects of forest, range, and other vegetative resource activities on historical and recreational values and on National Park System areas):

—Permits for farming and grazing. 16 U.S.C. Chapter 1, *et seq.* (36 CFR Parts 1, 2 and 7).

- Bureau of Reclamation (water storage and delivery projects and irrigation projects in relation to forest, range, and other vegetative resource activities; evaluation of water policy alternatives):

—Sale of farm units on Federal irrigation projects (statutory authority appears in individual project authorizations).

- Office of Surface Mining Reclamation and Enforcement (effects of surface coal mining and reclamation operations on renewable resources):

—Protection of prime farmlands during surface coal mining and reclamation operations. 30 U.S.C. 1265 (30 CFR Parts 785.17 and 823).

Department of Transportation

- Federal Highway Administration (development of forest haul and access roads, effects of highway projects on forest, range, and other vegetative resources).

Advisory Council on Historic Preservation (effects of renewable resource activities on historic properties).

Environmental Protection Agency (effects of pollution, pesticide, and other environmental quality controls on forest, range, and other vegetative resources).

Interstate Commerce Commission (freight rates for renewable resources).

Tennessee Valley Authority (effects of hydro-electric and other power developments on forest, range, and other vegetative resources; biomass production and use).

F. Fish and Wildlife

Department of Agriculture

- Agricultural Research Service (basic and applied research in animal and plant protection).
- Agricultural Stabilization and Conservation Service (fish and wildlife in relation to agricultural conservation and the Water Bank Program).
- Animal and Plant Health Inspection Service (animal and plant health in general; control of pests and diseases):

—Prevention of importation or exportation of diseased livestock or poultry. 21 U.S.C. 102–105, 111 and 132(a)–134(f).

- Farmers Home Administration (effects of farm housing, community, and business programs on fish and wildlife; conservation loan programs).
- Forest Service (fish and wildlife habitat management in National Forests and Grasslands; use of fire in habitat management):

—Fish and wildlife management (36 CFR Part 219.19).
—Management and disposal of wild free-roaming horses and burros. 16 U.S.C. 1331–1340 (36 CFR Part 222, Subpart B).
—Permits for hunting and fishing in refuge areas. 16 U.S.C. 551 and 683.

- Soil Conservation Service (fish and wildlife habitat, fish ponds, and raceways):

—Assistance to State and local sponsors, through a Small Watershed Program grant, for reservoir developments and stream modification projects including specific fish and wildlife habitat improvements. 16 U.S.C. 1001, *et seq.*, and 33 U.S.C. 701–1.

Department of Commerce

- National Oceanic and Atmospheric Administration (endangered species and critical habitats; coastal fish and wildlife management and protection):

—Approval and funding of State coastal zone management programs. 16 U.S.C. 1451, *et seq.* (15 CFR Parts 923 and 930).
—For other jurisdictional responsibilities, see PART IV. B.—Marine Resources.

Department of Defense

- Army Corps of Engineers (fish and wildlife mitigation measures at public works and navigable waterway projects, dredge and fill permits):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

- Department of the Air Force (bird/aircraft strike hazard reduction).

Department of Energy

- Bonneville Power Administration (fish and wildlife management and enhancement on power projects in the Pacific Northwest):

—Regional planning and conservation. 16 U.S.C. 839, *et seq.*

Department of the Interior

- Fish and Wildlife Service (endangered species and their critical habitats; management of effects on fish and wildlife in general):

—Permits to take bald and golden eagles for scientific, religious and other purposes. 16 U.S.C. 668(a) (50 CFR Part 22).
—Permits for the taking and importation of marine mammals. 16 U.S.C. 1361, *et seq.* (50 CFR Part 18).
—Permits to export/import and to take for scientific and other purposes endangered or threatened wildlife and plants. 16 U.S.C. 1531, *et seq.* (50 CFR Part 17).
—Permits for the importation of injurious mammals, birds, fish and other wildlife. 18 U.S.C. 42–44 (40 CFR Part 16.22).
—Permits for export/import and interstate transportation of wildlife. 18 U.S.C. 42, *et seq.* (50 CFR Part 14).
—Permits for the banding and marking of migratory birds. 16 U.S.C. 703–711 (50 CFR Part 21.22).
—Consultations regarding Federal projects that may affect an estuarine area. 15 U.S.C. 1224.
—Permits to perform taxidermy services on migratory birds, nests and eggs for commercial uses. 16 U.S.C. 704 (50 CFR Part 21.24).
—Permits for special purpose uses of migratory birds. 16 U.S.C. 701, *et seq.* (50 CFR Part 21.27).
—Certificates or permits of exception to Convention on International Trade in Endangered Species. 16 U.S.C. 1531–1543 (50 CFR Part 23).
—Consultations regarding projects which may effect any threatened or endangered species or its critical habitats. 16 U.S.C. 1531, *et seq.* (50 CFR Part 402).
—Determination of critical habitats for endangered and threatened species of fish, wildlife, and plants. 16 U.S.C. 1531, *et seq.* (50 CFR Parts 17, 402 and 424).
—Endangered species exemption process. 16 U.S.C. 1531, *et seq.* (50 CFR Parts 450–453).
—Consultation regarding Federal or federally permitted projects which affect fish and wildlife resources under the Fish and Wildlife Coordination Act. 16 U.S.C. 661, *et seq.*
—U.S. Fish and Wildlife Service Mitigation Policy. 16 U.S.C. 661–667(e), 742(a)–754 and 1001–1009 (see 46 FR 7644 of Jan. 23, 1981).
—Restoration and enhancement of anadromous fishery resources through grants for fish ladders, new anadromous fish hatcheries, new fishways, etc. 16 U.S.C. 742(a)–742(j) (50 CFR Part 401).
—Improvement of sport fishery resources through grants to States under the Dingell-Johnson (D–J) Program. 16 U.S.C. 777–777(k) (50 CFR Part 80).
—Restoration and enhancement of wildlife populations and resources through grants to States under the Pittman-Robertson (P–R) Program. 16 U.S.C. 669, *et seq.* (50 CFR Part 80).
—Approval of conversion of use for State lands acquired, developed or improved with grants under the (1) Pittman-Robertson Act, (2) Dingell-Johnson Act, (3) Endangered Species Act and/or (4) Anadromous Fish Conservation Act. For (1)—16 U.S.C. 669 (50 CFR Parts 80.4 and 80.14); for (2)—16 U.S.C. 777 (50 CFR Parts 80.4 and 80.14); (3)—16 U.S.C. 1535; and for (4)—16 U.S.C. 757 (a) and (b).
—Land acquisition, management, and other activities for endangered and threatened species through grants to States. 16 U.S.C. 1531–1543 (50 CFR Part 81).
—Consultation concerning the protection of fish and wildlife refuges which may be impacted by transportation projects. 49 U.S.C. 303.

• Geological Survey (water quality and quantity in relation to fish and wildlife resources).

• Bureau of Indian Affairs (fish and wildlife resource management on Indian lands; off-reservation treaty fishing).

• Bureau of Land Management (fish and wildlife management on public lands; wild horses and burros; endangered species and raptors; effects on fish and wildlife of power lines and other major projects crossing public lands):

—Management and disposal of wild free-roaming horses and burros. 16 U.S.C. 1331–1340 (43 CFR Part 4700).

• National Park Service (fishing, hunting and other outdoor recreational pursuits, fish and wildlife management in National Park System areas):

—Permits for collecting animal specimens from National Park System areas. 16 U.S.C. 1, *et seq.* (36 CFR Part 2).
—Licenses and permits for sport or commercial fishing in certain National Park System areas. (36 CFR Part 2).
—Disposition of surplus animals from National Park System areas. (36 CFR Part 10).

• Bureau of Reclamation (fish and wildlife management on water storage and delivery projects; hunting and fishing on project lands; mitigation measures; limnology).

• Office of Surface Mining Reclamation and Enforcement (effects of surface mining and reclamation operations on fish and wildlife).

Department of Health and Human Services

• Public Health Service: Centers for Disease Control (fish and wildlife in relation to human health); Food and Drug Administration (contamination of fish and shellfish with toxics).

Department of State (international issues concerning fish and wildlife, including migratory birds and marine mammals).

Department of Transportation

• Office of the Secretary (general effects of transportation projects on fish and wildlife refuges):

—Approval of transportation programs or projects that require the use of or have a significant impact on wildlife and waterfowl refuges. 49 U.S.C. 303.

• Federal Highway Administration (effects of highway projects on fish and wildlife habitat, and wildlife and waterfowl refuges):

—Preservation of park and recreation areas, and wildlife and waterfowl refuges: 23 U.S.C. 138 (23 CFR Part 771).

• Federal Aviation Administration (bird-aircraft strike hazard reduction).

• Coast Guard (enforcement of laws affecting Fishery Management Zones).

Environmental Protection Agency (effects of pollution control and water quality on fish and wildlife).

Marine Mammal Commission (conservation and protection of marine mammals and their habitat):

—Consultation and oversight responsibility for activities affecting marine mammals. 16 U.S.C. 1402.
—Review of permit applications for taking and importation of marine mammals and marine mammal products. 16 U.S.C. 1371(a).

National Science Foundation (conservation of antarctic animals, plants, and ecosystems):

—Permits for the taking or collecting of Antarctic animals and plants, and for entry into certain designated areas. 16 U.S.C. 2401, *et seq.* (45 CFR Part 670)

Tennessee Valley Authority (fish and wildlife management and conservation in the Tennessee Valley).

G. Non-Energy Mineral Resources

Department of Agriculture

• Forest Service (mineral resources development in National Forests and Grasslands; reclamation of disturbed lands):

—Permits and rights-of-way on National Forest System lands. 16 U.S.C. 471–472, 478, 495, 497–498, 525, 528, 531–538, 551, 572 and 580 (36 CFR Parts 212, 251 and 261).
—Surface use of public domain lands under U.S. mining laws. 16 U.S.C. 478 and 551 (36 CFR Part 228).
—Mineral development on acquired lands. For solid (hardrock) minerals—16 U.S.C. 520 (43 CFR Part 3500); for phosphate, sodium, potassium and sulphur—30 U.S.C. 351, *et seq.*

• Soil Conservation Service (abandoned mine land and mine reclamation).

Department of Commerce

• National Oceanic and Atmospheric Administration (air and water pollution from mining; offshore and coastal mining; port planning; management and protection of coastal and marine resources):

—Approval of licenses for deep seabed hard mineral exploration and development. 30 U.S.C. 1401, *et seq.* (15 CFR Part 970).

Department of Defense

• Army Corps of Engineers (effects of mineral development on navigable waters):

—For jurisdictional responsibilities, see PART I. B.—Water Quality.

Department of Housing and Urban Development

• Office of Housing (subsidence from mining operations and soil factors related to housing).

Department of the Interior

• Fish and Wildlife Service (effects of mineral development on endangered species and their critical habitats, National Wildlife Refuge and National Fish Hatchery Systems, and other fish and wildlife resources):

—Easements/permits for transmission line, pipelines and other rights-of-way across National Wildlife Refuge and National Fish Hatchery System land. For refuges—16 U.S.C. 668 dd, *et seq.*; for hatcheries—43

U.S.C. 931 c and (50 CFR Parts 25.41 and 29.21).
—Permits for rights-of-way across National Wildlife Monuments (Alaska only). 16 U.S.C. 432, 460(k-3) and 742(f) (50 CFR Part 96).

• Geological Survey (mineral resources in general, with emphasis on strategic and critical minerals; mineral resources assessment on public lands).

• Bureau of Indian Affairs (effects on Indian lands of mineral operations):
—Leases and permits on Indian lands. 25 U.S.C. 380, 393–395, 397, 402–403, 413, 415, 477 and 635 (25 CFR Part 162).
—Rights-of-way over Indian lands. 25 U.S.C. 311–321 and 323–328 (25 CFR Part 169).
—Mining leases on Indian lands. 25 U.S.C. 356, 396, 476–477 and 509 (25 CFR Parts 211–215 and 226–227).
—Permits for surface exploration and reclamation. 25 U.S.C. 355, 396, 473 and 501–502 (25 CFR Part 216).

• Bureau of Land Management (mineral development on public lands):
—Easements/leases/permits for use, occupancy and development of public lands. 43 U.S.C. 1732 (43 CFR Subchapters 2000 and 3000).
—Exploration licenses for leasable minerals on unleased land. 30 U.S.C. 181, *et seq.* and 201(b) (43 CFR Parts 3400 and 3480).
—Leases for phosphate, sodium, potassium, etc., exploration and mining. 30 U.S.C. 181, *et seq.* (43 CFR Group 3500 and Part 3570).
—Permits for sand, stone and gravel. 30 U.S.C. 601 and 602.
—Leases, permits and licenses for mining in Wild and Scenic River System areas. 16 U.S.C. 1280 (each area has special Federal Regulations).
—Concurrence for placer mining use of the surface of public lands withdrawn or reserved for power development or for a power site. 30 U.S.C. 621 (43 CFR Part 3730).
—Leases and permits for sulfur in Louisiana and New Mexico. 30 U.S.C. 271, *et seq.* (43 CFR Group 3500).
—Easements/permits for rights-of-way. 30 U.S.C. 185 and 43 U.S.C. 1701, *et seq.* (43 CFR Parts 2800–2887).

• Minerals Management Service (mineral development on the outer continental shelf):
—Leases for minerals on the outer continental shelf. 43 U.S.C. 1331–1343 (30 CFR Parts 250, 251, 252 and 256).
—Permits for exploration and development activities on Federal leases on the outer continental shelf. 43 U.S.C. 1331, *et seq.* (30 CFR Parts 250 and 251).
—Permits for geological and geophysical exploration on the outer continental shelf. 43 U.S.C. 1334 (30 CFR Part 251).
—Approval of geological geophysical exploration plans. 43 U.S.C. 1340 (30 CFR Part 251).
—Permits for artificial islands, platforms, and other fixed structures on any Federal or State outer continental shelf lease. 43 U.S.C. 1334–1335 (30 CFR 250.18 and 250.19).

• Bureau of Mines (mining, milling, and mineral land assessments):
—Agreements to dispose of helium of the United States. 43 U.S.C. 1201 and 30 U.S.C. 180, *et seq.* (43 CFR Part 16).

• National Park Service (effects of mineral development on public park, recreation and cultural/historical resources and values, and on National Park System areas):
—Permits, leases and easements for rights-of-way, grazing and other uses on National Park System areas. 16 U.S.C. 1, *et seq.* (36 CFR Parts 9 and 14).
—Leases, permits and licenses for mining on National Park System lands involved in National Wild and Scenic Rivers System. 16 U.S.C. 1280.
—Access permits for mining activity within the National Park System. 16 U.S.C. 1902 and 1908; 30 U.S.C. 21, *et seq.* (36 CFR Part 9).

• Bureau of Reclamation (effects of mineral development on water storage and delivery projects):
—Easements/permits for access, pipeline, and other rights-of-way. 43 U.S.C. 3871.

Department of Labor

• Mining Safety and Health Administration (safety and health issues in mining operations).

• Occupational Safety and Health Administration (general worker safety and health issues).

Department of State (international aspects of mineral development):
—Facilities for export/import of minerals. Executive Order 11423.

Department of Transportation

• Coast Guard (vessel transport of minerals):
—Ports and waterways safety. 33 U.S.C. 1221 (33 CFR Part 160, *et seq.*).

• Maritime Administration (dry bulk shipping of coal and other minerals in the inland waterways, domestic ocean, Great Lakes, and U.S. foreign trades).

Advisory Council on Historic Preservation (effects of mineral development activities on historic properties).

Environmental Protection Agency (pollution control and other environmental effects of minerals development):
—For jurisdictional responsibilities, see PART I—POLLUTION CONTROL.

H. Natural Resource Conservation

Department of Agriculture

• Agricultural Stabilization and Conservation Service (natural resource conservation programs; Forestry Incentives Program; Water Bank Program).

• Agricultural Research Service (research in technical aspects of soil and water conservation and forest and range management).

• Extension Service (rural area extension programs in conservation).

• Farmers Home Administration (farmer loan programs related to natural resource conservations).

• Forest Service (conservation of forest and rangeland resources; use of fire as a management tool).

• Soil Conservation Service (soil, water, and related resources conservation technology):
—Land conservation and utilization program. 7 U.S.C. 1010, *et seq.*
—Watershed protection, conservation and utilization of land and water resources. 16 U.S.C. 1001, *et seq.*
—Soil and water resources conservation. 16 U.S.C. 2001, *et seq.*

Department of Commerce

• National Oceanic and Atmospheric Administration (coastal and marine resources management and protection; national estuarine and marine sanctuaries; coastal energy facility planning and siting in State coastal zone management programs).

Department of Energy

• Bonneville Power Administration (resource conservation in the Pacific Northwest):
—Regional planning and conservation. 16 U.S.C. 839, *et seq.*

• Office of Policy, Safety, and Environment (general energy policies, programs and projects in relation to conservation).

Department of the Interior

• Fish and Wildlife Service (conservation of, and effects of conservation on, endangered species and their critical habitats, and other fish and wildlife resources; conservation in National Wildlife Refuge and National Fish Hatchery System areas).

• Geological Survey (conservation of water and mineral resources).

• Bureau of Indian Affairs (conservation of Indian lands).

• Bureau of Land Management (conservation on public lands).

• Minerals Management Service (conservation in relation to minerals management activities on the outer continental shelf).

• Bureau of Mines (conservation of mineral resources and land, air, and water resources associated with mineral deposits).

• National Park Service (conservation in relation to urban parks, outdoor recreation, historical and cultural resources, National Trails Systems, Wild and Scenic Rivers System, and the National Park System).

• Bureau of Reclamation (conservation in relation to water storage and delivery projects, water resources, and desalinization; Soil and Moisture Conservation Program; development of water policy options; National Water Summary).

• Office of Surface Mining Reclamation and Enforcement (conservation in relation to surface coal mining and reclamation operations).

Environmental Protection Agency (resource recovery from wastes; pollution and other environmental controls):
—Solid Waste Disposal Act permits. 42 U.S.C. 3251 *et seq.*, and 6901, *et seq.* (40 CFR Parts 122, 123 and 124).
—Guidelines on solid waste collection and storage for Federal assistance. 42 U.S.C. 6907 (40 CFR Part 243).

—Resource recovery facilities. 42 U.S.C. 6907 (40 CFR Part 245).
—Materials recovery and solid waste management guidelines for source separation. 42 U.S.C. 6907 (40 CFR Part 246).
—Solid waste management guidelines for beverage containers. 42 U.S.C. 6907 (40 CFR Part 244).

Federal Energy Regulatory Commission (relation of conservation to hydroelectric power development and natural gas facilities).

National Science Foundation (conservation of antarctic animals, plants, and ecosystems):
—Permits for the taking or collecting of antarctic animals and plants, and for entry into certain designated areas. 16 U.S.C. 2401, *et seq.* (45 CFR Part 670).

Tennessee Valley Authority (soil and other natural resource conservation in the Tennessee Valley region).

Appendix III—Federal and Federal-State Agency Offices for Receiving and Commenting on Other Agencies' Environmental Documents

DEPARTMENTS

Department of Agriculture

Send request to the Departmental office for comments on environmental documents about legislation, regulations, national program proposals or other major policy issues. For other comment requests, send to the listed office of the departmental components.

Assistant Secretary for Natural Resources and Environment, Department of Agriculture; Attn: Executive Secretary, Natural Resources and Environment Committee; Room 242-W, Administration Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250-0001. (202) 447-5166.

Department of Agriculture Components

Agricultural Research Service: Deputy Administrator, National Program Staff, Agricultural Research Service, Department of Agriculture, Room 125, Bldg. 005, Agricultural Research Center-West, Beltsville, MD 20705-2350. (301) 344-3084.

Agricultural Stabilization and Conservation Service: Chief, Planning and Evaluation Branch, Conservation and Environmental Protection Division, Agricultural Stabilization and Conservation Service, Department of Agriculture, Room 4714, South Agriculture Bldg., P.O. Box 2415; Wash., D.C. 20013-2415. (202) 447-3264.

Animal and Plant Health Inspection Service: Environmental Coordinator, Animal and Plant Health Inspection Service, Department of Agriculture, Room 600, Federal Bldg., 6505 Belcrest Road, Hyattsville, MD 20782-2058. (301) 436-8896.

Economic Research Service: Director, Natural Resource Economics Division, Economic Research Service, Department of Agriculture, Room 412, GHI Bldg., 500 12th St., SW, Wash., D.C. 20250-0001. (202) 447-8239.

Extension Service: Deputy Administrator, Natural Resources and Rural Development, Extension Service, Department of Agriculture, Room 3909, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250-0001. (202) 447-7947.

Farmers Home Administration: Environmental Protection Specialist, Program Support Staff, Farmers Home Administration, Department of Agriculture, Room 6309, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250-0001. (202) 382-9619.

Food Safety and Inspection Service: Director, Regulations Office, Food Safety and Inspection Service, Department of Agriculture, Room 2940, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250-0001. (202) 447-3317.

Rural Electrification Administration: Environmental Policy Specialist, Engineering Standards Division, Rural Electrification Administration, Department of Agriculture, Room 1257, South Agriculture Bldg., 14th St. and Independence Ave., SW, Wash., D.C. 20250-0001. (202) 382-0097.

Soil Conservation Service: National Environmental Coordinator, Environmental Activities Branch, Ecological Sciences Division, Soil Conservation Service, Department of Agriculture, Room 6155, South Agriculture Bldg., P.O. Box 2890, Wash., D.C. 20013-2890. (202) 447-4912.

U.S. Forest Service

For actions of national or inter-regional scope, send comment request and documents to Wash., D.C. For actions of a regional, State or local scope, send comment request and documents to the Regional Forester and Area Director in whose area the proposed action (e.g., highway or water resource construction project) will take place.

Director, Environmental Coordination Staff, Forest Service, Department of Agriculture, Room 4204, South Agriculture Bldg., P.O. Box 2417, Wash., D.C. 20013-2417. (202) 447-4708.

Region 1, Northern Region (northern ID, MT, ND, and northwest SD): Regional Forester, Northern Region, Forest Service, USDA, Federal Bldg., P.O. Box 7669, Missoula, MT 59807-7669. (406) 329-3011; (FTS) 585-3316.

Region 2, Rocky Mountain Region (CO, KS, NE, SD, and eastern WY): Regional Forester, Rocky Mountain Region, Forest Service, USDA, 11177 W. 8th Ave., Box 25127, Lakewood, CO 80225-0127. (303) 234-3711.

Region 3, Southwestern Region (AZ, and NM): Regional Forester, Southwestern Region, Forest Service, USDA, Federal Bldg., 517 Gold Ave., SW, Albuquerque, NM 87102-3156. (505) 476-3300.

Region 4, Intermountain Region (southern ID, NV, UT, and western WY): Regional Forester, Intermountain Region, Forest Service, USDA, Federal Bldg., 324 25th St., Ogden, UT 84401-2310. (801) 625-5605; (FTS) 586-5605.

Region 5, Pacific Southwest Region (CA and HI): Regional Forester, Pacific Southwest Region, Forest Service, USDA, 630 Sansome St., San Francisco, CA 94111-2206. (415) 556-4310.

Region 6, Pacific Northwest Region (OR and WA): Regional Forester, Pacific Northwest Region, Forest Service, USDA, 319 SW Pine St., P.O. Box 3623, Portland, OR 97208-3623. (503) 211-3625; (FTS) 423-3625.

Region 8, Southern Region (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, PR, and VI): Regional Forester, Southern Region, Forest Service, USDA, 1720 Peachtree Road, NW, Atlanta, GA 30367-9101. (404) 881-4177; (FTS) 257-4177.

Region 9, Eastern Region (CT, DE, IA, IL, IN, MA, MD, ME, MI, MN, MO, NH, NJ, NY, OH, PA, RI, VT, WI, and WV): Regional Forester, Eastern Region, Forest Service, USDA, Henry S. Reuss Federal Plaza, Suite 500, 310 W. Wisconsin Ave., Milwaukee, WI 53203-2211. (414) 291-3693; (FTS) 362-3600.

Region 10, Alaska Region (AK): Regional Forester, Alaska Region, Forest Service, USDA, Federal Office Building, Box 1628, Juneau, AK 99802-1628. (907) 586-7263.

Northeastern State and Private Forestry Area (Same as Region 9, above): Director, Northeastern State and Private Forestry Area, Forest Service, USDA, 370 Reed Road, Broomall, PA 19008-4086. (215) 461-3125; (FTS) 489-3125.

(In Regions 1 through 6, 8 and 10, State and private activities of the Forest Service are handled at regional offices.)

Department of Commerce

Chief, Ecology and Conservation Division, Office of Policy and Planning, National Oceanic and Atmospheric Administration, Department of Commerce, Room H6111, Herbert Hoover Bldg., 14th St. and Constitution Ave., NW, Wash., D.C. 20230-0001. (202) 377-5181.

Department of Defense

Send comment request and documents about legislation, regulations, national program proposals or other major policy issues to Department of Defense, except for the Corps of Engineers. For other comment requests, send to the listed office of the departmental components.

Director, Environmental Policy, Office of the Assistant Secretary of Defense (Manpower, Installations and Statistics), Department of Defense, Room 3D833, The Pentagon, Wash., D.C. 20301-0001. (202) 695-7820.

Department of Defense Components

Defense Logistics Agency: Staff Director, Office of Installation Services and Environmental Protection, Defense Logistics Agency, Department of Defense, Cameron Station, Room 4D446, Alexandria, VA 22304-6100. (202) 274-6124.

Department of the Air Force: Deputy for Environment and Safety; Office of the Deputy Assistant Secretary for Installations, Environment and Safety; Department of the Air Force, Room 4C916, The Pentagon, Wash., D.C. 20330-0001. (202) 697-9297.

Department of the Army: Chief, Army Environmental Office; Attn: HQDA (DAEN-ZCE); Department of the Army, Room 1E676, The Pentagon, Wash., D.C. 20310-2600. (202) 694-3434.

Department of the Navy: Director, Environmental Protection and Occupational Safety and Health Division (OP-453), Office of the Chief of Naval Operations, Department of the Navy, Bldg. 200, Room S-3, Washington Navy Yard, Wash., D.C. 20374-0001. (202) 433-2426.

U.S. Marine Corps: Head, Land Resources and Environmental Branch, Code: LFL, U.S. Marine Corps, Commonwealth Bldg., Room 614, 1300 Wilson Blvd., Arlington, VA. (202) 694–9237/38. MAILING ADDRESS: Commandant, U.S. Marine Corps; ATTN: Land Resources and Environmental Branch, Code: LFL; Wash., D.C. 20380–0001.

Corps of Engineers

Send comment request and documents about legislation, regulations, national program proposals or other major policy issues to:

Assistant Director of Civil Works, Environmental Programs (DAEN–CWZ–P), Office of the Chief of Engineers, Room 7233, Pulaski Bldg., 20 Massachusetts Ave., NW, Wash., D.C. 20314–1000. (202) 272–0103.

Send comment request and documents for other Federal actions to the Corps' District Engineer or the Division Engineer, in the case of Pacific Ocean and New England Division, in whose area the action will take place. If the action involves more than one Corps District, increase number of copies accordingly but send all to District Engineer primarily involved. For a map showing the Corps' Division and District Boundaries, contact the Director of Civil Works cited above.

- Division Engineer, U.S. Army Corps of Engineers, New England Division, 424 Trapelo Rd., Waltham, MA 02254–9194. (617) 647–8220; (FTS) 839–7220.
- District Engineer, U.S. Army Corps of Engineers, New York District, 26 Federal Plaza, New York, NY 10278–0022. (212) 264–0100.
- District Engineer, U.S. Army Corps of Engineers, Philadephia District, U.S. Custom House, 2nd and Chestnut Sts., Philadelphia, PA 19106–2912. (215) 597–4848.
- District Engineer, U.S. Army Corps of Engineers, Baltimore District, P.O. Box 1715, Baltimore MD 21203–1715. (301) 962–4545; (FTS) 922–4545.
- District Engineer, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510–1096. (804) 441–3601; (FTS) 827–3601.
- District Engineer, U.S. Army Corps of Engineers, Wilmington District, P.O. Box 1890, Wilmington, NC 28402–1890. (919) 343–4501; (FTS) 671–4501.
- District Engineer, U.S. Army Corps of Engineers, Charleston District, P.O. Box 919, Charleston, SC 29402–0919. (803) 724–4229; (FTS) 677–4229.
- District Engineer, U.S. Army Corps of Engineers, Savannah District, P.O. Box 889, Savannah, GA 31402–0889. (912) 944–5224; (FTS) 248–5224.
- District Engineer, U.S. Army Corps of Engineers, Jacksonville District, P.O. Box 4970, Jacksonville, FL 32201–4970. (904). 791–2241; (FTS) 946–2241.
- District Engineer, U.S. Army Corps of Engineers, Mobile District, P.O. Box 2288, Mobile, AL 26628–0001. (205) 690–2511; (FTS) 537–2511.
- District Engineer, U.S. Army Corps of Engineers, Vicksburg District, P.O. Box 60, Vicksburg, MS 39180–0060. (601) 634–5010; (FTS) 542–5010.
- District Engineer, U.S. Army Corps of Engineers, New Orleans District, P.O. Box 60267, New Orleans, LA 70160–0267. (504) 838–2204.
- District Engineer, U.S. Army Corps of Engineers, Memphis District, B–314 Clifford Davis Federal Bldg., Memphis, TN 38103–1816. (901) 521–3221; (FTS) 222–3221.
- District Engineer, U.S. Army Corps of Engineers, St. Louis District, 210 Tucker Blvd. North, St. Louis, MO 63101–1947. (314) 263–5660; (FTS) 273–5660.
- District Engineer, U.S. Army Corps of Engineers, Nashville District, P.O. Box 1070, Nashville, TN 37202–1070. (615) 251–5626; (FTS) 852–5626.
- District Engineer, U.S. Army Corps of Engineers, Louisville District, P.O. Box 59, Louisville, KY 40201–0059. (502) 582–5601; (FTS) 352–5601.
- District Engineer, U.S. Army Corps of Engineers, Huntington District, 502 8th St., Huntington, WV 25701–2070. (304) 529–5395; (FTS) 942–5395.
- District Engineer, U.S. Army Corps of Engineers, Pittsburgh District, William S. Moorehead Federal Bldg., 1000 Liberty Ave., Pittsburgh, PA 15222–4004. (412) 644–6800; (FTS) 722–6800.
- District Engineer, U.S. Army Corps of Engineers, Buffalo District, 1776 Niagara St. Buffalo, NY 14207–3199. (716) 876–5454, x2200; (FTS) 473–2200.
- District Engineer, U.S. Army Corps of Engineers, Chicago District, 219 S. Dearborn St., Chicago, IL 60604–1702. (312) 353–6400.
- District Engineer, U.S. Army Corps of Engineers, Rock Island District, Clock Tower Bldg., P.O. Box 2004, Rock Island, IL 61204–2004. (309) 788–6361, x6224; (FTS) 386–6011.
- District Engineer, U.S. Army Corps of Engineers, Detroit District, P.O. Box 1027, Detroit, MI 48231–1027. (313) 226–6762.
- District Engineer, U.S. Army Corps of Engineers, St. Paul District, 1135 USPO & Custom House, St. Paul, MN 55101–1479. (612) 725–7501.
- District Engineer, U.S. Army Corps of Engineers, Kansas City District, 700 Federal Bldg., 601 E. 12th St., Kansas City, MO 64106–2828. (816) 374–3201; (FTS) 758–3201.
- District Engineer, U.S. Army Corps of Engineers, Omaha District, 6014 USPO and Courthouse, Omaha, NE 68102–4910. (402) 221–3900; (FTS) 864–3900.
- District Engineer, U.S. Army Corps of Engineers, Little Rock District, P.O. Box 867, Little Rock, AR 72203–0867. (501) 378–5531; (FTS) 740–5531.
- District Engineer, U.S. Army Corps of Engineers, Tulsa District, P.O. Box 61, Tulsa, OK 74121–0061. (918) 581–7311; (FTS) 745–7311.
- District Engineer, U.S. Army Corps of Engineers, Galveston District, P.O. Box 1229, Galveston, TX 77553–1229. (409) 766–3006; (FTS) 527–6006.
- District Engineer, U.S. Army Corps of Engineers, Fort Worth District, P.O. Box 17300, Fort Worth, TX 76102–0300. (817) 334–2300.
- District Engineer, U.S. Army Corps of Engineers, Albuquerque District, P.O. Box 1580, Albuquerque, NM 87103–1580. (505) 766–2732; (FTS) 474–2732.
- District Engineer, U.S. Army Corps of Engineers, Los Angeles District, P.O. Box 2711, Los Angeles, CA 90053–2325. (213) 688–5300; (FTS) 798–5300.
- District Engineer, U.S. Army Corps of Engineers, San Francisco District, 211 Main Street, San Francisco, CA 94105–1905. (415) 974–0358; (FTS) 454–0358.
- District Engineer, U.S. Army Corps of Engineers, Sacramento District, 650 Capitol Mall, Sacramento, CA 95814–4708. (916) 440–2232; (FTS) 448–2232.
- District Engineer, U.S. Army Corps of Engineers, Portland District, P.O. Box 2946, Portland, OR 97208–2946. (503) 221–6000; (FTS) 423–6000.
- District Engineer, U.S. Army Corps of Engineers, Walla Walla District, Bldg. 602, City-County Airport, Walla Walla, WA 99362–9265. (509) 525–6509, ext. 100; (FTS) 434–6509.
- District Engineer, U.S. Army Corps of Engineers, Seattle District, P.O. Box C–3755, Seattle, WA 98124–2255. (206) 764–3690; (FTS) 399–3690.
- District Engineer, U.S. Army Corps of Engineers, Alaska District, Pouch 898, Anchorage, AK 99506–0001. (907) 278–1132.
- Division Engineer, U.S. Army Corps of Engineers, Pacific Ocean Division, Building 230, Ft. Shafter, HA. 96858–4910. (808) 438–1500.

Department of Energy

Director, Office of Environmental Compliance (PE–25), Department of Energy, Room 4G–085, Forrestal Building, 1000 Independence Ave., SW, Wash., D.C. 20585–0001. (202) 252–4600.

Department of Health and Human Services

Departmental Environmental Officer, Office of Management Analysis and Systems, Department of Health and Human Services, Room 542 E, Hubert H. Humphrey Bldg., 200 Independence Ave., SW, Wash., D.C. 20201–0001. (202) 245–7354.

Department of Housing and Urban Development

Send comment request and documents about legislation, regulations, national program proposals and other major policy issues to Wash., D.C. Send comment request and documents about other Federal actions to the Regional Environmental Officer in whose area the action will take place.

Director, Office of Environment and Energy, Department of Housing and Urban Development, Room 7154, HUD Bldg., 451 Seventh St., SW, Wash., D.C. 20410–0001. (202) 755–7894.

Federal Region I: Regional Environmental Officer, U.S. Department of Housing and Urban Development, Bulfinch Bldg., 15 New Chardon St., Boston, MA 02114–2598. (617) 223–1620.

Federal Region II: Regional Environmental Officer, U.S. Department of Housing and Urban Development, 26 Federal Plaza, New York, NY 10278–0022. (212) 264–5806.

Federal Region III: Regional Environmental Officer, U.S. Department of Housing and Urban Development, Curtis Building, 148 S. 6th St., Philadelphia, PA 19106–3313. (215) 597–3903.

Federal Region IV: Regional Environmental Officer, U.S. Department of Housing and Urban Development, Richard B. Russell

Federal Bldg., 75 Spring St., SW, Atlanta, GA 30303–3309. (404) 221–5197; (FTS) 242–5197.

Federal Region V: Regional Environmental Officer, U.S. Department of Housing and Urban Development, 300 S. Wacker Dr., Chicago, IL 60606–6606. (312) 353–1696.

Federal Region VI: Regional Environmental Officer, U.S. Department of Housing and Urban Development, 221 W. Lancaster Ave., P.O. Box 2905, Ft. Worth, TX 76113–2905. (817) 870–5482; (FTS) 728–5482.

Federal Region VII: Regional Environmental Officer, U.S. Department of Housing and Urban Development, Professional Bldg., 1103 Grand Ave., Kansas City, MO 64106–2496. (816) 374–3192; (FTS) 758–3192.

Federal Region VIII: Regional Environmental Officer, U.S. Department of Housing and Urban Development, Executive Tower Bldg., 1405 Curtis St., Denver, CO 80202–2394. (303) 837–3102; (FTS) 327–3102.

Federal Region IX: Regional Environmental Officer, U.S. Department of Housing and Urban Development, 450 Golden Gate Ave., P.O. Box 36003, San Francisco, CA 94102–3448. (415) 556–6642.

Federal Region X: Regional Environmental Officer, U.S. Department of Housing and Urban Development, 3051 Arcade Plaza Building, 1321 Second Ave., Seattle, WA 98101–2058. (206) 442–4521; (FTS) 399–4521.

Department of the Interior

Director, Office of Environmental Project Review, Department of the Interior, Room 4241, Interior Bldg., 18th and C Sts., NW, Wash., D.C. 20240–0001. (202) 343–3891.

Department of Labor

Director, Office of Regulatory Economics, Assistant Secretary for Policy, Department of Labor, Room S–2312, Frances Perkins Bldg., 200 Constitution Ave., NW, Wash., D.C. 20210–0001. (202) 523–6197.

Department of State

Director, Office of Environment and Health, Department of State, Room 4325, State Department Bldg., 21st and C Sts., NW, Wash., D.C. 20520–0001. (202) 632–9266.

Department of Transportation

For documents about legislation, regulations, national program proposals and any action with national policy implications, send comment request and documents to DOT's Office of Economics shown below. For an action which may involve more than one modal administration within DOT, send comment request and documents to the DOT Regional Secretarial Representative in whose area the action will take place. If the action involves more than one region, send request to each Regional Secretarial Representative (DOT will coordinate to provide a consolidated response). For an action which may involve only one modal administration, send comment request and documents to the regional office of the modal administration in whose area the action will take place but, if in doubt, send material to DOT's Regional Secretarial Representative.

Deputy Director for Environment and Policy Review, Office of Economics, Department of Transportation, Room 10309, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–4357.

DOT Regional Secretarial Representatives

Federal Regions I, II and III: Secretarial Representative, U.S. Department of Transportation, Independence Bldg., Suite 1000, 430 Walnut St., Philadelphia, PA 19106–3714. (215) 597–9430.

Federal Region IV: Secretarial Representative, U.S. Department of Transportation, Suite 515, 1720 Peachtree Rd., NW, Atlanta, GA 30309–2405. (404) 881–3738; (FTS) 257–3738.

Federal Region V: Secretarial Representative, U.S. Department of Transportation, Room 700, 300 S. Wacker Dr., Chicago, IL 60606–6607. (312) 353–4000.

Federal Region VI: Secretarial Representative, U.S. Department of Transportation, Room 7A29, 819 Taylor St., Fort Worth, TX 76102–6114. (817) 334–2725.

Federal Regions VII and VIII: Secretarial Representative, U.S. Department of Transportation, Room 634, 601 E. 12th St., Room 634, Kansas City, MO 64106–2879. (816) 374–5801; (FTS) 758–5801.

Federal Regions IX and X: Secretarial Representative, U.S. Department of Transportation, Room 1005, 211 Main St., San Francisco, CA 94105–1924. (415) 974–8464; (FTS) 454–8464.

Federal Aviation Administration

New England Region (CT, ME, MA, NH, RI, and VT): Regional Director, Federal Aviation Administration, 12 New England Executive Park, P.O. Box 510, Burlington, MA 01803–0933. (617) 273–7244; (FTS) 836–1244.

Eastern Region (DE, DC, MD, NJ, NY, PA, VA, and WV): Regional Director, Federal Aviation Administration, Fitzgerald Building, JFK International Airport, Jamaica, NY 11430–2181. (212) 917–1005; (FTS) 667–1005.

Southern Region (AL, FL, GA, KY, MS, NC, PR, Republic of Panama, SC, and TN): Regional Director, Federal Aviation Administration, P.O. Box 20636, Atlanta, GA 30320–0636. (404) 763–7222; (FTS) 246–7222.

Great Lakes Region (IL, IN, MI, MN, ND, OH, SD, and WI): Regional Director, Federal Aviation Administration, 2300 East Devon Ave., Des Plaines, IL 60018–4686. (312) 694–7294; (FTS) 384–7294.

Southwest Region (AR, LA, NM, OK, and TX): Regional Director, Federal Aviation Administration, P.O. Box 1689, Fort Worth, TX 76101–1689. (817) 877–2100; (FTS) 734–2100.

Central Region (IA, KS, MO, and NE): Regional Director, Federal Aviation Administration, 601 E. 12th St., Kansas City, MO 64106–2894. (816) 374–5626; (FTS) 758–5626.

Western-Pacific Region (AZ, CA, HI, and NV): Regional Director, Federal Aviation Administration, P.O. Box 92007, World Way Postal Center, Los Angeles, CA 90009–2007. (213) 536–6427; (FTS) 966–6427.

Northwest Mountain Region (CO, ID, MT, OR, UT, WA, and WY): Regional Director, Federal Aviation Administration, 17900 Pacific Highway South, Seattle, WA 98168–0966. (206) 431–2001; (FTS) 446–2001.

Alaskan Region (AK): Regional Director, Federal Aviation Administration, P.O. Box 14, 701 C St., Anchorage, AK 99513–0001. (907) 271–5645.

Federal Highway Administration

Federal Regions I and II: Regional Administrator, Federal Highway Administration, 729 Leo W. O'Brien Federal Bldg., Clinton Ave. and N. Pearl St., Albany, NY. 12207–2396. (518) 472–6476; (FTS) 562–6476.

Federal Region III: Regional Administrator, Federal Highway Administration, Room 1633, George H. Fallon Federal Office Building, 31 Hopkins Plaza, Baltimore, MD 21201–2825. (301) 962–0093; (FTS) 922–2773.

Federal Region IV: Regional Administrator, Federal Highway Administration, Suite 200, 1720 Peachtree Road, NW, Atlanta, GA 30309–2405. (404) 881–4078; (FTS) 257–4078.

Federal Region V: Regional Administrator, Federal Highway Administration, 18209 Dixie Highway, Homewood, IL 60430–2205. (312) 799–6300; (FTS) 370–6102.

Federal Region VI: Regional Administrator, Federal Highway Administration, 819 Taylor St., Fort Worth, TX 76102–6187 (817) 334–3908; (FTS) 334–3282.

Federal Region VII: Regional Administrator, Federal Highway Administration, 6301 Rockhill Rd., Kansas City, MO 64131–1117. (816) 926–7563; (FTS) 926–7490.

Federal Region VIII: Regional Administrator, Federal Highway Administration, 555 Zang St., P.O. Box 25246, Denver, CO 80225–0246. (303) 234–4051.

Federal Region IX: Regional Administrator, Federal Highway Administration, 211 Main St., Room 1100, San Francisco, CA 94105–1905. (415) 974–8450; (FTS) 454–8450.

Federal Region X: Regional Administrator, Federal Highway Administration, Room 412, Mohawk Building, 708 S.W. Third St., Portland, OR 97204–2489. (503) 221–2053; (FTS) 423–2065.

Federal Railroad Administration: Director, Office of Economic Analysis (RRP–30), Federal Railroad Administration, Room 8300, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–7391.

Maritime Administration: Head, Environmental Activities Group (MAR–700.4), Maritime Administration, Room 2120, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–5739.

National Highway Traffic Safety Administration: Assistant Chief Counsel for General Law, Office of Chief Counsel (NOA–33), National Highway Traffic Safety Administration, Room 5219, Nassif Bldg., 400 Seventh St., SW, Wash., D.C. 20590–0001. (202) 426–1834.

Research and Special Programs Administration (includes Materials Transportation Bureau): Chief, Environmental Technology Division (DTS–48), Research and Special Programs Administration, US-DOT, Transportation Systems Center, Room 3–55, Kendall Square, Cambridge, MA 02142–1001. (617) 494–2018; (FTS) 837–2018.

St. Lawrence Seaway Development Corporation: Deputy Chief Engineer, St. Lawrence Seaway Development Corporation, Seaway Administration Bldg., 180 Andrews

St., P.O. Box 520, Massena, NY 13662–1760. (315) 764–3256; (FTS) 953–0256.

United States Coast Guard: Chief, Environmental Compliance and Review Branch (G–WP–3), Office of Marine Environment and Systems, U.S. Coast Guard, 2100 2nd St., SW, Wash., D.C. 20593–0001. (202) 426–3300.

District I (MA, ME, NH, RI, and eastern VT): Commander, First Coast Guard District, 150 Causeway St., Boston, MA 02114–1391. (617) 223–3603; (FTS) 223–3644.

District II (Northern AL, AR, CO, IL, IN, KY, KS, MN, MO, northern MS, ND, NE, OH, OK, western PA, SD, TN, WI, WV, and WY (except Great Lakes Area)): Commander, Second Coast Guard District, 1430 Olive St., St. Louis, MO 63103–2398. (314) 425–4601; (FTS) 279–4601.

District III (CT, DE, NJ, eastern NY, eastern PA, and western VT): Commander, Third Coast Guard District, Governors Island, New York, NY 10004–5000. (212) 668–7196; (FTS) 664–7196.

District V (DC, MD, NC, and VA): Commander, Fifth Coast Guard District, Federal Bldg., 431 Crawford St., Portsmouth, VA 23704–5000. (804) 398–6000; (FTS) 827–9000.

District VII (Eastern FL, eastern GA, PR, SC, and VI): Commander, Seventh Coast Guard District, Room 1018, Federal Bldg., 51 SW 1st Ave., Miami, FL 33130–1608. (305) 350–5654.

District VIII (Southern AL, western FL, western GA, LA, southern MS, NM, and TX): Commander, Eighth Coast Guard District, Hale Boggs Federal Bldg., 500 Camp St., New Orleans, LA 70130–3313. (504) 589–6298; (FTS) 682–6298.

District IX (Great Lakes Area): Commander, Ninth Coast Guard District, 1240 E. 9th St., Cleveland, OH 44199–2060. (216) 522–3910; (FTS) 293–3910.

District XI (AZ, southern CA, southern NV, and southern UT): Commander, Eleventh Coast Guard District, Union Bank Bldg., 400 Oceangate Blvd., Long Beach, CA 90822–5399. (213) 590–2311; (FTS) 984–9311.

District XII (northern CA, northern NV, and northern UT): Commander, Twelfth Coast Guard District, Government Island, Alameda, CA 94501–9991. (415) 437–3196; (FTS) 536–3196.

District XIII (ID, MT, OR, and WA): Commander, Thirteenth Coast Guard District, Federal Bldg., 915 2nd Ave., Seattle, WA 98174–1001. (206) 442–5078; (FTS) 399–5078.

District XIV (AS, GU, HI, and TP): Commander, Fourteenth Coast Guard District, 9th Floor Prince Kalanianaole Federal Bldg., 300 Ala Moana Blvd., Honolulu, HI 96813–4982. (808) 546–5531.

District XVII (AK): Commander, Seventeenth Coast Guard District, P.O. Box 3–5000, Juneau, AK 99802–1217. (907) 586–2680.

Urban Mass Transportation Administration

Federal Region I: Regional Administrator, Urban Mass Transportation Administration, Transportation Systems Center, Room 921 55 Broadway, Cambridge, MA 02142–1001. (617) 494–2055; (FTS) 837–2055.

Federal Region II: Regional Administrator, Urban Mass Transportation Administration, 26 Federal Plaza, Suite 14–110, New York, NY 10278–0022. (212) 264–8162.

Federal Region III: Regional Administrator, Urban Mass Transportation Administration, Suite 1010, 434 Walnut St., Philadelphia, PA 19106–3790. (215) 597–8098.

Federal Region IV: Regional Administrator, Urban Mass Transportation Administration, Suite 400, 1720 Peachtree Road, NW, Atlanta, GA 30309–2472. (404) 881–3948; (FTS) 257–3948.

Federal Region V: Regional Administrator, Urban Mass Transportation Administration, Suite 1720, 300 S. Wacker Dr., Chicago, IL 60606–8755. (312) 353–2789.

Federal Region VI: Regional Administrator, Urban Mass Transportation Administration, Suite 9A32, 819 Taylor St., Dallas, TX 76102–6160. (817) 334–3787.

Federal Region VII: Regional Administrator, Urban Mass Transportation Administration, Suite 100, 6301 Rockhill, Rd., Kansas City, MO 64131–1117. (816) 926–5053.

Federal Region VIII: Regional Administrator, Urban Mass Transportation Administration, Prudential Plaza, Suite 1822, 1050 17th Street, Denver, CO 80265–1898. (303) 837–3242; (FTS) 327–3242.

Federal Region IX: Regional Administrator, Urban Mass Transportation, Room 1160, 211 Main St., San Francisco, CA 94105–1971. (415) 974–7313; (FTS) 454–7313.

Federal Region X: Regional Administrator, Urban Mass Transportation Administration, Suite 3142, 915 Second Avenue, Seattle, WA 98174–1001. (206) 442–4210; (FTS) 399–4210.

Department of Treasury

Manager, Environmental Quality, Physical Security and Safety Division, Department of the Treasury, Room 800, Treasury Bldg., 1331 G St., NW, Wash., D.C. 20220–0001. (202) 376–0289.

INDEPENDENT AGENCIES

ACTION

Assistant Director, Office of Policy and Planning, ACTION, Room M–606, 806 Connecticut Ave., NW, Wash., D.C. 20525–0001. (202) 634–9304; WATS #800–424–8580, ext. 81.

Advisory Council on Historic Preservation

Director, Office of Cultural Resource Preservation, Advisory Council on Historic Preservation, Old Post Office Building, Suite 803, 1100 Pennsylvania Ave., NW, Wash., D.C. 20004–2590. (202) 786–0505.

Appalachian Regional Commission

Director, Division of Housing and Community Development, Appalachian Regional Commission, 1666 Connecticut Ave., NW, Wash., D.C. 20235–0001. (202) 673–7845.

Civil Aeronautics Board

Chief, Environmental and Energy Programs (B–60C), Civil Aeronautics Board, Room 909, Universal Bldg., 1825 Connecticut Ave., NW, Wash., D.C. 20428–0001. (202) 426–9622.

Consumer Product Safety Commission

Assistant General Counsel, Office of the General Counsel, Consumer Product Safety Commission, Room 200, 5401 Westbard Ave., Bethesda, MD. (301) 492–6980. MAILING ADDRESS: Washington, D.C. 20207–0001.

Delaware River Basin Commission

Executive Director, Delaware River Basin Commission, 25 State Police Drive, P.O. Box 7360, West Trenton, NJ 08628–0360. (609) 883–9500; (FTS) 483–2677.

Environmental Protection Agency

Send comment request and documents about legislation, regulations, national program proposals and other major policy issues to Wash., D.C. Send comment request and documents about other Federal actions to the Federal Regional Administrator in whose area the action will take place. If the action involves more than one region, increase number of copies accordingly but send to the region primarily involved.

Director, Office of Federal Activities, Environmental Protection Agency, Room 2119–I, 401 M St., SW, Wash., D.C. 20460–0001. (202) 382–5053.

Federal Region I: Regional Administrator, U.S. Environmental Protection Agency, Room 2203, John F. Kennedy Federal Bldg., Boston, MA 02203–0001. (617) 223–7210.

Federal Region II: Regional Administrator, U.S. Environmental Protection Agency, Room 900, 26 Federal Plaza, New York, NY. 10278–0014. (212) 264–2525.

Federal Region III: Regional Administrator, U.S. Environmental Protection Agency, Curtis Bldg., 6th and Walnut Sts., Philadelphia, PA 19106–3310. (215) 597–8800.

Federal Region IV: Regional Administrator, U.S. Environmental Protection Agency, 345 Courtland Street, NE, Atlanta, GA 30365–2401. (404) 257–4727.

Federal Region V: Regional Administrator, U.S. Environmental Protection Agency, 230 S. Dearborn St., Chicago, IL 60604–1590. (312) 353–2000.

Federal Region VI: Regional Administrator, U.S. Environmental Protection Agency, 1201 Elm St., Dallas, TX 75270–2180. (214) 767–2600; (FTS) 729–2600.

Federal Region VII: Regional Administrator, U.S. Environmental Protection Agency, 324 E. 11th St., Kansas City, MO 64106–2467. (816) 374–5493; (FTS) 758–5493.

Federal Region VIII: Regional Administrator, U.S. Environmental Protection Agency, Suite 900, Lincoln Tower, 1860 Lincoln Street, Denver, CO 80295–0699. (303) 837–3895; (FTS) 327–3895.

Federal Region IX: Regional Administrator, U.S. Environmental Protection Agency, 215 Freemont St., San Francisco, CA 94105–2399. (415) 974–8153; (FTS) 454–8153.

Federal Region X: Regional Administrator, U.S. Environmental Protection Agency, 1200 Sixth Ave., Seattle, WA 98101–3188. (206) 442–5810; (FTS) 399–5810.

Federal Emergency Management Agency

Associate General Counsel, Federal Emergency Management Agency, Room 840, 500 C St., SW, Wash., D.C. 20472–0001. (202) 287–0387.

Federal Energy Regulatory Commission

Send comment requests and documents about legislation, regulations, national program proposals, major policy issues and Federal actions to:

For electric and hydroelectric matters—Director, Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission, Room 308, Railway Labor Building, 400 First St., NW, Wash., D.C. 20426–0001. (202) 376–1768.

For natural gas matters—Chief, Environmental Evaluation Branch, Office of Pipeline and Producer Regulation, Federal Energy Regulatory Commission, Room 7102A, 825 N. Capitol St., NE, Wash., D.C. 20426–0001. (202) 357–8098.

Federal Maritime Commission

Director, Office of Energy and Environmental Impact, Federal Maritime Commission, 1100 L St., NW, Wash., D.C. 20573–0001. (202) 523–5835.

Federal Trade Commission

Deputy Assistant General Counsel, Federal Trade Commission, Room 582, 6th St. and Pennsylvania Ave., NW, Wash., D.C. 20580–0001. (202) 523–1928.

General Services Administration

Send comment requests and documents about legislation, regulations, national program proposals and other major policy issues to Washington, D.C. Send comment requests and documents about other Federal actions to the regional office having responsibility for the area in which the action will take place.

Director, Environmental Affairs Staff (PRE), Office of Space Management, Public Buildings Service, General Services Administration, Room 2323, 18th and F Sts., NW, Wash., D.C. 20405–0001. (202) 566–0654.

Federal Region I: Chief, Planning Staff (1PEP) Public Buidings and Real Property, General Services Administration, John W. McCormack Post Office and Courthouse, Boston, MA 02109–4559. (617) 223–2707.

Federal Region II: Chief, Planning Staff (2PEP) Public Buildings and Real Property, General Services Administration, 26 Federal Plaza, New York, NY 10278–0022. (212) 264–3544.

Federal Region III: Chief, Planning Staff (3PEP) Public Buildings and Real Property, General Services Administration, 9th and Market Sts., Philadelphia, PA 19107–4269. (215) 597–0268.

Federal Region IV: Chief, Planning Staff (4PEP) Public Buildings and Real Property, General Services Administration, 75 Spring St., SW, Atlanta, GA 30303–3309. (404) 221–3080; (FTS) 242–3080.

Federal Region V: Chief, Planning Staff (5PEP) Public Buildings and Real Property, General Services Administration, 230 S. Dearborn St., Chicago, IL 60604–1602. (312) 353–5610.

Federal Region VI: Chief, Planning Staff (6PEP) Public Buildings and Real Property, General Services Administration, 1500 E. Bannister Rd., Kansas City, MO 64131–3087. (816) 926–7240.

Federal Region VII: Chief, Planning Staff (7PEP) Public Buildings and Real Property, General Services Administration, 819 Taylor St., Fort Worth, TX 76102–6114. (817) 334–2531.

Federal Region VIII: Chief, Planning Staff (8PEP) Public Buildings and Real Property, General Services Administration, Building 41, Denver Federal Center Lakewood, CO 80225–0001. (303) 776–7244.

Federal Region IX: Chief, Planning Staff (9PEP) Public Buildings and Real Property, General Services Administration, 525 Market St., San Francisco, CA 94105–2708. (415) 974–7623; (FTS) 454–7623.

Federal Region X: Chief, Planning Staff (10PEP) Public Buildings and Real Property, General Services Administration, GSA Center, 1501 G St., SW, Auburn, WA 98001–6599. (206) 931–7265; (FTS) 396–7265.

Federal National Capital Region: Chief, Planning Staff (WPJ) Public Buildings and Real Property, General Services Administration, 7th & D Sts., SW, Wash., D.C. 20407–0001. (202) 472–1479.

International Boundary and Water Commission, United States Section

Principal Engineer, Investigations and Planning Division, International Boundary and Water Commission, United States Section, IBWC Bldg., 4110 Rio Bravo, El Paso, TX 79902–1091. (915) 541–7304; (FTS) 572–7304.

Interstate Commerce Commission

Chief, Section of Energy and Environment, Office of Transportation Analysis, Interstate Commerce Commission, Room 4143, 12th St. and Constitution Ave., NW, Wash., D.C. 20423–0001. (202) 275–0800.

Marine Mammal Commission

General Counsel, Marine Mammal Commission, Room 307, 1625 Eye St., NW, Wash., D.C. 20006–3054. (202) 653–6237.

National Aeronautics and Space Administration

Environmental Compliance Officer, Facilities Engineering Division, National Aeronautics and Space Administration, Code NXG, Room 5031, 400 Maryland Ave., SW, Wash., D.C. 20546–0001. (202) 453–1958.

National Capital Planning Commission

Environmental/Energy Officer, Division of Planning Services, National Capital Planning Commission, Room 1024, 1325 G St., NW, Wash., D.C. 20576–0001. (202) 724–0179.

National Science Foundation

Chairman and Staff Associate, Committee on Environmental Matters; Office of Astronomical, Atmospheric, Earth and Ocean Sciences; National Science Foundation, Room 641, 1800 G St., NW, Wash., D.C. 20550–0001. (202) 357–7615.

Nuclear Regulatory Commission:

Chief, Environmental and Hydrologic Engineering Branch, Division of Engineering, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Room P–312, Phillips Bldg., 7920 Norfolk Ave., Bethesda, MD 20814–2587. (301) 492–7972.

Pennsylvania Avenue Development Corporation

Director of Development, Pennsylvania Avenue Development Corporation, Suite 1248, 425 13th St., NW, Wash., D.C. 20004–1856. (202) 523–5477.

Small Business Administration

Chief, Loan Processing Branch, Office of Business Loans, Small Business Administration, Room 804–B, 1441 L St., NW, Wash., D.C. 20416–0001. (202) 653–6470.

Susquehanna River Basin Commission

Executive Director, Susquehanna River Basin Commission, 1721 N. Front St., Harrisburg, PA. 17102–2391. (717) 238–0422.

Tennessee Valley Authority

Director, Environmental Quality Staff, Tennessee Valley Authority, 201 Summer Place Building, 309 Walnut St., Knoxville, TN 37902–1411. (615) 632–6578; (FTS) 856–6578.

United States Information Agency

Assistant General Counsel, United States Information Agency, 301 Fourth St., SW, Wash., D.C. 20547–0001. (202) 485–7976.

United States International Development Cooperation Agency:

For USAID matters, send to—Environmental Affairs Coordinator, Office of External Affairs, U.S. Agency for International Development, Department of State Bldg., 320 Twenty-First St., NW, Wash., D.C. 20523–0001. (202) 632–8268.

For OPIC matters, send to—International Economist/Environmental Officer, Office of Development, Overseas Private Investment Corporation, 1129 Twentieth St., NW, Wash., D.C. 20527–0001. (202) 653–2904.

United States Postal Service

Director, Office of Program Planning, Real Estate and Building Department, United States Postal Service, Room 4014, 475 L'Enfant Plaza West, SW, Wash., D.C. 20260–6420. (202) 245–4304.

Veterans Administration

Director, Office of Environmental Affairs, Veterans Administration, Code 088C, 810 Vermont Ave., NW, Wash., D.C. 20420–0001. (202) 389–3316.

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COUNCIL ON ENVIRONMENTAL QUALITY

40 CFR Part 1502

National Environmental Policy Act Regulations; Incomplete or Unavailable Information

AGENCY: Council on Environmental Quality, Executive Office of the President.

ACTION: Final rule.

SUMMARY: The Council on Environmental Quality (CEQ) promulgates regulations, binding on all federal agencies, to implement the procedural provisions of the National Environmental Policy Act (NEPA). The regulations address the administration of the NEPA process, including preparation of environmental impact statements for major federal actions which significantly affect the quality of the human environment. On August 9, 1985, CEQ published a proposed amendment to one of these regulations (40 CFR 1502.22), which addresses incomplete or unavailable information in an environmental impact statement (EIS). 50 FR 32234. After reviewing the comments received in response to that proposal, the CEQ now issues the final amendment to that regulation. The final amendment requires all federal agencies to disclose the fact of incomplete or unavailable information when evaluating reasonably foreseeable significant adverse impacts on the human environment in an EIS, and to obtain that information if the overall costs of doing so are not exorbitant. If the agency is unable to obtain the information because overall costs are exorbitant or because the means to obtain it are not known, the agency must (1) affirmatively disclose the fact that such information is unavailable; (2) explain the relevance of the unavailable information; (3) summarize the existing credible scientific evidence which is relevant to the agency's evaluation of significant adverse impacts on the human environment; and (4) evaluate the impacts based upon theoretical approaches or research methods generally accepted in the scientific community. The amendment also specifies that impacts which have a low probability of occurrence but catastrophic consequences if they do occur, should be evaluated if the analysis is supported by credible scientific evidence and is not based on pure conjecture, and is within the rule of reason. The requirement to prepare a "worst case analysis" is rescinded.

The existing guidance regarding 40 CFR 1502.22, found in Question 20 of *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 FR 18032 (1981), is hereby withdrawn. Guidance relevant to the amended regulation will be published after the regulation becomes effective.

EFFECTIVE DATE: May 27, 1986.

FOR FURTHER INFORMATION CONTACT: Dinah Bear, General Counsel, Council on Environmental Quality, 722 Jackson Place NW., Washington, DC 20006. (202) 395-5754.

SUPPLEMENTARY INFORMATION:

Executive Order 12291

Under Executive Order 12291, CEQ must judge whether a regulation is major and, therfore, whether a Regulatory Impact Analysis must be prepared. This regulation does not satisfy any of the criteria specified in section 1(b) of the Executive Order and, as such, does not constitute a major rulemaking. As required by Executive Order 12291, this regulation was submitted to the Office of Management and Budget (OMB) for review. There were no comments from OMB to CEQ regarding compliance with Executive Order 12291 in relationship to amendment of 40 CFR 1502.22.

Paperwork Reduction Act

The information collection requirements in this proposed rule were submitted for approval to OMB under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* No comments were submitted by OMB or the public on the information collection requirements.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, CEQ is required to prepare a Regulatory Flexibility Analysis for proposed regulations which would have a significant impact on a substantial number of small entities. No analysis is required, however, when the Chairman of the Council certifies that the rule will not have a significant economic impact on a substantial number of small entities. Accordingly, I hereby certify, pursuant to 5 U.S.C. 605(b), that this final amendment would not have a significant impact on a substantial number of small entities.

Environmental Assessment

Although there are substantial legal questions as to whether entities within the Executive Office of the President are required to prepare environmental assessments, CEQ, consistent with its practice in 1978, has prepared a special environmental assessment and a Finding of No Significant Impact regarding amendment of this regulation, which is available to the public upon request. For the reasons stated in the Finding of No Significant Impact, CEQ has concluded that the amendment to 40 CFR 1502.22 will not have a significant impact on the quality of the human environment.

Background

The National Environmental Policy Act, signed into law by President Nixon on January 1, 1970, articulated national policy and goals for the nation, established the Council on Environmental Quality, and, among other federal agencies to assess the environmental impacts of and, among other things, required all federal agencies to assess the environmental impacts of and alternatives to proposals for major federal actions significantly affecting the quality of the human environment. The Council on Environmental Quality, charged with the duty of overseeing the implementation of NEPA, developed guidelines to aid federal agencies in assessing the environmental impacts of their proposals. A combination of agency practice, judicial decisions and CEQ guidance resulted in the development of what is commonly referred to as "the NEPA process", which includes the preparation of environmental impact statements for certain types of federal actions.

Because of complaints about paperwork and delays in projects caused by the NEPA process, and a perception that the problem was caused in part by lack of a uniform, binding authority, CEQ was directed in 1977 to promulgate binding regulations implementing the procedural provisions of NEPA. (Executive Order 11991, 3 CFR 123 (1978). Council was directed to specifically: "make the environmental impact statement process more useful to decisionmakers and the public; and to reduce paperwork and the accumulation of extraneous background data, in order to emphasize the need to focus on real environmental issues and alternatives." After undertaking an extensive process of review and comment with federal, state and local governmental officials, private citizens, business and industry representatives, and public interest organizations, the Council issued the NEPA regulations on November 29, 1978. 40 CFR 1500–1508 (1958). The regulations were hailed as a "significant improvement on prior EIS guidelines", (Letter, Chamber of Commerce of the United States, January 8, 1979), and became effective for, and binding upon, most federal agencies on July 30, 1979, and for all remaining federal agencies on November 29, 1979.

Since promulgation of the NEPA regulations, the Council has continually reviewed the regulations to identify areas where further interpretation or guidance is required.[1] No broad support for amendment of the regulations surfaced during review under the 1981 Vice President's Regulatory Relief Task Force; indeed, some recommended that, "CEQ's streamlining regulations for the implementation of NEPA requirements should receive full support from the Administration and the federal agencies". (Letter, National League of Cities, May 14, 1981). Although continual attention is required to ensure that the mandate of the regulations is being fulfilled, the regulations appear to be generally working well.

During the past two and a half years, however, the Council has received numerous requests from both government agencies and private parties to review and amend the regulation which addresses "incomplete or unavailable information" in the EIS process. That regulation currently reads as follows:

"Section 1502.22. Incomplete or unavailable information.

"When an agency is evaluating significant adverse effects on the human environment in an environmental impact statement and there are gaps in relevant information or scientific uncertainty, the agency shall always make clear that such information is lacking or that uncertainty exists.

"(a) If the information relevant to adverse impacts is essential to a reasoned choice among alternatives and is not known and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

"(b) If (1) the information relevant to adverse impacts is essential to a reasoned choice among alternatives and is not known and the overall costs of obtaining it are exorbitant or (2) the information relevant to adverse impacts is important to the decision and the means to obtain it are not known (e.g., the means for obtaining it are beyond the state of the art) the agency shall weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty. If the agency proceeds, it shall include a worst case analysis and an indication of the probability or improbability of its occurrence." 40 CFR 1502.22.

On August 11, 1983, the Council proposed guidance regarding the "worst case analysis" requirement and asked for comments on the proposed guidance 48 FR 36486 (1983). The draft guidance suggested that an initial threshold of probability should be crossed before the requirements in 40 CFR 1502.22 became applicable. Although some

[1] See, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 FR 18026 (1981); *Memorandum for General Counsels, NEPA Liaisons and Participants in Scoping*, April 30, 1981 (available upon request from the General Counsel's office, CEQ); *Guidance Regarding NEPA Regulations*, 48 FR 34263 (1983).

commentators agreed with the guidance, others believed that the proposed threshold would weaken analysis of low probability and severe consequences impacts. Other writers suggested different approaches to the issue, or advocated amendment of the regulation rather than guidance. After reviewing the comments received in response to that proposal, the Council withdrew the proposed guidance, stating its intent to give the matter additional examination before publishing a new proposal. 49 FR 4803 (1984).

After many discussions with federal agency representatives and other interested parties in state governments, public interest groups, and business and industry, the Council published an Advance Notice of Proposed Rulemaking (ANPRM) for 40 CFR 1502.22, and stated that it was considering the need to amend the regulation. 49 FR 50744 (1984). The ANPRM posed five questions about the issue of incomplete or unavailable information in an EIS and asked for thoughtful written responses to the questions. The Council received 161 responses to the ANPRM. A majority of the commentators cited problems with the "worst case analysis" requirement, but recognized the need to address potential impacts in the face of incomplete or unavailable information. Many commentators thought that either the regulation itself or recent judicial decisions required agencies to go beyond the "rule of reason". These commentators suggested that the "rule of reason" should be made specifically applicable to the requirements of the regulation. A minority of commentators felt strongly that the original regulation was adequate and should not be amended.

On March 18, 1985, the Council held a meeting, open to the public, to discuss the comments received in response to the Advance Notice of Proposed Rulemaking. 50 FR 9535 (1985). Shortly after that meeting, the Council voted to amend the regulation. On August 9, 1985, CEQ published a proposed amendment to 40 CFR 1502.22 which read as follows:

"Section 1502:22. Incomplete of unavailable information.

"In preparing an environmental impact statement, the agency shall make reasonable efforts, in light of overall costs and state of the art, to obtain missing information which, in its judgment, is important to evaluating significant adverse impacts on the human environment that are reasonably foreseeable. If, for the reasons stated above, the agency is unable to obtain this missing information, the agency shall include within the environmental impact statement (a) a statement that such information is missing, (b) a statement of the relevance of the missing information to evaluating significant adverse impacts on the human environment, (c) a summary of existing credible scientific evidence which is relevant to evaluating the significant adverse impacts on the human environment, and (d) the agency's evaluation of such evidence. 'Reasonably foreseeable' includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that they have credible scientific support, are not based on pure conjecture, and are within the rule of reason." 50 FR 32238 (1985).

The Council received 184 comments in response to the proposed amendment: 81 comments from business and industry; 39 comments from private citizens; 30 comments from public interest groups; 15 comments from federal agencies; 14 comments from state governments; 4 comments from local governments; and one comment from a Member of Congress.

A majority of the commentators favored an amendment to the regulation, and supported the general approach of the proposed amendment. However, many of these writers offered specific suggestions for improving the proposal. Many commentators asked for definitions of terms used in the proposal, particularly for the phrase "credible scientific evidence." Some commentators wanted the Council to specify a particular methodology, such as risk assessment, as a substitute for a worst case analysis. Many commentators had specific comments about particular words or phrases used in the proposed amendment. Many commentators asked CEQ to provide further guidance or monitoring after the regulation was issued in final form.

A minority of commentators strongly opposed the amendment. Some of these writers were concerned over perceived changes in the first two paragraphs of the original regulation—requirements to disclose the fact that information is missing, and to obtain that information, if possible. Some commentators opposed deletion of the "worst case analysis" requirement. Other commentators believed that the proposed amendment did not require agencies to analyze or evaluate impacts in the face of incomplete or unavailable information. These comments, and others, will be discussed below in the section "Comments and the Council's Response".

On January 9, 1986, CEQ held a meeting, open to the public, to discuss the comments received in response to the proposed amendment. 50 FR 53061 (1985). A summary of the presentation made at that meeting is available from the Office of the General Counsel. Shortly after that meeting, the Council voted to proceed to final amendment of the regulation.

Purpose and Analysis of Final Amendment

CEQ is amending this regulation because it has concluded that the new requirements provide a wiser and more manageable approach to the evaluation of reasonably foreseeable significant adverse impacts in the face of incomplete or unavailable information in an EIS. The new procedure for analyzing such impacts in the face of incomplete or unavailable information will better inform the decisionmaker and the public. The Council's concerns regarding the original wording of 40 CFR 1502.22 are discussed at length in the preamble to the proposed amendment. 50 FR 32234 (1985). It must again be emphasized that the Council concurs in the underlying goals of the original regulation—that is, disclosure of the fact of incomplete or unavailable information; acquisition of that information if reasonably possible; and evaluation of reasonably foreseeable significant adverse impacts even in the absence of all information. These goals are based on sound public policy and early NEPA case law.[2] Rather, the need for amendment is based upon the Council's perception that the "worst case analysis" requirement is an unproductive and ineffective method of achieving those goals; one which can breed endless hypothesis and speculation.

The amended regulation applies when a federal agency is preparing an EIS on a major federal action significantly affecting the quality of the human environment and finds that there is incomplete or unavailable information relating to reasonably foreseeable significant adverse impacts on the environment. It retains the legal requirements of the first paragraph and subsection (a) of the environment and finds that there is incomplete or unavailable information relating to reasonably foreseeable significant adverse impacts on the environment. It retains the legal requirements of the first paragraph and subsection (a) of the

[2] See, for example, *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079 (D.C. Cir. 1973).

original regulation. Thus, when preparing an EIS, agencies must disclose the fact that there is incomplete or unavailable information. The term "incomplete information" refers to information which the agency cannot obtain because the overall costs of doing so are exorbitant. The term "unavailable information" refers to information which cannot be obtained because the means to obtain it are not known. If the incomplete information relevant to adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency must include the information in the EIS. The first paragraph and subsection (a) of the original regulation have been amended only insofar as the phrases "incomplete or unavailable information" (title of the original regulation) or "incomplete information" are substituted for synonymous phrases and the term "reasonably foreseeable" is added to modify "significant adverse impacts". These changes are made for consistency, clarity and readability.

Subsection (b) is amended to require federal agencies to include four items in an EIS if the information relevant to reasonably foreseeable significant adverse impacts remains unavailable because the overall costs of obtaining it are exorbitant or the means to obtain it are not known. The first step is disclosure of the fact that such information is incomplete or unavailable; that is, "a statement that such information is incomplete or unavailable". The second step is to discuss why this incomplete or unavailable information is relevant to the task of evaluating reasonably foreseeable significant adverse impacts; thus, "a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable relevant to evaluating the reasonably foreseeable significant adverse impacts, impacts on the human environment". Fourth, the agency must use sound scientific methods to evaluate the potential impacts; or in the words of the regulation, "the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community".

The regulation also makes clear that the reasonably foreseeable potential impacts which the agency must evaluate include those which have a low probability of occurrence but which would be expected to result in catastrophic consequences if they do occur. However, the regulation specifies that the analysis must be supported by credible scientific evidence, not based on pure conjecture, and be within the rule of reason.

Subsection (b) deletes two substantive requirements from the same subsection of the original regulation, promulgated in 1978. First, it eliminates the requirement for agencies to "weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty" while in the process of preparing an EIS. The Council believes that the weighing of risks and benefits for the particular federal proposal at hand is properly done after completion of the entire NEPA process, and is reflected in the Record of Decision. Nothing, of course, prohibits a decisionmaker from withdrawing a proposal during the course of EIS preparation.

Second, the regulation eliminates the "worst case analysis" requirement. It does not, however, eliminate the requirement for federal agencies to evaluate the reasonably foreseeable significant adverse impacts of an action, even in the face of unavailable or incomplete information. Rather, it specifies that the evaluation must be carefully conducted, based upon credible scientific evidence, and must consider those reasonably foreseeable significant adverse impacts which are based upon scientific evidence. The requirement to disclose all credible scientific evidence extends to responsible opposing views which are supported by theoretical approaches or research methods generally accepted in the scientific community (in other words, credible scientific evidence).

The regulation also requires that analysis of impacts in the face of unavailable information be grounded in the "rule of reason". The "rule of reason" is basically a judicial device to ensure that common sense and reason are not lost in the rubric of regulation. The rule of reason has been cited in numerous NEPA cases for the proposition that, "An EIS need not discuss remote and highly speculative consequences. . . . This is consistent with the (CEQ) Council on Environmental Quality Guidelines and the frequently expressed view that adequacy of the content of the EIS should be determined through use of a rule of reason." *Trout Unlimited* v. *Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974). In the seminal case which applied the rule of reason to the problem of unavailable information, the court stated that, "[NEPA's] requirement that the agency describe the anticipated environmental effects of a proposed action is subject to a rule of reason. The agency need not foresee the unforeseeable, but by the same token, neither can it avoid drafting an impact statement simply because describing the environmental effects of alternatives to particular agency action involves some degree of forecasting . . . 'The statute must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible . . .'" *Scientists' Institute for Public Information, Inc.* v. *Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. 1973), citing *Calvert Cliffs' Coordinating Committee* v. *Atomic Energy Commission*, 499 F.2d 1109, 1114 (D.C. Cir. 1971). The Council's amendment supports and conforms with this direction.

The evaluation of impacts under § 1502.22 is an integral part of an EIS and should be treated in the same manner as those impacts normally analyzed in an EIS. The information included in the EIS to fulfill the requirements of § 1502.22 is properly a part of the "Environmental Consequences" section of the EIS (40 CFR 1502.16). As with other portions of the EIS, material substantiating the analysis fundamental to the evaluation of impacts may properly be included in an appendix to the EIS.

Comments and the Council's Response

Comment: CEQ does not make clear the fact that the first paragraph and paragraph (a) of 1502.22 would be eliminated in the proposed amendment. The preamble says nothing about radical changes in the research requirements of the existing regulation.

Response: The changes to the first paragraph and subsection (a) of the existing regulation in the proposed amendment were made primarily for the purpose of attempting to clarify and simplify the existing requirements. However, in response to a number of concerns regarding perceived changes in the legal requirements of these paragraphs, the Council has chosen to retain the original format of the regulation. The Council intends that the substitution of the phrase "incomplete or unavailable information" and "incomplete information" are taken from the title of the regulation itself, and are being inserted for the sake of consistency of terms and clarity.

Comment: The term "reasonable efforts" should be defined.

Response: The term "reasonable efforts" does not appear in the final regulation.

Comment: The proposed amendment drops the standard of "exorbitant costs"

and substitutes "overall costs." Substantively, the current standard should be retained. It is a purposefully high standard, intended to counter agencies' demonstrated reluctance to seek out information. The proposed standard is lax and undefined.

Response: The final regulation retains the original standard.

Comment: The term "state of the art" should be replaced with "the availability of adequate scientific or other analytical techniques or equipment".

Response: The term has been deleted in the final regulation, and the phrase "the means to obtain it are not known" is substituted. That phrase is meant to include circumstances in which the unavailable information cannot be obtained because adequate scientific knowledge, expertise, techniques or equipment do not exist.

Comment: The regulation should make clear that "overall costs" include, among other things, all economic costs and delays in timing. The "overall cost" requirement needs to be further defined to reflect items such as comparing low cost/high cost risk (and vice versa), costs of time in obtaining information, costs of delaying projects, benefit/cost ratio and outyear impact cost.

Response: CEQ intends that the term "overall costs" encompasses financial costs and other costs such as costs in terms of time (delay) and personnel. It does not intend that the phrase be interpreted as a requirement to weigh the cost of obtaining the information against the severity of the impacts, or to perform a cost-benefit analysis. Rather, it intends that the agency interpret "overall costs" in light of overall program needs.

Comment: The term "missing information" should be clarified or changed.

Response: The term "missing information" is deleted in the final regulation, and is replaced with the terms "incomplete or unavailable information" and "incomplete information". These terms are consistent with the title of the regulation.

Comment: The word "material" should be substituted for the word "significant" because the word "significant" is a term of art and incorporates consideration of controversy surrounding a proposal. The word "material" would be more appropriate.

Response: The final regulation retains the term "significant". "Significant" is indeed a term of art which connotes the type of environmental impact which the agency is obligated to analyze in an EIS. Consideration of controversy is one of many factors which must be considered in determining whether an impact is "significant"; others include the degree to which the proposed action affects public health or safety, unique characteristics of the geographic area such as wetlands, wild and scenic rivers, etc., the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks, the cumulative impacts of an action, whether the action may adversely affect an endangered species or critical habitat, the degree to which an action may adversely affect historic areas, and whether the proposed action would violate another federal, state or local environmental law. 40 CFR 1508.27. The 1978 CEQ regulations differed from the earlier CEQ Guidelines in stating that the fact of controversy does not, alone, require preparation of an EIS; rather, it is one of many factors which the responsible official must bear in mind in judging the context and intensity of the potential impacts.

Comment: The term "in its judgment" gives agencies the administrative discretion to limit the data needed to prepare an EIS. It gives too much discretionary authority to agency officials to decide if they need to obtain the information. Suggest deleting "in its judgment" or adding "and with the concurrence of appropriate federal or state resource agencies".

Related Comment: It is important to allow an agency discretion to determine the extent of the investigation required to obtain information.

Response: The term "in its judgment" is deleted from the final regulation. However, deletion of that phrase is not intended to change the discretion currently vested in the agencies to determine the extent of the investigation required to obtain information. The agency's discretion must be used to make judgments about cost and scientific availability of the information.

Comment: The proposed amendment's definition of "reasonably foreseeable" should be strengthened or clarified or the use of this phrase should be changed.

Response: The term "reasonably foreseeable" has a long history of use in the context of NEPA law, and is included elsewhere in the CEQ NEPA regulations. 40 CFR 1508.8(b). Generally, the term has been used to describe what kind of environmental impacts federal agencies must analyze in an EIS; for example, ". . . if the [agency] makes a good faith effort in the survey to describe the *reasonably foreseeable* environmental impact of the program, alternatives to the program and their *reasonably foreseeable* environmental impact, and the irreversible and irretrievable commitment of resources the program involves, we see no reason why the survey will not fully satisfy the requirements of [NEPA] section 102(C)." *Sierra Club* v. *Morton*, 379 F. Supp. 1254, 1259 (D. Col. 1974) (emphasis added). *See also, Town of Orangetown* v. *Gorsuch*, 718 F.2d 29, 34 (2d Cir. 1983); *NRDC* v. *NRC*, 685 F.2d 459, 476 (D.C. Cir. 1982). The term has also been used in the context of incomplete or unavailable information. *See Scientists' Institute for Public Information* v. *Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

Because of the controversy and nature of this particular regulation, CEQ has specified that in the context of 40 CFR 1502.22, the term "reasonably foreseeable" includes low probability/severe consequence impacts, provided that the analysis of such impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

Comment: To prevent confusion, the proposed amendment should use either the term "credible scientific evidence" or "credible scientific support"—not both.

Response: The final regulation uses the term "credible scientific evidence" and deletes the term "credible scientific support".

Comment: The term "credible scientific evidence" should be defined. (A number of commentators offered specific suggestions for such a definition).

Response: The final regulation states that the agency's evaluation of impacts in the face of incomplete or unavailable information should be based upon theoretical approaches or research methods generally accepted in the scientific community. While this is admittedly a broad and general direction, CEQ is concerned that a narrow definition of "credible scientific evidence" would prove inappropriate in some circumstances, given the wide variety of actions which potentially fall under the auspices of this regulation. In many cases, the Council expects that "theoretical approaches or research methods generally accepted in the scientific community" will include commonly accepted professional practices such as literature searches and peer review.

Comment: The term "credible" should be deleted from the regulation, and all information should be considered.

Response: The definition of the word "credible" is, "capable of being

believed". *Webster's II New Riverside University Dictionary*, 1984. Information which is unworthy of belief should not be included in an EIS.

Comment: The term "scientific" is overly restrictive since measurement of an action's environmental effects may be grounded in, among other things, economic, historical or sociological information.

Response: In an EIS, federal agencies are responsible for analysis of significant environmental effects which include "ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 CFR 1508.8(b). The requirement to analyze these potential impacts or effects are not modified in any manner by the qualified "scientific evidence" in 40 CFR 1502.22. Rather, the term "scientific" is meant to imply that the evidence presented about the possibility of a certain impact should be based upon methodological activity, discipline or study. *Webster's II New Riverside University Dictionary, 1984.*

Comment: The amendment should include some recognized scientific method for evaluating uncertainty, such as, perhaps, a risk assessment approach.

Response: Because of the wide variety of types of incomplete or unavailable information which may potentially fall within the scope of this regulation, CEQ does not choose to specify a particular methodology. Rather, each agency should select that approach which best meets the goals of evaluating potential impacts in the face of unavailable information. Further, a requirement that a particular methodology be utilized might be soon outdated by scientific developments in a particular field.

Comment: The draft preamble states that the summary of credible scientific evidence must include all information from all sources, including minority or opposing viewpoints. What are "minority views" as they relate to credible scientific evidence?

Response: The preamble to the proposed amendment states that the requirement to disclose all credible scientific evidence extends to those views which are generally regarded as "minority views" within the scientific community. The final preamble adopts the term "responsible opposing views" as the preferred term, consistent with 40 CFR 1502.9(b). The requirement to include responsible opposing views reflects the belief that many times, particularly when dealing with questions of incomplete or unavailable information, there will be more than one point of view about potential environmental impacts which has scientific credibility. The regulation requires an agency to include information about such views which have scientific credibility, rather than simply selecting one concept which supports its particular view. The responsible opposing views, must, of course, meet the criteria set out in subsection (b) of the regulation. Once such information is set out in the EIA, the agency must then use its own judgment and discretion to determine which viewpoint it believes is the most worthy of acceptance.

Comment: CEQ should indicate in the preamble that along with available scientific evidence, the views and conclusions of other government agencies and departments may be considered.

Response: The views and conclusion of other government agencies and departments are appropriately considered throughout the EIS process, beginning with the scoping process. Section 1502.22 does not limit involvement by other federal agencies in that process. Special attention should be paid to the views of those agencies with special expertise or jurisdiction by law in a particular field of inquiry. 40 CFR 1503.1(a)(1). The views of the public, and indeed all interested parties, are, of course also to be considered throughout the EIS process.

Comment: It should be made clear that the summary should be limited to credible scientific evidence only.

Response: This is precisely the requirement of the regulation itself. Again, credible scientific evidence includes both majority views and responsible opposing views, so long as these views meet the criteria in the regulation.

Comment: The regulation should require agencies to state the probability or improbability of the occurrence of the impacts which are identified.

Response: Although this requirement is not part of the final regulation, agencies are free to include this information in the EIS. The Council encourages the inclusion of such data when it is relatively reliable and when such information would help to put the analysis in perspective for the decisionmaker and other persons who read and comment on the EIS.

Comment: The fourth requirement, to include the agency's "evaluation" of the scientific evidence is vague. Presumably, what is meant is not a critique of the evidence, but an application of the evidence to predict impacts.

Response: The fourth requirement has been reworded so that it is clear that the agency is required to evaluate reasonably foreseeable significant adverse impacts which significantly affect the quality of the human environment.

Comment: There is no requirement for the agencies to analyze impacts—the basic purpose of the regulation.

Response: The fourth requirement clearly states a requirement for the agencies to evaluate the reasonably foreseeable significant adverse impacts.

Comment: The final amendment should require agencies to address high probability/low or chronic impacts, as well as low probability/catastrophic impacts.

Response: If there is a high probability of an impact occurring, an agency is probably not in the realm of incomplete or unavailable information; hence, the impacts would be analyzed under the ordinary requirements in the "Environmental consequences" section. This section includes the analysis of the environmental impacts of the proposal and the environmental impacts of alternatives to the proposed action. 40 CFR 1502.16.

Comment: The preamble to the draft amendment errs in asserting that case law has established a precedent to go beyond the rule of reason and it ignores subsequent Ninth Circuit case law which applies the rule of reason to find that agencies properly refused to prepare a worst case analysis.

Response: The Ninth Circuit decision referred to in this comment held that a worst case analysis was not required because the lead agency had obtained the information which it needed; thus there was no incomplete or unavailable information to trigger the worst case analysis requirement. *Friends of Endangered Species* v. *Jantzen*, 760 F.2d 976 (9th Cir. 1985).

Comment: The threshold triggering the agency's responsibility to comply with 40 CFR 1502.22(b) is actually the existance of incomplete or unavailable information. "Scientific credibility" is not a threshold, but rather a standard to be applied to the analysis once the duty to comply is triggered.

Response: This comment is correct.

Comment: The Council should make clear in the regulation itself that "scientific credibility" is the threshold which triggers the regulation.

Response: "Scientific credibility" is the criterion for the evidence which should be used to evaluate impacts in the face of incomplete or unavailable information. The trigger to comply with the regulation itself is incomplete or unavailable information.

Comment: If the phrase "worst case analysis" is unacceptable, the Council should consider replacing the term with

its functional equivalent, "spectrum of events".

Response: In the final regulation, a lead agency is required to evaluate "impacts". "Impacts" or "effects" (the two are synonymous under CEQ regulations) are the subject of analysis in an EIS, not "events". Indeed, the event to be anticipated is the proposed action itself.

Under the final regulation, agencies are required to evaluate impacts for which there is credible scientific evidence. In implementing this section, agencies will have to determine the appropriate range of analysis based on the unique facts of each particular proposal. In some cases, this may amount to a spectrum or range of impacts. In other cases, the scope of suggested impacts may be much more limited. Credible scientific evidence should determine the scope of the analysis, as opposed to a pre-determined number of impacts.

Comment: A careful reading of the case law reveals that neither the Ninth Circuit nor any other circuit has required worst case analysis in the absence of scientific opinion, evidence, and experience, as alleged in the draft preamble.

Response: Although CEQ was asked to consider this question by various persons who were concerned about the effect in future cases of possible interpretations of judicial decisions involving the worst case analysis requirement, CEQ has amended the regulation because it believes, based on further review, that the worst case analysis requirement is flawed, and the new requirements provide a better and more logical means of dealing with the analysis of impacts in the face of incomplete or unavailable information in an EIS.

Comment: Deletion of the worst case requirement will weaken environmental protection.

Response: This assertion is incorrect. The amended regulation establishes a better approach to dealing with the issue of incomplete and unavailable information in an EIS. It is a less sensational approach, but one which is a more careful and professional approach to the analysis of impacts in the face of incomplete or unavailable information. It should improve the quality of the EIS and the decision which follows, and, hence, strengthen environmental protection, in conformance with the purpose and goals of NEPA. 42 U.S.C. 4321, 4331. It will provide the public and the decisionmaker with an improved and more informed basis for the decision.

Comment: Before eliminating the term "worst case analysis", the Council should determine whether a worst case analysis is really impossible to prepare, or whether it is being resisted by agencies unwilling to learn because they do not want to admit the adverse impacts of their preferred programs.

Response: The Council does not maintain that a worst case analysis is impossible to prepare; however, it does view the worst case analysis requirement as a flawed technique to analyze impacts in the face of incomplete or unavailable information. The new requirement will provide more accurate and relevant information about reasonably foreseeable significant adverse impacts. To the extent that agencies were reluctant to discuss such impacts under the requirements of the original regulation, the amended regulation will not offer them an escape route.

Comment: The expressed need for clarification can be met by simply adding the "rule of reason" to the existing regulation.

Response: While the "rule of reason" is indeed added to the language of the regulation, CEQ believes that it is also important to amend the requirement to prepare a worst case analysis. The requirement that the analysis of impacts be based on credible scientific evidence is viewed as a specific component of the "rule of reason".

Comment: The proposal inappropriately removes the obligation to weigh the need for an action against its potential impacts.

Response: The regulation deletes this requirement because it is more properly accomplished at the conclusion of the entire NEPA process. A decisionmaker may, of course, decide to withdraw a proposal at any stage of the NEPA process for any reason, including the belief that the paucity of information undermines the wisdom of proceeding in the face of possibly severe impacts. However, such weighing and balancing in the middle of EIS preparation is a matter of policy, not law.

It is clear that, "one of the costs that must be weighed by decisionmakers is the cost of uncertainty—i.e., the costs of proceeding without more and better information." *Alaska v. Andrus*, 580 F.2d 465, 473 (D.C. Cir. 1978). However, that weighing takes place after completion of the EIS process, including the public comment process. Indeed, it would seem that the results of such a weighing process would naturally be more informed and wiser after the agency has completed the requirements of § 1502.22 to evaluate the potential impacts in the face of incomplete or unavailable information. After completion of the EIS process, the responsible decisionmaker must then weigh the costs of proceeding in the face of uncertainty, "and where the responsible decision-maker has decided that it is outweighed by the benefits of proceeding with the project without further delay . . ." he may proceed to do so. *Id.* Similarly, he or she may also decide, with the benefit of the best possible information, to delay the project until further information is obtained or to cancel the project altogether.

Comment: CEQ should provide additional guidance about the new regulation, and oversee and actively monitor its implementation.

Response: CEQ plans to provide additional guidance about the new regulation in the form of an amended question 20 of *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations.* CEQ also plans to actively monitor the implementation of the amended regulation, and evaluate its effectiveness after it has been implemented for a sufficient period of time to make a reasonable assessment.

Comment: It is unclear in which situations the new rule would apply, and what specific information it mandates. CEQ should apply the rule to actual or hypothetical situations and explain how the rule will apply and how the agencies' obligations differ under the new rule from those of the old. Request the Council provide such an analysis for particular fact patterns.

Response: CEQ plans to provide specific examples of the application of the rule to hypothetical situations in its guidance, following issuance of the final rule. The amended regulation will apply, of course, to the very same situations to which the original regulation applies; that is, the existence of incomplete or unavailable information related to significant adverse impacts on the human environment. The modifications to the regulation are designed to better articulate the precise requirements with which an agency must comply once it finds itself in this situation.

Comment: It is essential to mention the Committee of Scientists which was instrumental in development of the proposed regulation.

Response: The writer is probably referring to a proposed Advisory Committee on Worst Case Analysis, which would have included scientists. The Committee was never formed, and thus had no role in developing the amended regulation. Instead, the Council sought public comment through the process of asking questions in the

Advance Notice of Proposed Rulemaking.

Comment: CEQ should state that this analysis is to be done only in conjunction with an EIS, as opposed to an environmental assessment.

Response: Section 1502.22 is part of the set of regulations which govern the EIS process, as opposed to the preparation of an environmental assessment. *It is only appropriate to require this level of analysis when an agency is preparing an EIS.* The type of analysis called for in § 1502.22 is clearly much more sophisticated and detailed than the scope of an environmental assessment. Environmental assessments should be concise public documents which *briefly* provide sufficient analysis for determining whether to prepare an EIS, and aid in an agency's compliance with NEPA when no EIS is necessary. "Since the EA [environmental assessment] is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered". The Council's suggested page limit for environmental assessments are ten to fifteen pages. *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations,* Question 36a, 46 FR 18026, 18037 (1981).

Comment: CEQ should state clearly that the amendment is intended to repudiate and overrule the Ninth Circuit decisions on worst case analysis.

Response: The Ninth Circuit opinions are based on the requirements of former § 1502.22, or agency reflections thereof, and are inapplicable to this revision. The regulation is being amended to provide a better approach to the problem of analyzing environmental impacts in the face of incomplete or unavailable information. Because the requirements of the amended regulation are more clearly articulated and manageable than the "worst case analysis" requirement, CEQ expects that there will be less litigation based on § 1502.22 than the former version of § 1502.22 interpreted by the Ninth Circuit.

Comment: CEQ should withdraw the guidance contained in the 1981 publication, *Forty Most Asked Questions about CEQ's NEPA Regulations,* relating to worst case analysis.

Response: That guidance is withdrawn by this publication.

Comment: CEQ has not complied with its duties to assert its substantive powers over federal agencies to comply with NEPA, to coordinate programs, and to issue instructions to agencies, but has instead succumbed to pressure from defendant agencies and their attorneys to amend the regulation. Further, CEQ is collaterally estopped from overruling the Ninth Circuit decisions.

Response: CEQ manifests its oversight of the NEPA process in a number of ways on a daily basis; for example, review of agency NEPA procedures, resolving referrals of proposals of major federal actions, and assisting parties on an individual basis in resolving difficulties with the NEPA process. The requirements of the amended regulation are a more productive use of the agencies' resources than attempting to prepare a worst case analysis. Collateral estoppel is a doctrine by which a party may be barred from relitigating a question decided in a prior case. It does not bar an agency from changing a regulation that the courts have interpreted.

Comment: Agencies should be required to present an evaluation of the existing evidence of the most likely outcome.

Response: Step four of subsection (b) requires agencies to evaluate potential impacts. The lead agency may wish to specify which of the impacts are the most likely to occur, and the Council encourages inclusion of such data when it is reliable information which would be useful to the decisionmaker and the public.

Comment: Case law required worst case analysis prior to adoption of 40 CFR 1502.22.

Response: This assertion is incorrect. Case law prior to the adoption of 40 CFR 1502.22 *did* require agencies to make a "good faith effort . . . to describe the reasonably foreseeable environmental impact(s)" of the proposal and alternatives to the proposal in the face of incomplete or unavailable information, consistent with the "rule of reason". *Scientists' Institute for Public Information* v. *Atomic Energy Commission,* 481 F.2d 1079, 1092 (D.C. Cir. 1973). The "worst case analysis" requirement was a technique adopted by CEQ as a means of achieving the goals enunciated in such case law. The "worst case" requirement itself, however, was clearly a "major innovation". Comment, *New Rules for the NEPA Process: CEQ Establishes Uniform Procedures to Improve Implementation,* 9 Envt'l L.Rep. 10,005, 10,008 (1979). The U.S. Court of Appeals for the Fifth Circuit, interpreting the "worst case analysis" requirement for the first time in a litigation context, recognized that it was an innovation of CEQ. *Sierra Club* v. *Sigler,* 695 F.2d 957, 972 (5th Cir. 1983). CEQ has since observed difficulties with the technique of "worst case analysis" and is replacing it with a better approach to the problem of incomplete or unavailable information in an EIS.

List of Subjects in 40 CFR Part 1502

Environmental impact statements.

PART 1502—[Amended].

40 CFR Part 1502 is amended as follows:

1. The authority citation for Part 1502 continues to read:

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

2. Section 1502.22 is revised to read as follows:

§ 1502.22 Incomplete or unavailable information.

When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.

(a) If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

(b) If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement: (1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure

conjecture, and is within the rule of reason.

(c) The amended regulation will be applicable to all environmental impact statements for which a Notice of Intent (40 CFR 1508.22) is published in the Federal Register on or after May 27, 1986. For environmental impact statements in progress, agencies may choose to comply with the requirements of either the original or amended regulation.

Dated: April 21, 1986.

A. Alan Hill,

Chairman.

[FR Doc. 86-9270 Filed 4-24-86; 8:45 am]

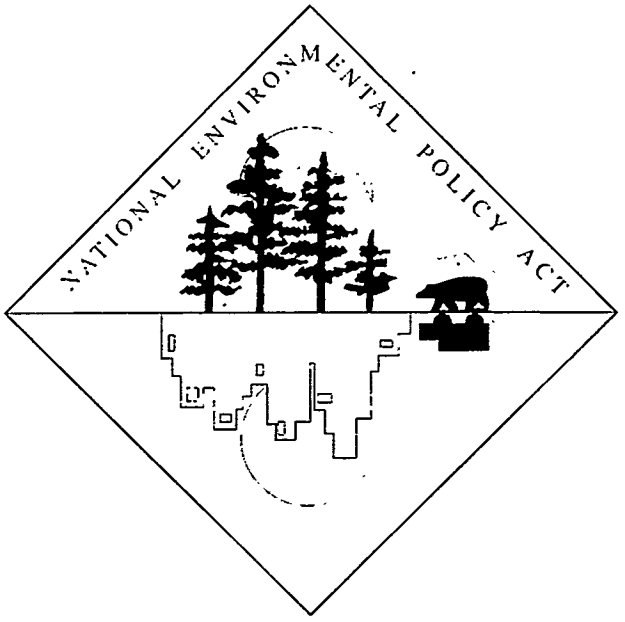
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Council on Environmental Quality



Incorporating Biodiversity Considerations Into Environmental Impact Analysis Under the National Environmental Policy Act

Incorporating Biodiversity Considerations Into Environmental Impact Analysis Under the National Environmental Policy Act



Council on Environmental Quality
Executive Office of the President
722 Jackson Place, NW
Washington, DC 20503

January 1993

This report presents the results of consultations by the Council on Environmental Quality (CEQ) concerning the consideration of biological diversity in analyses prepared under the National Environmental Policy Act (NEPA).

This report is intended to provide background on the emerging, complex subject of biodiversity, outline some general concepts that underlie biological diversity analysis and management, describe how the issue is currently addressed in NEPA analyses, and provide options for agencies undertaking NEPA analyses that consider biodiversity.

The report does not establish new requirements for such analyses. It is not, and should not be viewed as, formal CEQ guidance on this matter, nor are the recommendations in the report intended to be legally binding. The report does not mean to suggest that biodiversity analyses should be included in every NEPA document, without regard to the degree of potential impact on biodiversity of the action under review.

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Acknowledgements

Many people contributed to this document in many ways. The project team would like to express sincere thanks to CEQ Chairman Michael Deland, for his strong support of this and other CEQ efforts to advance the cause of biodiversity conservation. Dinah Bear, CEQ General Counsel, as well as several other CEQ staff members, contributed significantly to the conference series on which this report was based, and to the report itself. The Environmental Protection Agency and the Departments of Defense, Transportation, and Interior provided funding for the conference series and report development, without which this effort would not have been possible. Many other agencies, organizations, and individuals contributed to making the conference series a success, through their presentations and attendance. Finally, a number of agency and other expert reviewers (listed in Appendix A) provided valuable input into the report. We thank all who contributed to this effort, but take full responsibility for any shortcomings that may persist in the document.

We especially acknowledge the contributions of Allan Hirsch, whose loss was deeply felt by those of us who worked with him on this report, and by his colleagues everywhere.

Robin O'Malley
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Preface

Between December 1991 and June 1992, the Council on Environmental Quality (CEQ), in conjunction with the Environmental Protection Agency (EPA) and with support from the Departments of Defense, Interior, and Transportation, conducted a series of conferences designed to explore the need for improved incorporation of concerns for ecosystem integrity and the protection of biological diversity into the decision-making process under the National Environmental Policy Act (NEPA). Five conferences were held in different regions of the country:

December 9-11, 1991 - Denver, Colorado

February 18-20, 1992 - Atlanta, Georgia

March 23-25, 1992 - Boston, Massachusetts

April 28-30, 1992 - Chicago, Illinois

May 19-21, 1992 - Anchorage, Alaska

The conferences served to (1) familiarize agency staff with emerging thinking on biodiversity and other ecological issues; (2) encourage and provide some guidance for analysis of these issues in NEPA documents; and (3) gather information on existing and developing methodologies for improving consideration of biodiversity in the NEPA process. Each conference also explored NEPA issues not directly related to biodiversity such as the use of environmental assessments, third party contracting, public participation, and cumulative impacts analysis.

Presenters at the conferences included experts on biological diversity and ecological theory from academic and other non-governmental institutions; NEPA legal experts and natural resource policy analysts from CEQ; members of EPA's Office of Federal Activities; federal agency NEPA coordinators and scientists from both regional and headquarters offices; state officials; and others. Conference attendees were predominantly regional federal agency staff directly involved in the preparation or review of environmental analysis documents under NEPA; they represented more than 20 federal agencies. State governments (e.g., departments of fish and game, transportation, environmental conservation, and natural resources) also were well represented.

This report is based in part on these conferences.

Introduction

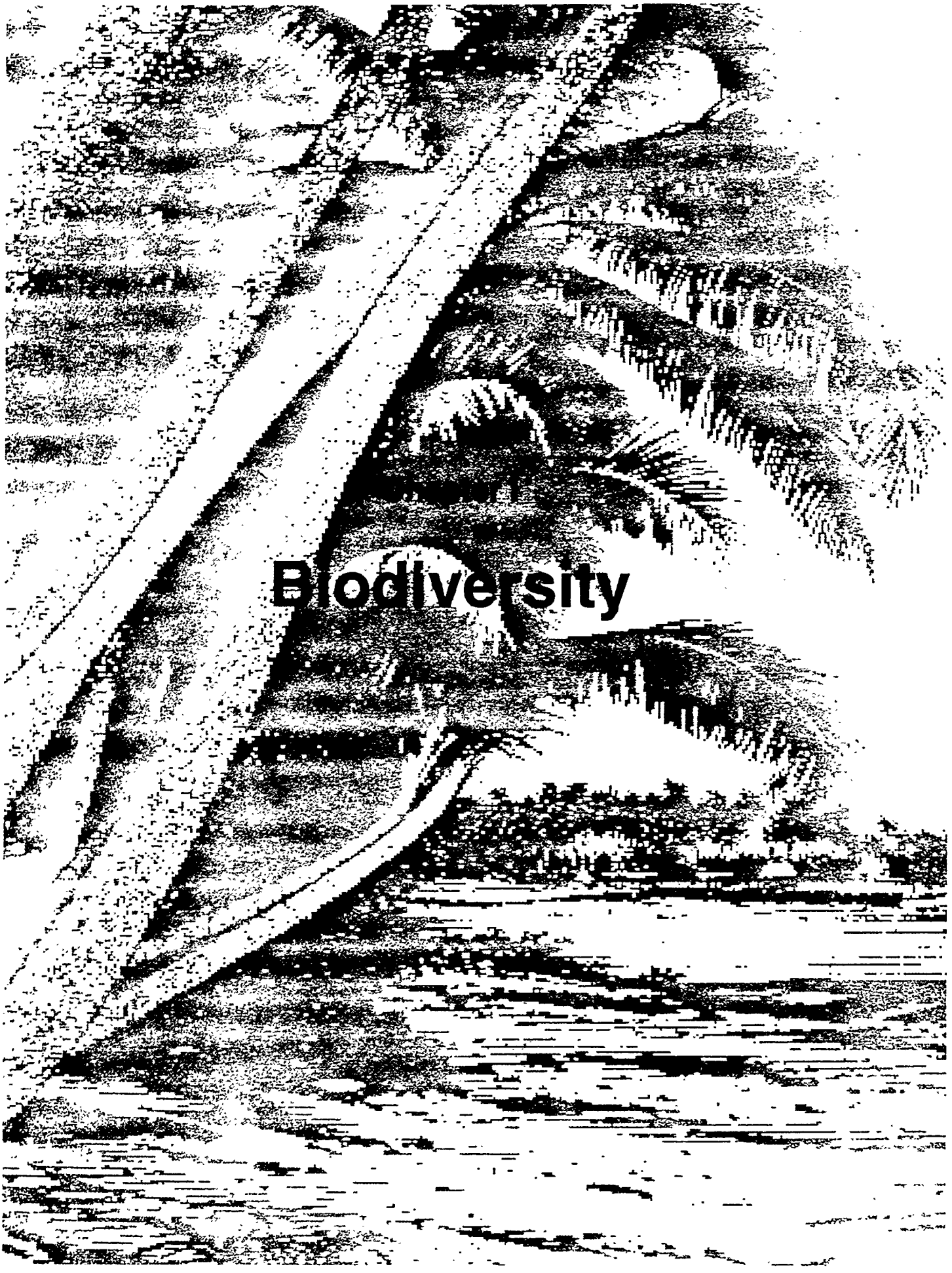
Biological diversity, or the variety of life and its processes, is a basic property of nature that provides enormous ecological, economic, and aesthetic benefits. Its loss is recognized as a major national as well as global concern with potentially profound ecological and economic consequences.

Conservation of biological diversity is a national goal that requires the combined efforts of federal, state, and local governments, and the private sector. Opportunities for biodiversity conservation exist on actively managed, as well as protected, areas through the reduction of impacts and the promotion of restoration.

The National Environmental Policy Act (NEPA) provides a mandate and a framework for federal agencies to consider all reasonably foreseeable environmental effects of their actions. To the extent that federal actions affect biodiversity, and to the extent that it is possible to both anticipate and evaluate those effects, NEPA requires federal agencies to do so.

To assist federal agencies in fulfilling their responsibilities under NEPA in the context of biological diversity, the Council on Environmental Quality (CEQ) held a series of conferences to explore biodiversity science and its application to the implementation of NEPA and consulted with a wide range of both federal and non-federal practitioners and experts to review the most current thinking in this field. This report provides material on the components of biodiversity, the major causes of the loss of biodiversity, general principles for its protection, and the appropriate scale for considering biodiversity.

The report summarizes emerging biodiversity concepts and practices and how they may be applied to NEPA analyses. It is intended to help agencies identify situations where consideration of biodiversity under NEPA is appropriate, and to strengthen their efforts to do so.


Biodiversity

Biological diversity, or biodiversity, is a general term referring to an extremely complex ecological issue. It is often defined simply as "the variety and variability of life" or "the diversity of genes, species, and ecosystems." In fact, biodiversity does comprise the variation between and among major ecological elements, but the significance of that diversity is not communicated by these definitions.

What is Biodiversity?

Biodiversity is a new and more explicit expression of one of the fundamental concepts of ecology, popularly stated as "everything is connected to everything else." Emerging concern about biodiversity reflects an empirically based recognition of the fundamental interconnections within and among various levels of ecological organization. Ecological organization, and therefore biodiversity, is a hierarchically arranged continuum, and reduction of diversity at any level will have effects at the other levels.

Fundamental to our understanding of biodiversity is the recognition that the biological world is not a series of unconnected elements, and that the richness of the mix of elements and the connections between those elements are what sustains the system as a whole.

In the past, biologists relied upon measurements of species diversity or species richness—simple measures of the number or distribution of species in a given area—to describe biodiversity. However, these measures do not consider the issues of ecosystem and genetic diversity and typically treat all species alike, whether native or introduced, common or rare.

Concern for biodiversity is often misinterpreted as a desire to maximize the diversity (usually species diversity) of every area. In fact, managing for maximum diversity might actually impoverish natural biodiversity. For example, introducing small-scale habitat disturbances might increase local biodiversity by favoring the spread of opportunistic, "weedy" species. However, the same activity may decrease the available habitat for species at risk regionally, and regional or global biodiversity may be diminished.

Why Is Biodiversity Important?

Biotic resources are important, both ecologically and economically. At the ecosystems level, maintenance of structural diversity and functional integrity is essential to the

Components of Biological Diversity

- **Regional ecosystem diversity:** The pattern of local ecosystems across the landscape, sometimes referred to as "landscape diversity" or "large ecosystem diversity".
- **Local ecosystem diversity:** The diversity of all living and non-living components within a given area and their interrelationships. Ecosystems are the critical biological/ecological operating units in nature. A related term is "community diversity" which refers to the variety of unique assemblages of plants and animals (communities). Individual species and plant communities exist as elements of local ecosystems, linked by processes such as succession and predation.
- **Species diversity:** The variety of individual species, including animals, plants, fungi, and microorganisms.
- **Genetic diversity:** Variation within species. Genetic diversity enables species to survive in a variety of different environments, and allows them to evolve in response to changing environmental conditions.

The **hierarchical nature** of these components is an important concept. Regional ecosystem patterns form the basic matrix for, and thus have important influences on, local ecosystems. Local ecosystems, in turn, form the matrix for species and genetic diversity, which can in turn affect ecosystem and regional patterns.

Relationships and interactions are critical components as well. Plants, animals, communities, and other elements exist in complex webs, which determine their ecological significance.

continued provision of important ecological services, such as regulation of hydrologic cycles, carbon and nutrient cycling, and soil fertility. Healthy, functioning ecosystems are necessary to support commercially and recreationally important fish and wildlife populations. Furthermore, the aesthetic, ethical, and cultural values associated with unique forms of life lend additional support to the establishment of biological conservation as public policy.[1]

The diversity of species and genetic strains provides a pool of critically important resources for potential use in agriculture, medicine, and industry; the loss of wild plant and animal species that have not been tested, or in some cases not yet described, would deprive society of these potentials. Access to genetic resources contributes about $1 billion annually to U.S. agriculture through development of improved crops. The development of livestock and other sources of protein benefits from this access as well. About 25 percent of our prescription drugs are derived from plant materials, and many more are based on models of natural compounds. Native species themselves are essential as foodstuffs and are valuable as commodities such as wood and paper. Marine biodiversity, in particular, plays a major role in meeting the protein needs of the world.

Biodiversity is not simply a problem of tropical rainforests and coral reefs, although that is where much attention has been focused. The decline of biological diversity is also a major problem in the United States, as it is elsewhere in the temperate zone. In the United States, nearly 600 plant and animal species are listed as threatened or endangered under the Endangered Species Act and another 4,000 species are candidates for listing. It has been estimated that 700 plants may become extinct during the next decade. A recent inventory suggests that 9,000 plant and animal species may be at risk. In many cases, entire plant and animal communities are threatened. In Texas, nearly one-third of the plant and animal communities are at risk, as are more than one-fifth of such communities in California, nearly one-half in Florida; and more than half in Hawaii.

Factors Contributing to the Decline of Biodiversity

Effective analysis and management of biodiversity requires a thorough understanding of the factors that contribute to its loss. The following major activities and impacts may cause the degradation or loss of biodiversity:

Physical alteration

Physical alteration, as a result of resource exploitation and changing land use, is the most pervasive cause of biodiversity loss. Ecosystem alteration includes habitat destruction, simplification, and fragmentation. When natural areas are converted to industrial, residential, agricultural, military, recreational, or transportation uses, ecosystems are disrupted and biodiversity diminished. Beyond the direct removal of vegetation and natural landforms in local areas, development of sites for human use fragments larger ecosystems and produces isolated patches of natural areas. Activities such as timber harvesting and grazing also may fragment natural areas but, more importantly, they result in simplification of ecosystems. Traditionally, timber production and grazing practices involve management for a few desired species that results in the reduction of physical heterogeneity and the disruption of species interactions and ecosystem processes.

Pollution

Pollution impacts on ecosystems include direct lethal effects, sublethal and reproduction effects (and those resulting from bioaccumulation), and degradation of habitat through eutrophication, acidification, salinization, thermal pollution, and ultraviolet (UV-B) exposure.

Overharvesting

The impacts of overfishing and other overharvesting include reduction of target populations below levels at which they can recover or compete successfully, and indirect effects through impacts on other species with which they naturally interact, thereby disrupting ecosystem functioning.

Introduction of exotic species

The introduction of non-native, or exotic, species can result in the elimination of native species through predation, competition, genetic modification, and disease transmission. Exotics pose a serious threat to biodiversity in states such as Florida, California, and especially Hawaii, where 75% of the native land birds have been lost to exotic species.

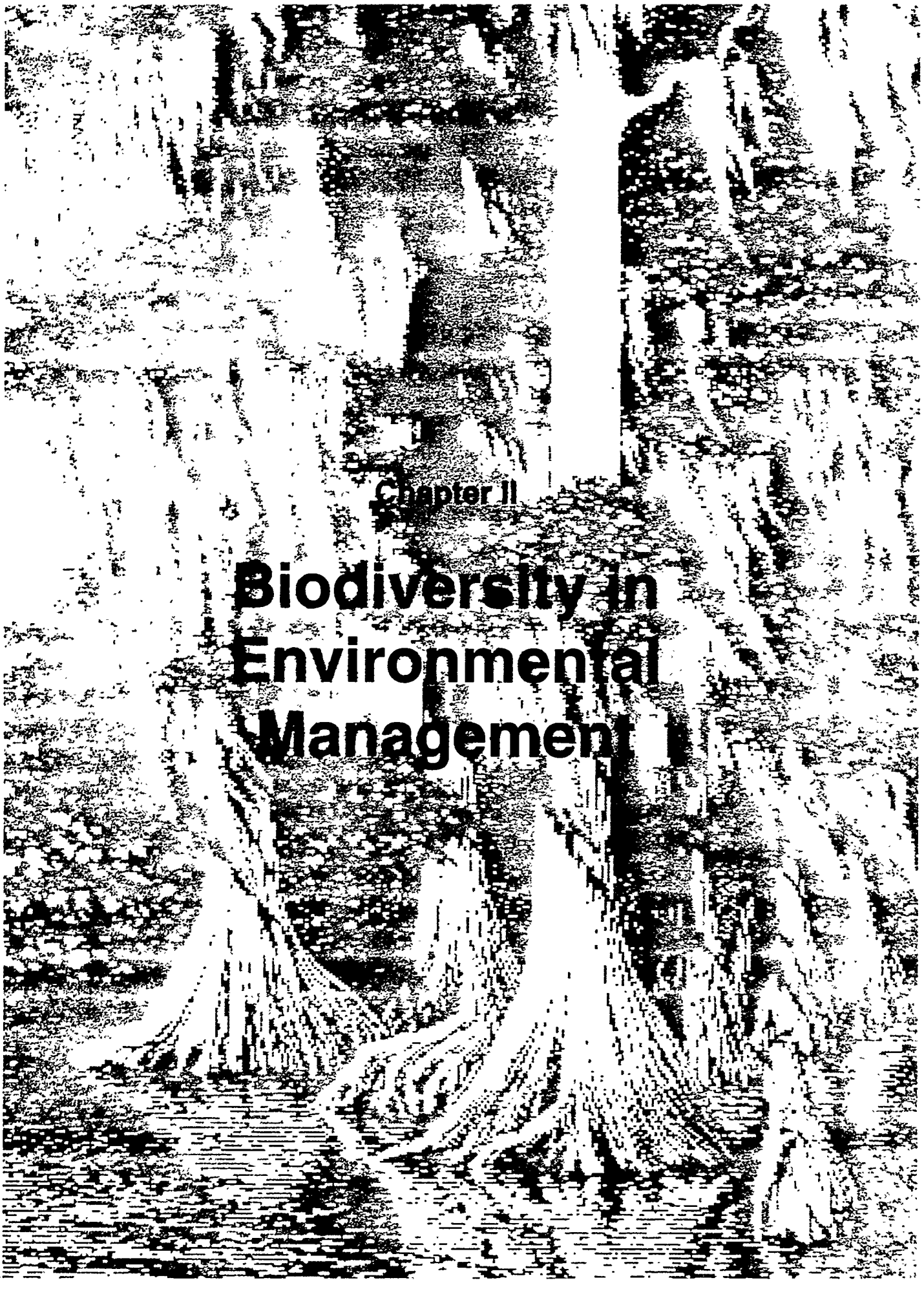
Disruption of natural processes

Natural processes can be disrupted even when many components of the ecosystem appear intact. Resource management activities may alter ecosystem dynamics through

fire suppression, modified flow regimes, and altered predator-prey relationships. In turn, these effects can have dramatic impacts on community composition, succession, and ecosystem integrity.

Global climate change

Over the long run, global climate change presents a potentially major — some would say the major — threat to biodiversity. Should current global climate change projections (such as those discussed by the United Nations Intergovernmental Panel on Climate Change) be realized, many organisms and natural systems would not be able to function in their current ranges. Sea level rise and increased temperatures would force the present pattern of biodiversity to adapt to new conditions or to disperse to colonize new areas. Plants and animals attempting to adapt would face rates of change many times that needed to evolve or even to migrate for many species (e.g., trees). The ability of ecosystems to shift their locations would be further hindered by fragmentation of the natural landscape that places inhospitable environments between current and future ranges.



Chapter II

Biodiversity in Environmental Management

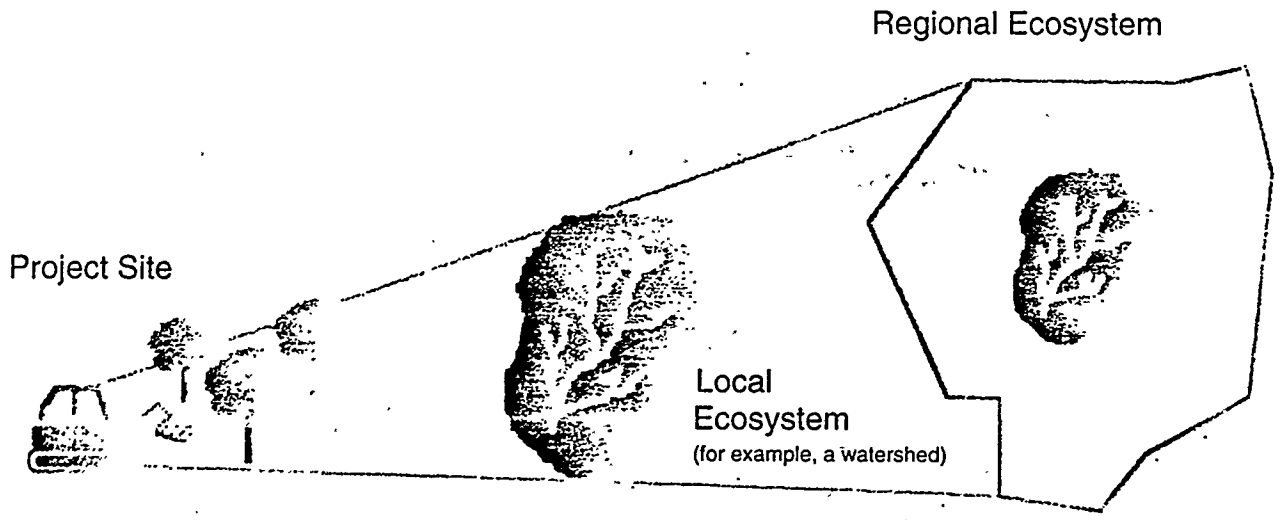
An understanding of the definition and components of biodiversity, and of the factors leading to its loss, allows for the identification of general principles for incorporating consideration of biodiversity into management. These principles are not rules; biodiversity conservation cannot be reduced to rules that are applicable in all situations. Rather, what is presented here are generalized statements or guiding principles that can help managers and planners identify biodiversity concerns and seek solutions in specific situations as agencies pursue their diverse mandates. The principles can be used to shape practices to conserve biodiversity; to understand the effect of any activity or project on biodiversity; to assist in developing mitigation; and to guide environmental analyses, including those carried out under NEPA.

• The basic goal of biodiversity conservation is to maintain naturally occurring ecosystems, communities, and native species.*

• The basic goals when considering biodiversity in management are to identify and locate activities in less sensitive areas, to minimize impacts where possible, and to restore lost diversity where practical.

THE "BIG PICTURE"

How Local impacts should be considered in the context of local and regional ecosystems



Source: Adapted from Salwasser, H., "Conserving biological diversity: a perspective on scope and approaches, "Forest Ecology and Management 35:79-90 (Amsterdam, The Netherlands, 1990).

* Conservation of ecosystems and species in the natural environment, or *in situ* conservation, is a preferred, cost-effective method of maintaining biodiversity. However, there are many other methods such as gene banks, germ plasm banks, zoos, nurseries, botanical gardens, aquaria, and the like. Referred to collectively as *ex situ* methods, these methods complement *in situ* activities, but are typically very costly and focus primarily on the genetic and species aspects of biodiversity. *Ex situ* methods are not treated in this report.

General Principles[2]

1. Take a "big picture" or ecosystem view

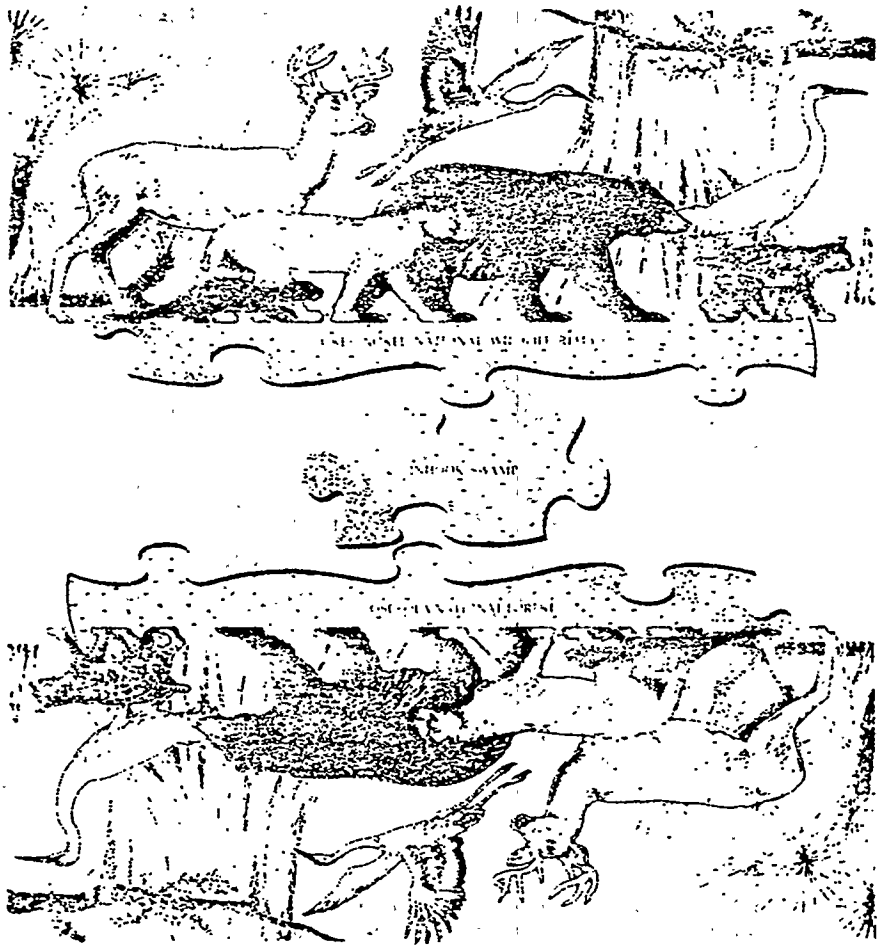
No site exists in ecological isolation. Rather they exist within a context defined by regional and local ecosystems. Understanding the potential effects of an action requires looking beyond local impacts, with an eye toward the relationship of the site to the local ecosystem and to larger regional systems. Biological resources must be protected and managed at a geographic scale commensurate with the scale of the systems that sustain them.

2. Protect communities and ecosystems

Biodiversity conservation must look beyond species to the ecological units that sustain them. Working with these larger elements ensures protection for a large number of species and their interrelationships. This is especially true if one considers the myriad of insects, fungi, and microorganisms that collectively are responsible for a significant portion of ecosystem function. This approach, often called ecosystem management, also provides for maintenance of natural processes such as carbon, nutrient, and hydrologic cycling, and vegetative succession.

Ecosystem management can help avoid future listings under the Endangered Species Act, and can be an important element of management planning for listed species. However, for species that are already threatened or endangered, strategies that specifically address their needs remain critical. Therefore, ecosystem management complements, but does not replace, recovery and management planning for individual listed species.

Pinhook Swamp corridor purchased by The Nautre Conservancy and the USDA Forest Service to provide a 15-mile land bridge between Okefenokee National Wildlife Refuge in Georgia and the Oscaola National Forest in Florida.



Source: Illustration by M. R. Clark, copyright 1990 Defenders of Wildlife, printed with permission.

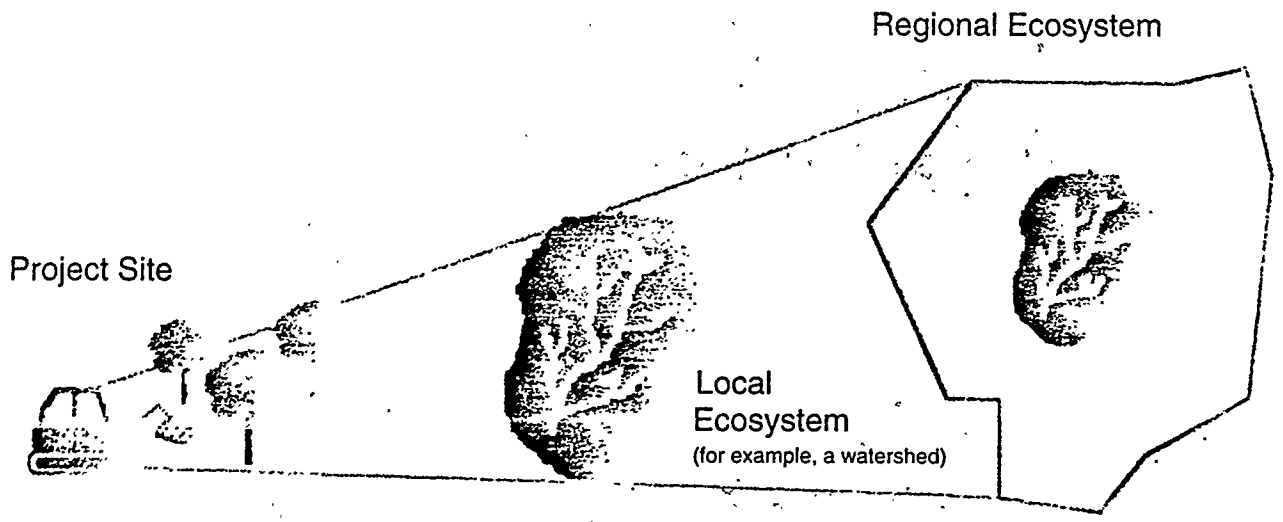
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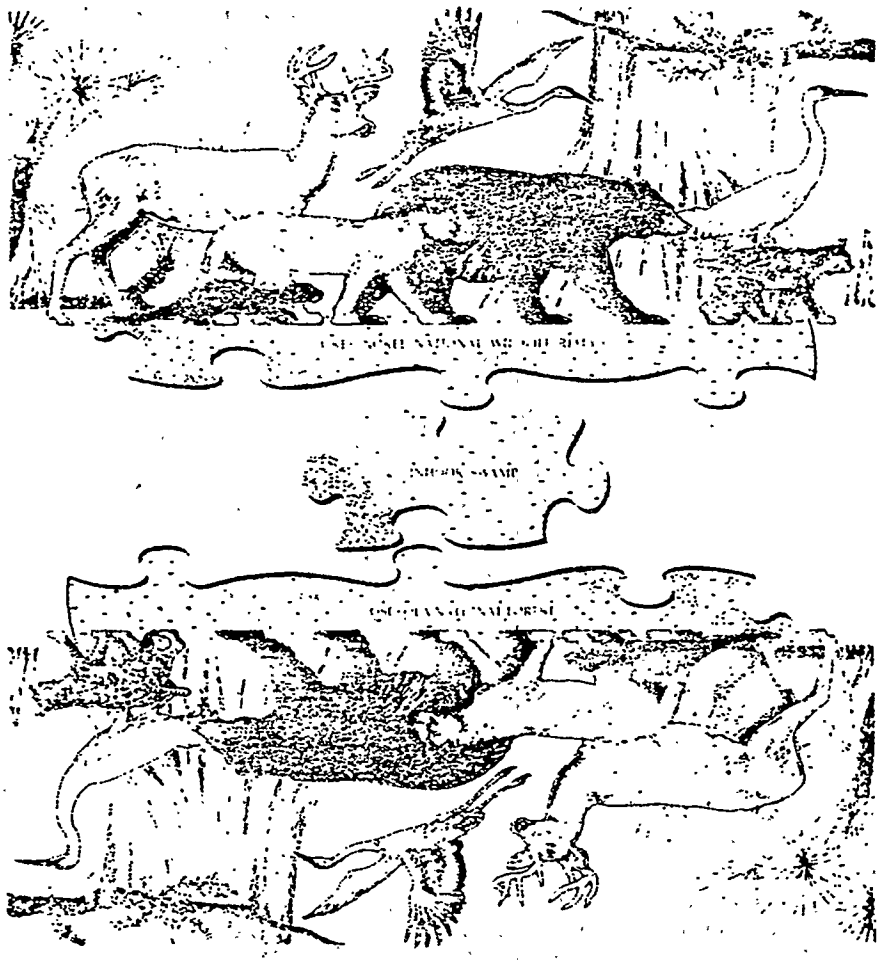
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Source: Illustration by M. R. Clark, copyright 1990 Defenders of Wildlife, printed with permission.

3. Minimize fragmentation. Promote the natural pattern and connectivity of habitats.

In general, larger blocks of natural habitat are better at conserving biodiversity than smaller ones, and connected blocks are better than isolated ones. Larger areas and linked smaller areas reduce the genetic isolation of individual populations; support wide-ranging species and those requiring isolation from external influences; allow natural flows of organisms, energy, water, and nutrients critical to ecosystem functioning; and enhance the ability to withstand disturbances.

Natural areas, especially large ones, should be preserved wherever possible. Natural corridors and migration routes should be protected or restored. In contrast, artificial barriers should be avoided as they segment habitats, increasing mortality rates and disrupting normal movement, and provide avenues for colonization by weedy, exotic or parasitic species. Roads, powerlines, and other linear features should utilize existing developed areas wherever possible rather than cross relatively undisturbed areas.

Avoid removal of natural barriers which have allowed particular systems to evolve in isolation. Removal of such barriers may lead to invasion by non-native species or interactions between formerly isolated populations, thereby reducing genetic diversity.

4. Promote native species. Avoid introducing non-native species .

Biodiversity depends upon the variety of species adapted to a specific ecosystem. In spite of the fact that some introduced species provide important benefits, non-native species can out-compete native species, resulting in an overall reduction in diversity. Non-native species may carry disease, or may be pests themselves for which native species have no defense. In addition, they may interbreed with native species, thereby reducing overall genetic variation.

The introduction of non-native species, with their potential for adverse ecological effects, must be avoided to ensure the viability of populations of native species, and prevent declines toward extinction.

5. Protect rare and ecologically important species.

By definition, rare species are more vulnerable to extinction. Species with naturally limited ranges or those facing extinction (including species not formally listed under the Endangered Species Act or on state threatened and endangered species lists) clearly require special attention. Similarly, the loss of certain "keystone" species—species that provide important food, habitat, or other ecological values—will affect a large number of other species and can affect overall ecosystem structure and function.

6. Protect unique or sensitive environments.

Areas that are unique or substantially different from their surroundings in terms of vegetation, terrain, soils, water availability, or other factors may be ecologically critical, i.e., a large number of species may be affected by their disturbance. These areas may include stream banks and other wetlands, areas that are particularly species-rich, or areas sensitive to nutrient enrichment. Areas that are ecologically simple, i.e., lack functional redundancy, also may be particularly sensitive to disturbance.

These areas should not be disturbed. Buffers are a principal method of avoiding impacts to sensitive areas, and also provide an opportunity to retain connections (corridors) between natural areas.

7. Maintain or mimic natural ecosystem processes.

Ecosystems cannot function without the internal processes that shape and maintain them. Particular attention should be directed to the role of fire, vegetative succession, hydrologic regimes, nutrient flows, and inter-species relationships such as predation, competition, and symbiosis.

8. Maintain or mimic naturally occurring structural diversity.

Each ecosystem is characterized by a variety of physical locations and conditions to which native species have adapted for food, shelter, and other activities. Activities that change the naturally occurring number and type of these "niches" should be avoided.

9. Protect genetic diversity.

The genetic diversity of a species reflects its unique evolution and enables it to adapt to existing variation and future changes in conditions. To preserve genetic adaptations, species should be maintained in natural habitats across their natural ranges, and plants and animals for reintroduction should be selected from ecologically similar areas as close to the restoration site as feasible.

10. Restore ecosystems, communities and species.

Significant reductions of biodiversity have occurred, and many opportunities, techniques, and federal authorities exist to reverse these losses. Ecosystem restoration should be encouraged and the reintroduction or restoration of viable populations of plants, animals, or natural communities that are rare, at risk, or have been lost from parts of their range should be pursued. In doing so, appropriate experts should be consulted, since restoration and reintroduction are complex activities, and the extent of restoration experience and success is limited for some systems. Adaptive management and monitoring are especially important.

11. Monitor for biodiversity impacts. Acknowledge uncertainty. Be flexible.

Consideration of biodiversity impacts is hampered by information gaps and the inherent complexity and uncertainty of biological systems, all of which limit predictive capacity.

Project planning should recognize this uncertainty and monitoring should be an inherent part of project planning and implementation. Biodiversity monitoring can serve to test assumptions and thus improve future predictions, to identify unintended or unpredicted consequences, and to inform adaptive management. Monitoring should address both project effects and mitigation success. Phased implementation and adaptive management, with revision based on early monitoring results, are valuable means for reducing impacts.

An Ecosystem Approach

Ecosystem management includes the analysis of both the elements and the interrelationships involved in maintaining ecological integrity. This approach uses a local-to-regional perspective that considers impacts at the appropriate scale within the context of the whole system. Even at the project-specific or site-specific level, analyses should extend to the regional ecosystem scale to consider adequately impacts on biodiversity.

The implementation of an ecosystem framework must include (1) selection of the appropriate scales of analysis, and (2) establishment of goals and objectives for the protection of biodiversity, based on (3) an adequate information base.

Determining the Appropriate Scale

Scale is a central issue in the ecosystem approach. The appropriate boundary is one that ensures adequate consideration of all resources that are potentially subject to non-trivial impacts. For some resources, that boundary can be very large. The long-range atmospheric transport of nutrients and contaminants into water bodies such as the Great Lakes and Chesapeake Bay transcends even the boundaries of their vast watersheds. At the other end of the spectrum, significant contributions to biodiversity protection can be made by identifying and avoiding small sensitive areas, such as rare plant communities. Determining relevant boundaries for assessment is guided by informed judgment, based on the resources potentially affected by an action and its predicted impacts.

The most obvious opportunities for agencies to address biodiversity on an ecosystem scale occur where one agency is responsible for managing large tracts of public lands or waters, such as the U.S. Forest Service, Bureau of Land Management, National Park Service, and National Marine Fisheries Service.[3] Even these agencies may not have jurisdiction over entire ecosystems. Management of entire ecosystems may require the cooperation of several agencies or levels of government. An example is the Greater Yellowstone Ecosystem, which includes lands managed by the National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, three states, and private landholders. Regional ecosystem planning for Yellowstone is conducted through the Greater Yellowstone Coordinating Committee.

Separate jurisdictions and competing missions may make it initially more difficult to engage in cooperative ecosystem management. However, clear benefits are to be gained from sharing expertise, technical capabilities, and information; such sharing will lead to improved environmental decision-making. Agencies need not sponsor regional ecosystem planning efforts to benefit from them, and agencies whose primary mission does not involve natural resource management can nonetheless make good use of existing efforts sponsored by other agencies or organizations.

Establishing Goals and Objectives

In order to understand biodiversity impacts, it is important to establish or consider concrete operational goals for the maintenance or restoration of biodiversity, based on an ecosystem perspective. Although the general goal of biodiversity conservation is to protect or restore the diversity of natural organisms and natural ecosystem processes, there is no one objective that will apply to all situations, and in some

Consideration of Biodiversity on a Regional Scale

A number of pioneering planning efforts are applying ecosystem management at the regional scale. These efforts recognize that the solution of individual environmental problems requires consideration of the context in which they occur and the interrelationships that exist among them. Examples of these include the following:

California Bioregions Initiatives[4]

In California, a path-breaking exercise is underway to design a statewide strategy to conserve biodiversity, and to coordinate implementation through regional and local institutions, based on the concept of bioregions – coordinating resource management by regions of biological similarity. On September 19, 1991, a Memorandum of Understanding (MOU) on biological diversity was signed by the Resources Agency of California and nine state and federal land management agencies – the California Departments of Fish and Game, Forestry and Fire Protection, and Parks and Recreation; the California Lands Commission; the University of California Division of Agriculture and Natural Resources; and the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, and Bureau of Land Management. Representatives of these agencies sit on an Executive Council; individual bioregional councils will be established in each of the eleven bioregions. At the time, Resources Agency Secretary Douglas Wheeler said, "Our objective is to bring California's varied resources management programs together in a way that assures the long-term sustainability of our rich natural heritage. Rather than focusing protection efforts on specific sites at specific times, we plan to identify entire biological and geographical areas for protection and conservation. . . . By doing this, we can save more of our environmental resources and do so in a manner that is socially and economically viable." In June 1992, the Sierra Summit Steering Committee published 18 recommendations to address the Sierra Nevada bioregion on the following three topic areas: the need for better information, improving coordination in the management of natural resources, and sustainable economic development.

Minnesota Integrated Resources Management Initiative[5]

The Minnesota Department of Natural Resources is piloting an integrated resource management approach to maintain biodiversity over entire watersheds, landscapes, and ecoregions. Under this approach, the management focus will shift from jurisdictional entities, such as state forests, to ecological land units. A first step in the process – for which the goal is to sustain entire ecological systems – has been to identify high-priority landscape areas such as large watersheds, forest areas, and prairie/farmland landscapes. These areas are then the focus of integrated management efforts involving state and federal agencies, local governments, and the private sector. While this initiative is in its early states, there are indications that the State's efforts to reorganize its major natural resources agency along ecosystem lines may provide an important catalyst. One such example is the Prairie Stewardship Partnership, which seeks to motivate environmentally sound and sustainable economic development, while protecting the productivity and diversity of natural ecosystems in the northern tall-grass prairie, more then 99% of which has already vanished. It has been estimated that at least 1,000 acres of continuous grassland are needed to sustain viable populations of species such as prairie chickens or upland sandpipers. Yet, most reserves protected by the Department of Natural Resources are less than 100 acres in size. To maintain the spectrum of prairie diversity, the Department is seeking means to link its preserves to other biologically important lands within the larger prairie/farmland landscape. The objective is to maintain these conservation areas within a matrix of multi-use pasture and haylands, and cropland.

Chesapeake Bay Program[6]

A historic Chesapeake Bay Agreement was signed in 1983 by Virginia, Pennsylvania, Maryland, District of Columbia, Chesapeake Bay Commission (an interstate legislative coordinating body), and U.S. Environmental Protection Agency to develop and implement plans to improve and protect the water quality and living resources of the Chesapeake Bay estuarine system. In 1987, a Second Bay Agreement included 29 commitments to actions that outlined steps to be taken in six areas: living resources; water quality, population growth and development; public information, education, and participation; public access; and governance. The agreement clearly established that the productivity, diversity, and abundance of the estuary's plants and animals (referred to as living resources) would be used as the ultimate measure of the Chesapeake Bay's condition. At present, a Living Resources Subcommittee is charged with providing a permanent body of scientists and managers to guide living resource restoration. This group consists of 11 workgroups in such areas as waterfowl, wetlands, submerged aquatic vegetation, fishery management plans, fish passage, habitat objectives, living resources monitoring, exotic species, and ecologically valuable species. The subcommittee has recently completed a multi-volume *Habitat Requirements for Chesapeake Bay* that will support an ecosystem-based approach to further refine understanding of the complex linkages which bind the Chesapeake ecosystem.

cases biodiversity objectives will conflict with other agency objectives. Because they may represent important social choices, the establishment of goals and objectives based on the principles outlined in this report must be undertaken with care. For example, for federal actions, the lead agency should involve not only the public, but other agencies that may be responsible for managing the affected natural resources. This will help identify those instances where other parties have developed operational goals and objectives relevant to biodiversity.

General objectives for the protection of biodiversity can be developed by identifying the relevant guiding principles outlined in this report. For example, measures to minimize landscape fragmentation, or to link blocks of originally connected habitat through landscape corridors, can often be assumed to benefit biodiversity without quantifying the specific biodiversity goal to be achieved. Agencies may have to limit their biodiversity objectives to such general guidelines in the case of programmatic environmental impact statements (EISs) if more specific objectives cannot be identified. Subsequent project-level EISs or environmental assessments, tiered from the programmatic assessments, can specify more detailed measures.

A more specific approach to the establishment of biodiversity objectives is to identify quantifiable environmental attributes for which a baseline can be established and subsequent monitoring done. Under the Great Lakes Water Quality Agreement between the United States and Canada, an ecosystem objective with associated indicators for Lake Superior was adopted, and a commitment was made to develop objectives and indicators for each of the other Great Lakes.[7] These objectives are primarily biological in nature, in contrast to the chemical objectives that had previously been the central focus of water quality efforts. The approach involves identification of (1) broad ecosystem goals, (2) objectives designed to ensure attainment of the goals, and (3) measurable indicators of progress toward meeting each objective. Societal values are reflected in the goals and objectives following consultation with competing users of ecosystem resources. Although this program has not been designed to address biodiversity *per se*, the indicators represent specific assessment elements that agencies should consider in the NEPA process with respect to activities that could affect the Great Lakes.

A wide variety of objectives and measurement approaches are potentially useful. For example, Appendix B summarizes a hierarchical approach that incorporates elements of ecosystem composition, structure, and functioning at four levels of organization: regional landscape, community-ecosystem, population-species, and genetic.[8]

Setting Biodiversity Goals and Objectives

The designation of appropriate biodiversity goals and objectives is critical for the formulation of regional management plans of all types. The following gives three examples of goals and objectives developed for natural resource management efforts:

Regional Biodiversity Goals of the Rocky Mountain Regional Guide for National Forests[9]

The Rocky Mountain Biological Diversity Assessment discusses the major elements of biodiversity, and includes recommendations for maintenance of biodiversity that could be applied during the revision of Forest Management Plans for National Forests and Grasslands in the Rocky Mountain Region. Selected examples of specific attributes are as follows:

- **Riparian Areas** – Manage for mod- to upper-seral successional states.
- **Wetlands** – Maintain the present size and quality of wetlands.
- **Tallgrass Prairie** – Provide for no acreage reduction.
- **Shortgrass Prairie** – Provide for no acreage reduction.
- **Aspen** – Increase the acreage of aspen. Increase the diversity of structure and age classes.
- **Lodgepole Pine** – Diversify age classes of lodgepole pine in homogeneous landscapes.
- **Old Growth** – Increase the acreage of old growth ponderosa pine as the major forested ecosystem present on the forest. Distribute old growth management areas to prevent or correct fragmentation.
- **Ecosystem Protection** – Provide for the protection of select special habitats, such as caves, cliffs, talus slopes, springs, seeps, and bogs.
- **Landscape Linkages** – Evaluate the need for linkages and corridors to provide for movement of organisms.

The Guide also recommends that individual Forest Management Plans document population objectives and provide habitat for wildlife and fish species selected as management indicator species.

Biodiversity Indicators for Alternative BLM Resource Management Plan (Eugene, Oregon District)[10]

In considering the environmental consequences of seven alternatives in their Eugene RMP/EIS, the BLM evaluated effects on biological diversity by estimating the changes in the following 10 indicators of biodiversity:

- Seral Stages
- Species Mix and Hardwoods
- Fragmentation
- Snags
- Special Habitats
- Dead and Down Material
- Special Areas
- Special Status Animals
- Riparian Zones
- Special Status Plants.

Acknowledging the uncertainties in evaluating effects on biodiversity, the BLM analysis is based on the extent to which management actions or resource protection would retain or depart from the natural, evolved state that existed before active forest management and protection activities began. Effects on each of the indicators were evaluated for both the short-term (10 years) and long-term (100 years) with regard to the impact on genetic, species, ecosystem, and landscape diversity.

Great Lakes Ecosystems Objectives[7]

Under the Great Lakes Water Quality Agreements of between the United States and Canada, the following ecosystem objective with associated indicators was adopted for Lake Superior:

"The lake should be maintained as a balanced and stable oligotrophic ecosystem with lake trout as the top aquatic predator of a cold-water community and the crustacean, *Pontoporeia hoyi* as a key organism in the food chain." Indicators for Lake Superior are lake trout [productivity greater than 0.38 kg/ha and stable, self-producing stocks, free from contaminants at concentrations that adversely affect the trout themselves or the quality of the harvested products.] and the crustacean *Pontoporeia hoyi* [abundance maintained throughout the entire lake at present levels of 220-320 per m^2 (depths less than 100 m) and 30-160 per m^2 (depths greater than 100 m.)].

Gathering Ecosystem Information

Successful application of an ecosystem framework also requires sufficient ecological information. Agencies should begin by assembling information from existing sources. Efforts are currently under way to establish a National Biodiversity Center[11] in cooperation with the Smithsonian Institution that would improve access to biodiversity information, assess existing information, and improve and standardize information management. Many federal and state agencies have already developed inventories of the distribution of biota and the ecological conditions in areas under their jurisdiction. The following are several potentially useful sources of ecological information.

Natural Heritage Programs

State Natural Heritage Programs and Conservation Data Centers provide the most extensive biodiversity information in usable form.[12] This system contains organized inventories on the distributions of species and communities, as well as other related information on a statewide basis in the form of integrated computer databases, manual files, maps, and aerial photography. The system is particularly useful for biodiversity analysis because, in addition to providing information on the distribution of organisms and communities, it ranks them according to their degree of endangerment (see box on page 13).

GIS — Geographic Information Systems

A geographic information system (GIS) is a collection of computer hardware, software, and geographic data that can capture, store, integrate, edit, retrieve, manipulate, analyze, synthesize, and output all forms of geographically referenced information. GIS provides tools that can help solve complex spatial questions (such as the local and regional habitat impacts of new development) that could be more difficult, time consuming, or even impossible to solve using traditional analytical methods. Specifically, a GIS[13] can accomplish the following:

- Collect, store, and retrieve information based on its spatial location
- Identify locations within a targeted environment that meet specific criteria
- Explore relationships among data sets within that environment
- Analyze the related data spatially as an aid to making decisions about that environment
- Facilitate the integration of data into analytical models to assess the impact of alternatives

• Display the selected environment both graphically and numerically.

GIS has enormous potential for supporting public policy decisions related to biodiversity. For example, GIS can be used to analyze the spatial relationships between species ranges and land use patterns. This approach is critical to identifying adequate buffer areas and potential biodiversity corridors for the maintenance of ecosystem integrity. The design of a GIS should involve coordination among a variety of federal and non-federal entities to ensure that the information base is comprehensive.

Gap Analysis

The U.S. Fish and Wildlife Service, in cooperation with a number of state and federal agencies, Natural Heritage Programs, and others, has initiated a program referred to as "gap analysis," to determine what portion of the Nation's biological diversity currently exists in protected areas such as parks and wilderness areas. Gap analysis projects are underway in 22 states, and plans exist to extend the program nationally.[14]

Using computers to integrate information on land use, vegetation, and animal species distributions, researchers from the Idaho Cooperative Fish and Wildlife Research Unit are able to identify landscapes with high biological diversity. Program scientists study large tracts of forest and rangeland ranging from 10 to 1,000 square kilometers. Areas with high biological diversity that are not under protective management are called "gaps"— hence the program's name. At minimum, gap surveys include the following:

• Vegetation types.

• Terrestrial vertebrate distribution, including identification of centers of species-richness for native vertebrates in management groups (e.g., non-game mammals, waterbirds, uncommon species); analysis of species in each vegetation type and province; centers of endemism; and species-by-species protection status.

• Terrestrial invertebrate (butterfly) distribution including centers of native species-richness, centers of endemism, and species-by-species protection status.

• Areas of species-richness for threatened, endangered, and sensitive species.

• Distribution of other taxa, when databases are available or can be readily assembled.

Together, these *themes* make up the gap analysis database. Using geographic information systems (GIS), which assemble, store, retrieve and manipulate electronically generated maps, species, communities, and ecosystems can all be viewed as integrated components.

Gap analysis makes it possible to assess how much of the nation's biodiversity is protected and enables natural resource planners and managers to focus on high-priority conservation actions. It is a potentially powerful tool for use in environmental impact assessment at the landscape scale and can be used to identify measures to mitigate the impacts of a proposed federal action.

Missouri Biodiversity Task Force

Where they exist, state biodiversity inventories, ecosystem classifications, and conservation databases can provide an enormous amount of information to meet the ecosystem management needs of the region. For example, in the State of Missouri, a Biodiversity Task Force representing the Missouri Department of Conservation, the U.S. Forest Service, and three universities recently published *The Biodiversity of Missouri.*[15] This report provides considerable information on the status of biodiversity in Missouri. Plant species, animal species, and natural communities are discussed from an ecosystem perspective that recognizes the contributions of both the biotic and abiotic components of the State's biodiversity. The report's approach to biodiversity conservation is top down, seeking first to protect ecosystem diversity, and then to protect lower levels such as species and genetic diversity. This biodiversity conservation effort in Missouri is an example of an ever-growing number of state initiatives that can be invaluable to agencies evaluating the biodiversity impacts of their proposed actions.

Fish and Wildlife Information Exchange

The Fish and Wildlife Information Exchange is an extension of the cooperative Multi-State Project among the U.S. Fish and Wildlife Service, Bureau of Land Management, International Association of Fish and Wildlife Agencies, Virginia Department of Game and Inland Fisheries, and Virginia Polytechnic Institute and State University. This unit is a clearinghouse and technical assistance center to state and federal fish and wildlife agencies in the area of fish and wildlife databases and computer applications. Since 1984, a computerized clearinghouse called the Master Species Files has been developed to facilitate data sharing. Currently, the file contains more than 4,500 species accounts representing more than 3,000 marine, terrestrial, and freshwater vertebrate and invertebrate species found in North America. States typically use this file, and their own species information systems, to address impacts of development projects, as well as statewide and coastal zone planning. Seven state databases are available from the Fish and Wildlife Information Exchange, as are the Breeding Bird Survey, Endangered Species Information System, National Fisheries Resource Inventory, and National Reservoir Research Database.

The Natural Heritage Network[16]

State Natural Heritage Data Centers have been established in all fifty states as cooperative ventures of The Nature Conservancy (TNC) and various state agencies. Satellite data centers operate in several staffed preserves, including two National Parks, and in various offices of cooperating state and federal agencies and private institutions. A number of federal agencies, including DOD and the U.S. Forest Service, have agreements with TNC to collect and manage data through the Heritage Network.

Heritage data centers focus on natural community types and individual species. The idea is that major natural communities will act as a "coarse filter" to capture populations of the majority of species, including invertebrates and other small organisms too numerous to inventory individually, while focus on populations of known rare species will act as a "fine filter" for these uncommon elements.

All Heritage programs also amass and organize data on land ownership, existing preserves and protected areas, secondary information sources (including publications, repositories, individual experts, institutions), and key individual contacts (key data users, agency personnel, mailing lists).

A large degree of standardization of terminology, methods, formats, and systems has been achieved and maintained among the many Heritage programs. This facilitates the exchange of information, efficient methodological research and technical support, consistent communication with users, and the combination of information from many programs.

Fundamental information available in this system includes the following:

Species:

Each Heritage data center tries to maintain information on all the vascular plants and vertebrate animal species in its state or area of coverage along with information on a limited number of invertebrates and non-vascular plants believed to be particularly rate or otherwise of conservation interest. A systematic ranking process is employed to ascertain the relative degree of biological endangerment of each species including, and this is documented in element ranking records. Each species is ranked as to its status on a global and state basis using consistent criteria of rarity (the estimated number of occurrences of each element) and threat (vulnerability to human disturbance or destruction). Using this system, the highest priority would be given to species with a ranking indicating threats at both global and state levels. Rankings consist of a letter — G for global and S for state — and a number — with 1 indicating the highest threat level. A G1S1 ranking would indicate that the species or community is critically imperilled both globally and regionally (typically five or fewer occurrences or extremely vulnerable to extinction due to biological factors). Originally, Heritage programs only dealt with rare species, but it was gradually found desirable to include at least limited amounts of information on all vertebrates and vascular plants. However, for efficiency's sake, total inventory effort is still allocated among species in proportion to their relative endangerment.

Communities and Ecosystems:

Each state Heritage data center develops a taxonomic classification of natural community types known within its geographic area. In places where there is a well-developed local tradition of community classification, the local system is adopted as a beginning point and modified as knowledge and perspective accumulate. In other places, a new classification is developed. Efforts are now underway to ensure regional and national consistency among these efforts. Heritage data centers attempt to include occurrences of all community types. Communities are ranked according to a set of criteria similar to the species ranking system.

Other Biological Information:

Other types of biological information can include anything that merits inventory and conservation planning, such as areas of seasonal wildlife concentration, breeding colonies of common species, outstanding individuals (such as champion trees), and areas of historical field work.

Managed (or Protected) Areas:

All State Heritage programs gather and organize information on all protected and semi-protected areas in their states, regardless of ownership. This information can provide a comprehensive picture of protected natural land and habitat for each state.


Chapter 1
The Role of NERA

The Earth's biological diversity is being reduced at a rate without precedent in human history and the loss of biodiversity has become recognized as a major global and national environmental problem during the last decade. The federal government has a major role in stemming the loss of natural biota. Federal agencies are stewards on more than 720 million acres of land and waters. Decisions concerning the use of these federal resources can promote the conservation of biological diversity and ecological restoration. Federal agency decisions also can affect millions of acres of nonfederal land and waters through agency responsibility for the construction of infrastructure, regulation of environmental pollution, and provision of resources to state and local governments, as well as their influences on private sector investment strategies.

With the passage of NEPA in 1969, Congress recognized that technological and socioeconomic forces were inducing profound influences on the quality of the human environment. Section 101 of the act sets forth national policies that were intended to stem the deterioration and restore environmental and natural resource damages already inflicted by the federal government.

> . . . it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans . . . .
>
> (b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may . . .
>
> (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain wherever possible, an environment which supports diversity and variety of individual choice. . . .
>
> National Environmental Policy Act, Section 101

The act was prescient in its anticipation of the future environmental problems facing the nation, and while the environmental goals in Section 101 are broad policy mandates, they are also specific enough to serve as a blueprint for the consideration of a wide range of environmental effects of federal actions. Section 102(2) provides the necessary tool to ensure that decisionmakers are aware of the Section 101 policies and the environmental consequences of federal proposals.

> . . . [A]ll agencies of the Federal Government shall —
>
> (A) Utilize a systematic, interdisciplinary approach. . . in planning and decisionmaking . . .
>
> (B) Identify methods and procedures, in consultation with the Council on Environmental Quality . . . , which will insure that presently unquantified environmental . . . values may be given appropriate consideration . . .
>
> (C) Include in every recommendation . . . on proposals for . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement . . . on . . . the environmental impact of the proposed action . . . (i) any adverse impacts . . . (ii) alternatives to the proposed action [and] (iii) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. . . .
>
> (H) Initiate utilize ecological information in . . . planning and development . . . .
>
> National Environmental Policy Act, Section 102

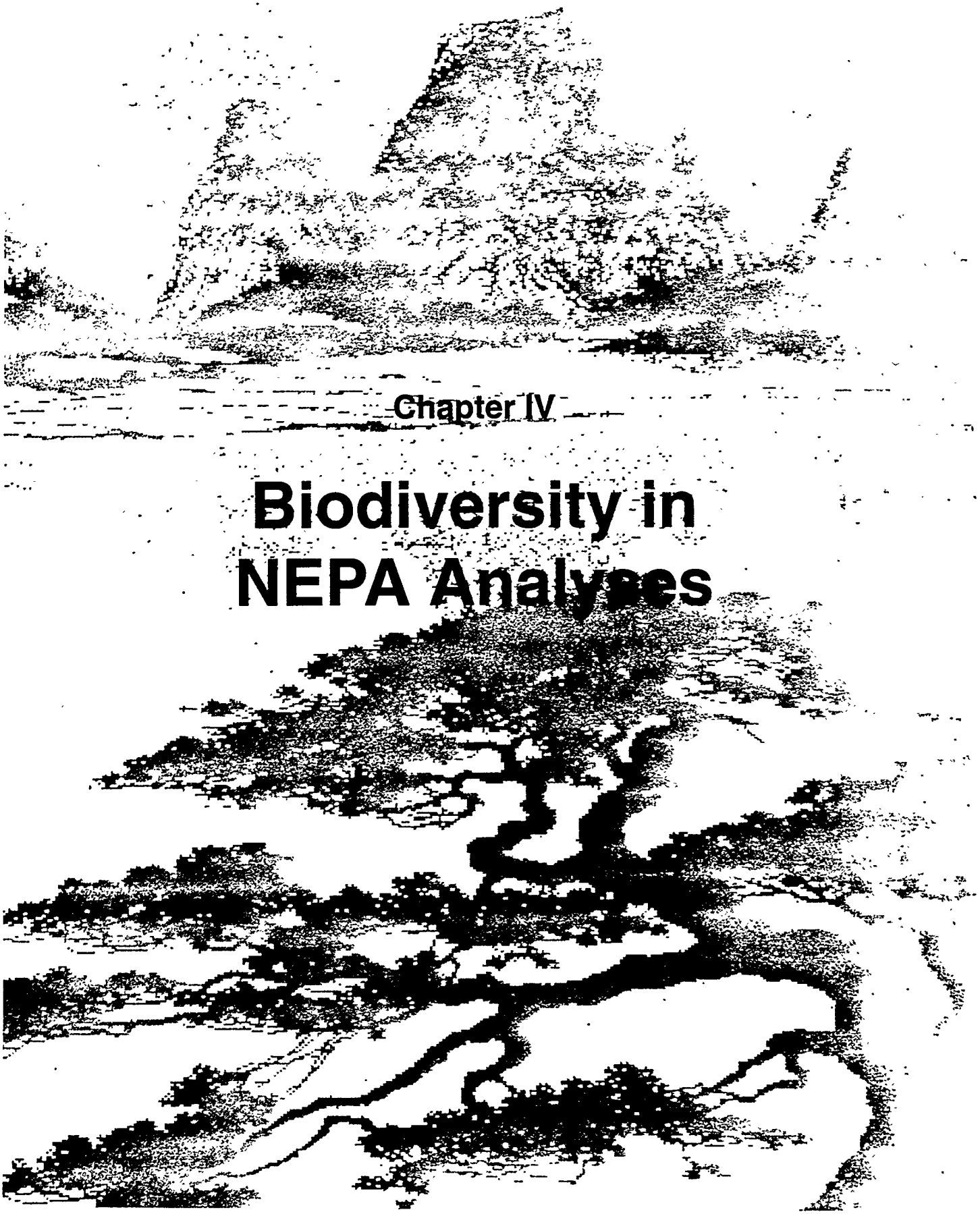
The full potential of NEPA as a means to address the conservation of biodiversity lies in the effective linkage of Sections 101 and 102. NEPA's combination of broad consideration of environmental impacts and a specific mechanism to address them provide an opportunity for significant improvement in biodiversity protection.

The procedures set forth in Section 102(2)(C) and subsequent implementing regulations issued by CEQ provide the framework under which federal agencies evaluate the effects of their programs and projects on the environment. The Section 102(2)(H) requirement that agencies use ecological information is relevant because biodiversity and its conservation are currently the major focus of ecological research and applications.

An important aspect of the NEPA process is that it can serve to coordinate consideration of substantive requirements of other environmental statutes, including laws designed to protect special species or areas (such as the Endangered Species Act, Marine Mammal Protection Act, and Wilderness Act). In addition, proper application of the NEPA process can reduce conflicts over resource management now burdening the Endangered Species Act by providing a mechanism for consideration of overall ecosystem health issues and of the needs of specific species prior to their becoming threatened or endangered. NEPA also requires a broad examination of environmental effects, including those not specifically addressed by other laws; this integrated assessment is particularly well suited to the consideration of biodiversity. Although federal agencies have routinely evaluated the effects of their proposed actions on certain specific resources (primarily wetlands and endangered species) in their NEPA analyses, they have not usually included the full range of effects or the appropriate scale required for adequate consideration of biodiversity. With the growing recognition of biodiversity losses, a few federal agencies have begun to incorporate consideration of biodiversity in their NEPA assessments. Most have not yet done so.

In addition to broadening their NEPA analyses to include biodiversity, many agencies need to strengthen the effectiveness with which they utilize the NEPA process. The ultimate effectiveness of NEPA depends upon the degree to which federal agencies use it to integrate environmental objectives into their planning and decisionmaking processes. NEPA should be used as a planning tool, not simply as a mechanism for tabulating impacts of projects that are already in the design stage. The degree to which agencies accomplish this varies widely among agencies.

The extent to which biodiversity in considered in future NEPA analyses of federal actions will strongly affect whether biodiversity is adequately protected in the coming decades. It is critical that federal agencies understand and take into account general principles of biodiversity conservation in their decisionmaking. However, biodiversity cannot be adequately conserved on the federal level alone. Even though federal lands and resources play a major role, the protection of biological resources will require concerted efforts by all levels of government and the private sector. NEPA addresses the effects of federal actions whether or not they involve federally managed lands or resources.



Chapter IV

Biodiversity in NEPA Analyses

Successful implementation of the principles of biodiversity management requires that they be effectively integrated into the NEPA process. The principles and approaches outlined in this report are intended to be sufficiently flexible to be considered in all aspects of environmental impact analysis under NEPA.

It is important to stress, however, that this report should not be interpreted as requiring that every NEPA document contain a perfunctory biodiversity section, whether or not there are likely impacts on biodiversity.

Determining the Appropriate Extent of Analysis

For any potential impact, including those on biodiversity, determining the extent and nature of analysis under NEPA involves consideration of both the context and intensity of likely effects. CEQ regulations state that, in environmental impact statements,

> [I]mpacts shall be discussed in proportion to their significance. There shall be only a brief discussion of other than significant issues. . . . [t]here should be only enough discussion to show why more study is not warranted. 40 CFR 1502.2(b)

In most cases, determination of the level of discussion on biological diversity should, as with all impacts, be made during the scoping process. While scoping is mandatory only for the preparation of EISs, some agencies, such as the U.S. Forest Service, find it valuable to engage in an appropriate level of scoping for actions subject to the preparation of environmental assessments. The scoping process should be used to identify whether biological diversity will be an important consideration in the environmental analysis, and

Implementation of the NEPA Process

Integrating environmental concepts into decisionmaking demands that the NEPA process start early in an agency's planning process. The CEQ regulations implementing NEPA require an agency to begin the preparation of a NEPA analysis as close as possible to the time the agency is developing or is presented with a proposal. NEPA analysis must not be a justification for a decision already made.

Each federal agency promulgates its own NEPA procedures, consistent with the CEQ regulations, which address how NEPA is to be applied to that agency's activities. Among other things, the agency procedures identify the appropriate level of environmental analysis required for the agency's normal activities. Actions which typically have a significant impact on the quality of the human environment require preparation of an EIS. Actions which may or may not have a significant environmental impact, depending upon the situation, are the subject of briefer documents known as environmental assessments (EAs). Agencies usually follow EAs by either a Finding of No Significant Impact (FONSI) or a decision to prepare an EIS. Actions which normally do not have, either individually or cumulatively, a significant environmental impact, are categorically excluded from NEPA documentation.

In NEPA analysis, the agency must fully consider the proposed action and its environmental consequences and all reasonable alternatives and their environmental consequences. The alternatives section is generally known as the "heart of the EIS."

Public participation is a critical element of the NEPA process. The process of preparing an EIS commences with the publication of a Notice of Intent which contains some basic information about the agency's proposal and set's forth the schedule for the agency's scoping process. Scoping involves interested federal, state and local agencies, private organizations, members of the public, and it applicable, the applicant. During the scoping process, the important issues for analysis is an EIS are identified, as well as other environmental review requirements. All members of the public, as well as interested agencies, are afforded at least a 45-day review and comment period upon publication of the draft EIS. The responsible lead federal agency must then respond to all substantive comments in the final EIS.

When an agency makes a decision on a proposal requiring an EIS, the agency must demonstrate that it has adequately considered environmental values by preparing a Record of Decision (ROD) no sooner than 30 days after publication of the final EIS. The ROD must state what the decision was, identify all alternatives considered by the agency in reaching its decision, specify the alternative which was considered to be environmentally preferable, and state whether all practicable means to avoid or minimize environmental harm from the selected alternative have been adopted and if not, why not.

also to allocate assignments for any special studies and analyses in that regard. Scoping is also the point at which an agency should determine which issues do not warrant further attention in the NEPA process.

Current NEPA Practice

The NEPA process has contributed significantly to the protection of biological resources. For example, agencies have evaluated the effects of their programs and projects on (1) threatened and endangered species, (2) sensitive habitats such as wetlands, and (3) protected areas such as parks and refuges. In many cases, NEPA analyses have helped protect these resources by identifying the need to avoid or otherwise mitigate the most serious impacts. At the same time, the focus on a limited set of statute-driven or regulation-driven elements (e.g., endangered species) has significantly lessened the ability of NEPA analyses to consider the full range of biodiversity issues.

Examples of the weaknesses found in current NEPA analyses are given in the box below. Such weaknesses result from a tendency to address only parts of the biodiversity problem (e.g., impacts to endangered species, wetlands, and preserves) or from a lack of effectiveness in conducting rigorous biological assessments. Current NEPA analyses often (1) focus on species, rather than ecosystems; (2) address the site scale, rather than the ecosystem or regional scale; and (3) concentrate on immediate short-term impacts, rather than likely future impacts. Because of these weaknesses, major impacts may be missed, as in the case of indirect effects arising from biodiversity components or interactions not considered in the assessment. For this reason, agencies would benefit from giving explicit consideration to biodiversity goals and strategies against which they can assess the impacts of their programs and projects.

Levels of Analysis and Decisionmaking

NEPA documents can address three scales of federal activity: the national, regional, and project levels. When agencies undertake NEPA analysis at any of these levels,

Examples of Weakness in Current NEPA Practice

- **Inadequate consideration of "non-listed" species.** Agencies should address the requirements of the Endangered Species Act in EISs and EAs. Certainly, impacts to threatened and endangered species directly affect biodiversity. However, only about 600 U.S. species are officially listed as threatened or endangered, which estimates indicate that as many as 9,000 species may currently be at risk. Reliance on listed threatened and endangered species is likely to address only a small portion of the nation's imperiled biodiversity.

- **Inadequate consideration of "non-protected" areas.** While NEPA documents may give adequate recognition to impacts on areas that have been set aside as parks or refuges, or are already identified as meriting special protection (e.g., wetlands), they often do not consider areas that have not been so designated, but that are equally important to biodiversity.

- **Inadequate consideration of "non-economically important" species.** The potential effects on species of recreational and comercial importance are also often considered. However, some practices intended to maximize protection or production of these species conflict with wider biodiversity objectives. For example, the impoundment of salt marshes to create waterfowl habitat can reduce estuarine biodiversity. The stocking of rainbow trout for sport and commercial fisheries has resulted in the replacement of wild brook trout in Appalachian streams, and the endangerment of native squawfish, chubs, and suckers in the Colorado River system. The creation of forest openings and edge habitat favoring game species is now recognized as causing severe impacts to interior forest-dwelling species.

- **Inadequate consideration of cumulative impacts.** Finally, and perhaps most importantly, the majority of EISs and environmental assessments deal only with project-specific considerations. If effects on biodiversity are to be adequately assessed, it must be done on an ecosystem or regional scale, taking into account cumulative effects. Avoidance or mitigation of impacts at the project level (such as redesigning a highway to avoid damaging a sensitive bog, or modifying a coal lease to protect a raptor nesting area) has been, and will continue to be, critically important in minimizing biodiversity losses. Yet, in the absence of protection at the larger scale, ecosystem patterns and processes so important to biodiversity will not be sustained over the long term.

they should consider whether the reduction in biodiversity is likely to be a relevant and significant issue. Not all federal actions subject to NEPA procedures will affect biodiversity. However, for actions where non-trivial impacts on biodiversity may occur, the responsible agency should address the impacts of the proposed action, each alternative action, and any mitigation measures.

National

Proposed agency policies, programs, and regulations can significantly affect biodiversity, and programmatic EISs can effectively consider these impacts. Agencies can assess whether a proposed program is likely to result in the widespread application of practices known to reduce diversity, or whether the activity encourages measures favorable to the protection of biodiversity. Programmatic EISs can be useful in estimating the total cumulative impact on biodiversity, especially where programs consist of a number of projects that individually may have insignificant effects on biodiversity. While such evaluations are necessarily general, they can result in policy that guides more specific consideration of biodiversity conservation in subsequent tiered, project-level analyses. Although the number of national programmatic EISs is relatively small, and the loss of biodiversity may not be a relevant issue for some, programmatic EISs for major new federal programs provide an invaluable opportunity for setting the framework through which an agency can evaluate and articulate policy guidance concerning biodiversity.

Regional

Analyses at the regional scale can most easily employ the principles of ecosystem management needed to protect biodiversity over the long term. The most obvious opportunities for the use of NEPA assessments to address biodiversity at this scale occur when the NEPA process is integrated into the planning process of an agency responsible for managing large areas of public land or waters. Examples have been cited of the management plans and associated environmental impact statements being prepared by the U.S. Forest Service and the Bureau of Land Management.

U.S. Forest Service Northern Goshawk Guidelines [17]

Possible declining populations and reproduction of the goshawk, a forest habitat generalist, in western North America has been associated with tree harvests, as well as other factors. This prompted the U.S. Forest Service to prepare *Management Recommendations for the Northern Goshawk in the Southwestern United States* (August 1992). These guidelines, for which no NEPA analysis has been conducted, will be used to develop national forest plans in the Southwestern Region that will sustain goshawk populations and also benefit forest health, soil productivity, and the habitats of other old-growth-dependent plants and animals.

The study emphasizes that both a large-scale geographic approach and an ecosystem perspective are necessary for managing a wide-ranging high-level predator such as the goshawk. The Northern Goshawk Scientific Committee (GSC) established by the U.S. Forest Service developed a set of "desired forest conditions" estimated to sustain goshawk populations in the Southwestern Region. Declining goshawk numbers have been attributed to the effects of human influence in these forests, including loss of a herbaceous and shrubby understory, reduction in the amount of older forests, and increased areas of dense tree regeneration. Key objectives of the GSC guidelines are to provide (1) nesting, post-fledging, and foraging areas for goshawks, and (2) habitat to support abundant populations of 14 primary goshawk prey. An important goal is to dampen extreme fluctuations of goshawk populations caused by fluctuations in prey abundance by providing for a wider variety of prey species. Therefore, the "desired forest conditions" include maintenance of specific habitat attributes utilized by important prey species, such as snags, downed logs, woody debris, large trees, openings, herbaceous and shrubby understories, and an intermixture of various forest vegetation structural stages. Management prescriptions include thinning trees in the understory, creating small openings, and conducting controlled burns to meet the desired forest conditions. Because of the need to manage for a wide variety of species to sustain goshawk populations, the GSC used a landscape ecology approach that considers habitats and food chains for many wildlife species. The approach also provides for other elements of a functioning ecosystem—recurring fires, productive soils, forest productivity and health, genetic diversity, woody debris, large snags and downed logs, microorganisms, invertebrates, and vertebrates. These recommendations represent a shift from single-species and stand-level management to management of ecosystems and they are, in essence, recommendations for maintaining biodiversity, that will, at the same time, maintain healthy, productive forests relatively safe from catastrophic fires and pests.

Federal land management plans are not the only opportunities for addressing biodiversity on a regional scale. For example, a number of agencies have prepared regional programmatic EISs for federal leasing or regulatory actions. Typical examples are Minerals Management Service EISs for oil and gas leasing, Bureau of Land Management regional coal leasing EISs, and Federal Energy Regulatory Commission hydropower licensing and relicensing EISs. Federal water resource development and management plans, developed for entire watersheds or river basins, and fisheries management plans for marine areas also afford important opportunities to incorporate biodiversity concerns into NEPA analyses at a regional scale.

It is both ineffective and inefficient for multiple individual agencies to duplicate the task of describing the biota and ecosystem processes of the same geographic area for the purposes of environmental analysis.

A more effective and less costly approach would be for several agencies to pool resources and information to describe the biological resources of the affected environment on a regional or ecosystem scale. Such coordinated efforts can provide input to planning and analysis for all participating agencies. NEPA is sufficiently flexible to allow for various configurations in developing such regional frameworks, and agencies should be innovative in pursuing such opportunities.

Site-Specific

Most NEPA analyses are prepared for individual projects. Therefore, it is critical that federal agencies develop the capabilities to evaluate project-level activities within the context of clearly defined regional biodiversity goals. As a first step, agencies can strengthen the evaluation of biodiversity in their project-specific EISs and EAs by applying the general principles set forth in this report. As a second step, information from projects of the same general type can be assembled to provide more specific guidelines on likely biodiversity impacts.

Agencies need to consider the bigger picture when assessing the effects of individual actions. The cumulative and indirect impacts of individual projects should be evaluated in the regional or ecosystem context. Agencies should carefully consider whether regional resource management plans or analyses already exist that will enable them to evaluate the effects of their individual projects within a broader, regional perspective.

Even in the absence of regional plans that include biodiversity goals, efforts should be made to identify any specific ecosystems, communities, or species that are particularly jeopardized within the geographic region in question. There are losses of special concern in almost every ecoregion, such as bottomlands hardwoods, old-growth forest, wetlands, free-flowing streams, and native prairie. Identification of these problems through scoping, review of existing literature and databases (such as the Natural Heritage Network), and querying experts is an important step in placing project-specific losses in an ecosystem context. In some cases, state or regional studies of biodiversity can help provide this bigger picture.

Components of NEPA Analysis

Throughout the NEPA process, the general principles outlined in this report can be applied. Specifically, agencies can incorporate biodiversity considerations into each step of their NEPA analyses: scoping, analysis, mitigation, and monitoring.

Scoping

During the scoping process, the lead agency should determine whether the proposed action may affect biodiversity. If so, the agency can begin to identify sources of information on the distribution and characteristics of potentially affected species, communities, and ecosystems to establish a baseline of existing biodiversity conditions. The characterization of ecological resources also facilitates the development of an ecosystem framework for further data gathering and subsequent analysis of potential project impacts. Included in the development of the ecosystem framework is the identification of ecological goals and objectives. The lead agency also can ask other agencies with special expertise or jurisdiction by law to be cooperating agencies and to prepare portions of the EIS.

It is important that information be collected on the distribution and status of entire ecosystems or habitats that could be impacted by the proposed action. Assessment of potential impacts at the ecosystem level will aid in the protection of the majority of the animals, plants, and microorganisms. Information on species populations and communities that are rare, sensitive, or otherwise in need of special protection (e.g., small, endemic populations confined to localized areas) is essential as well.

Many agencies already possess substantial natural resource information. Others are conducting new research

or entering cooperative arrangements to increase their data sources. In addition, nongovernmental and academic institutions can provide a wealth of useful information. As previously stated, clear benefits are to be gained from sharing expertise, technical capabilities, and information, leading to improved environmental decisionmaking. Agencies need not sponsor regional ecosystem planning efforts to benefit from them, and those agencies whose primary mission does not involve natural resource management can nonetheless make good use of existing efforts sponsored by other agencies or organizations.

Analysis of Impacts

Once the necessary background information has been obtained, the potential direct, indirect, and cumulative impacts on biodiversity of each of the proposed actions and alternatives can be determined. This task requires the careful evaluation of the effects of the proposed action on attaining ecological goals and objectives. Biodiversity analyses should consider both the factors contributing to loss of biodiversity discussed in Chapter I of this report and the general principles for conserving biodiversity presented in Chapter II. A wide range of techniques can be used to evaluate these ecological impacts including checklists, matrices, mathematical models, and cartographic displays. No one technique is suitable for all situations.

Agencies seeking to consider biodiversity in their project-level environmental analyses must address the same problems faced in other cumulative impact analyses. A basic problem is the disparity between administrative and ecological boundaries, that is, differences between the scope of the project decision and the scale of potential impacts in both time and space. There are also difficulties in estimating possible future actions on the same resource, and the additive or synergistic effects of multiple stresses. This report suggests a number of ways in which agencies can seek to establish a broader, ecosystem context to help address this issue.

For many situations, assessment of cumulative impacts on the regional scale, which is so important to understanding threats to biodiversity, poses major difficulties. Frequently the region-specific data necessary for such assessments are lacking, particularly within the time and resource constraints often involved in preparing environmental analyses. This emphasizes the need for federal agencies to cooperate in developing regional baseline information. Even for small projects, it should always be the objective of the environmental document to analyze impacts at the largest relevant scale, based on the affected resources and expected impacts.

Mitigation

Appropriate mitigation measures should be identified in response to potential impacts on biodiversity. Mitigation measures should be developed within the ecosystem framework and should consider the possible impacts of the mitigation itself. Agencies may identify measures through the NEPA process that can be implemented through direct management of federal lands and resources, or through the use of regulatory authority, economic incentives, and other mechanisms.

Monitoring

Monitoring is essential to understanding the effects of a project. It is likewise critical to evaluating the degree of implementation and success or failure of mitigation efforts. Effects observed through monitoring can help modify project management or improve future decisionmaking on projects with similar impacts, or in similar areas. It is unlikely that adequate information on project effects and mitigation implementation and success will be obtained unless it is provided for in the monitoring program

Many of the elements necessary for adequate monitoring will have been developed as part of project planning and environmental analysis. These include the following[18]:

- Gathering data.
- Establishing baseline conditions.
- Identifying ecological elements at risk.
- Selecting ecological goals and objectives.
- Predicting likely project impacts.
- Establishing the objectives of mitigation.

The following additional monitoring-specific steps can build upon these elements:

- Formulate specific questions to be answered by monitoring.
- Select indicators.
- Identify control areas/treatments.
- Design and implement monitoring.
- Confirm relationships between indicators and goals and objectives.
- Analyze trends and recommend changes to management.

The breadth and specificity of the monitoring program will be determined by the biodiversity goals and objectives established as part of project planning and environmental analysis.

Obstacles

As the steps required to attain biodiversity goals and objectives become better defined, a number of obstacles emerge. Science, institutional behavior, and policy and decisionmaking processes may pose challenges that, at least for the present, can hinder agencies' ability to fully embrace and implement policies, procedures, and activities that would enhance the conservation of biological diversity.

Lack of recognition of the issue.

Managers and analysts may not be familiar with the concept of biodiversity, understand its importance, or recognize the fact that there are practical steps that may be taken to incorporate it into planning, analysis, and decisionmaking.

Lack of information.

There are major gaps in knowledge concerning the status and distribution of biota and ecosystems in the United States.

Lack of awareness of existing information.

Valuable information that has been collected may be effectively unavailable because its existence is not widely known or because it has not been organized or made readily accessible. While real gaps do exist, there is a wealth of valuable information in federal, state, and local agencies, nongovernmental organizations, and academic institutions.

Lack of understanding.

Incomplete understanding of certain conceptual and practical aspects of ecosystem management and biodiversity conservation can serve as a barrier to greater incorporation of these issues into decisionmaking. There is much to be learned concerning how ecosystems function. There is a lack of overall consensus about the selection and assessment of ecological indicators. Improvements in predicting the effects of stress on ecosystems are needed, as are better general methods for establishing the spatial and temporal boundaries of impacts and analyses.

Disparity between administrative and ecological boundaries.

Agency jurisdictional boundaries rarely conform to ecological boundaries. Consequently, there are often differences between the scope of a project decision and the scale of potential impacts in both time and space. This problem tends to reveal itself in inadequate analyses of indirect and cumulative impacts.

Institutional infrastructure.

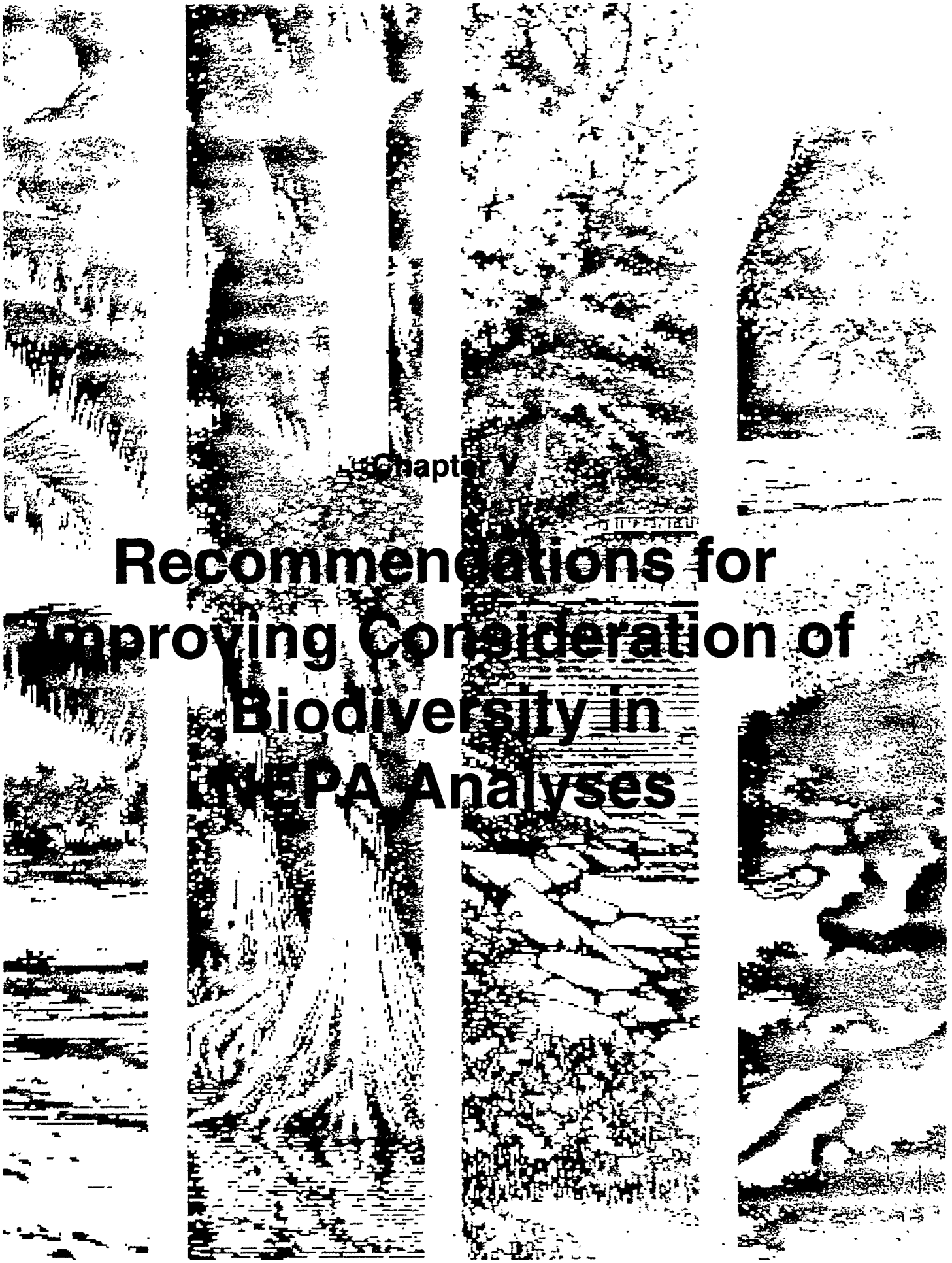
Separate jurisdictions, differing missions, and compartmentalization of disciplines within and among agencies make it very difficult to establish an ecosystem-based approach to protecting or conserving biological diversity. For the most part, agencies (and units within them) are not organized, formally or informally, around an ecosystem model. There is little experience in bringing together the necessary components for successful ecosystem approaches such as expertise, information, technical capabilities, and appropriate mandates.

Absence of regional ecosystem plans.

A real need exists for cohesive regional ecosystem plans and strategies that provide specific biodiversity goals and objectives against which the impacts of proposed activities can be assessed. Such plans would serve as focal points around which government agencies at all levels could coordinate their activities in an effective, efficient, and nonredundant manner.

Despite several examples, such plans are, at present, much more the exception than the rule (see the box on p. 9). The process of developing interagency, intergovernmental, or public-private relationships to gather information and address concerns across such boundaries can be initially time-consuming and costly, despite both the need and the potential for making better and more efficient decisions.

Finding ways to stem current losses of biodiversity raises many complex science and policy questions. There are no easy answers. However, the challenges and obstacles discussed here do not preclude serious consideration of biodiversity in NEPA analyses within existing institutional arrangements and with presently available information.



Chapter V

Recommendations for Improving Consideration of Biodiversity in NEPA Analyses

RECOMMENDATIONS FOR IMPROVING CONSIDERATION OF BIODIVERSITY IN NEPA ANALYSES

This report summarizes an important body of current ecological thinking on biodiversity conservation. It also describes a framework and general principles for considering, under NEPA, the effects of federal actions on biodiversity. Practical approaches to biodiversity conservation are continuing to evolve rapidly. CEQ will continue to monitor progress in this field.

The National Environmental Policy Act (NEPA) provides a mandate and a framework for federal agencies to consider all reasonably foreseeable environmental effects of their actions. To the extent that federal actions affect biodiversity, and that it is possible to both anticipate and evaluate those effects, NEPA requires federal agencies to do so.

The basic conclusion to draw from this report is that conceptual frameworks, analytical tools and information are currently available to support such analysis.** A few agencies have already made progress in doing so; others have not yet begun to address the issue.

1. **Acknowledge the conservation of biodiversity as national policy and incorporate its consideration in the NEPA process.**

Agencies should ensure that both staff responsible for conducting environmental impact analyses and decisionmakers responsible for considering the findings of those analyses are familiar with the importance of the biodiversity issue and its relevance to their work. Agency-sponsored environmental training courses should discuss biodiversity and how best to consider it in the NEPA process and in all planning, design, and management.

2. **Encourage and seek out opportunities to participate in efforts to develop regional ecosystem plans.**

Regional ecosystem frameworks are a critical element of conserving biological diversity. Such regional efforts can provide an ecosystem framework for evaluating the impacts of individual projects on biodiversity, and provide a common basis for describing the affected environment. Both will save time and financial resources in preparing NEPA documents.

Agencies should investigate and consider participation in efforts that may be already in progress in areas where they have jurisdiction or interest.

Some regional frameworks exist that do not explicitly address biodiversity. In such cases, agencies should consider establishing specific goals and objectives for the conservation of biodiversity, within those frameworks.

Finally, where such efforts are lacking entirely, agencies should consider initiating them.

3. **Actively seek relevant information from sources both within and outside government agencies.**

While information on the status and distribution of biota is incomplete, a great deal of information is available from a wide variety of sources. Agencies should look to each other, to state agencies, and to academic and other non-governmental entities. By doing so, agencies can benefit from the resources and technical capabilities of others and reduce the costs associated with collecting and managing information on which ecosystem and biodiversity analyses depend.

4. **Encourage and participate in efforts to improve communication, cooperation, and collaboration between and among governmental and non-governmental entities.**

Improved communication, cooperation, and collaboration will enormously improve the prospects for overcoming the barriers described earlier. Working with others can help to identify common interests and overlapping or complementary missions, and can lead to mutual sharing of information, technical capabilities, and expertise. Efforts to do so will require support at the management and policy-making levels within agencies, as well as at the level of the staff responsible for carrying out NEPA analyses.

Such efforts also can enable agencies to focus their research and data collection efforts on real information gaps rather than duplicating the efforts of others. The inventory and analysis being undertaken by the Federal Coordinating Council on Science, Engineering, and Technology's Subcommittee on Environmental Biology will improve communication concerning biodiversity research and reduce duplication.

** CEQ regulations at 40 CFR 1502.22 provide a framework for agencies to proceed when faced with incomplete or unavailable information.

*** The Federal Coordinating committee on Science, Engineering and Technology (FCCSET) is coordinated by Office of Science and Technology Policy (OSTP) within the Executive Office of the President

5. Improve the availability of information on the status and distribution of biodiversity, and on techniques for managing and restoring it.

Agencies that support or sponsor research and development efforts that will improve our ability to evaluate and manage for biodiversity should ensure that the information they obtain is maintained in a format that is useful and is readily accessible.

Agencies should consider opportunities to cooperate with and benefit from the National Biodiversity Center, presently in the planning and design stages. A key role of the Center will be to identify existing ecological information and make it more readily available for use in environmental planning and assessment.

6. Expand the information base on which biodiversity analyses and management decisions are based.

Basic research is needed into a host of issues relating to both ecosystem management and biodiversity conservation. These include ecosystem functioning; selection of indicators; prediction of the effects of change on ecosystems; and establishment of spatial and temporal boundaries for impacts and analyses.

Agencies should recognize the research opportunities afforded by projects, and consider sponsoring or cooperating with academic institutions, private industry, and others on research to advance ecological understanding.

Appendices and References

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The report was reviewed in draft by a group of distinguished individuals with recognized expertise in the relevant areas of science and policy. The reviewers provided valuable input and suggestions for revisions, but bear no responsibility for the final product.

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Examples of Biodiversity Indicator Variables

Indicator variables for inventorying, monitoring, and assessing terrestrial biodiversity at four levels of organization, including compositional, structural, and functional components; Also includes a sampling of inventory and monitoring tools and techniques.

	Indicators			
	Composition	**Structure**	**Function**	**Inventory and Monitoring Tools**
Regional Landscape	Identity, distribution, richness, and proportions of patch (habitat) types and multipatch landscape types; collective patterns of species distributions (richness, endemism)	Heterogeneity; connectivity; spatial linkage; patchiness; porosity; contrast; grain size; fragmentation; configuration; juxtaposition; patch size frequency distribution; perimeter-area ratio; pattern of habitat layer distribution	Disturbance processes (areal extent, frequency, or return interval, rotation period, predictability, intensity, severity, seasonality); nutrient cycling rates; energy flow rates; patch persistence and turnover rates; rates of erosion and geomorphic and hydrologic processes; human land-use trends	Aerial photographs (satellite and conventional aircraft) and other remote sensing data; Geographic Information System (GIS) technology; time series analysis; spatial statistics; mathematical indices (of pattern, heterogeneity, connectivity, layering, diversity, edge, morphology, autocorrelation, fractal dimension)
Community-Ecosystem	Identity, relative abundance, frequency, richness, evenness, and diversity of species and guilds; proportions of endemic, exotic, threatened, and endangered species; dominance-diversity curves; life-form proportions; similarity coefficients; C4:C3 plant species ratios	Substrate and soil variables; slope and aspect; vegetation biomass and physiognomy; foliage density and layering; horizontal patchiness; canopy openness and gap proportions; abundance, density, and distribution of key physical features (e.g., cliffs, outcrops, sinks) and structural elements (snags, down logs); water and resource (e.g., mast) availability; snow cover	Biomass and resource productivity; herbivory, parasitism, and predation rates; colonization and local extinction rates; patch dynamics (fine-scale disturbance processes), nutrient cycling rates; human intrusion rates and intensities	Aerial photographs and other remote sensing data; ground-level photo stations; time series analysis; physical habitat measures and resource inventories; habitat suitability indices (HSI, multispecies); observations, censuses and inventories, captures. and other sampling methodologies; mathematical indices (e.g., of diversity, heterogeneity,layering dispersion, biotic integrity)
Population-Species	Absolute or relative abundance; frequency; importance or cover value; biomass; density	Dispersion (microdistribution); range (macrodistribution); population structure (sex ratio, age ratio); habitat variables (see community-ecosystem structure, above); within-individual morphological variability	Demographic processes (fertility, recruitment rate, survivorship, mortality); metapopulation dynamics; population genetics (see below); population fluctuations; physiology; life history; phenology; growth rate (of individuals); acclimation; adaptation	Censuses (observations, counts, captures, signs, radio-tracking); remote sensing; habitat suitability index (HSI); species-habitat modeling; population viability analysis
Generic	Allelic diversity; presence of particular rare alleles, deleterious recessives, or karyotypic variants	Census and effective population size; heterozygosity; chromosomal or phenotypic polymorphism; generation overlap; heritability	Inbreeding depression; outbreeding rate; rate of genetic drift; gene flow; mutation rate; selection intensity	Ectrophoresis; karyotypic analysis; DNA sequencing; offspring-parent regression; sib analysis; morphological analysis

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58 Fed. Reg. 6478 (Jan. 29, 1993)

MEMORANDUM

TO: Heads of Federal Departments and Agencies

FROM: Michael R. Deland

SUBJECT: Pollution Prevention and the National Environmental Policy Act

DATE: January 12, 1993

Introduction

Although substantial improvements in environmental quality have been made in the last 20 years by focusing federal energies and federal dollars on pollution abatement and on cleaning up pollution once it has occurred, achieving similar improvements in the future will require that polluters and regulators focus more of their efforts on pollution prevention. For example, reducing non-point source pollution--such as runoff from agricultural lands and urban roadways--and addressing cross-media environmental problems--such as the solid waste disposal problem posed by the sludge created in the abatement of air and water pollution--may not be possible with "end-of-the-pipe" solutions.

Pollution prevention techniques seek to reduce the amount and/or toxicity of pollutants being generated. In addition, such techniques promote increased efficiency in the use of raw materials and in conservation of natural resources and can be a more cost-effective means of controlling pollution than does direct regulation. Many strategies have been developed and used

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to reduce pollution and protect resources, including using fewer toxic inputs, redesigning products, altering manufacturing and maintenance processes, and conserving energy.[1]

This memorandum seeks to encourage all federal departments and agencies, in furtherance of their responsibilities under the National Environmental Policy Act (NEPA), to incorporate pollution prevention principles, techniques, and mechanisms into their planning and decisionmaking processes and to evaluate and report those efforts, as appropriate, in documents prepared pursuant to NEPA.

Background

NEPA provides a longstanding umbrella for a renewed emphasis on pollution prevention in all federal activities. Indeed, NEPA's very purpose is "to promote efforts which will prevent or eliminate damage to the environment...." 42 USC § 4321.

Section 101 of NEPA contains Congress' express recognition of "the profound impact of man's activity on the interrelations of all components of the natural environment" and declaration of the policy of the federal government "to use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony...." 42 USC § 4331(a). In order to carry out this environmental policy,

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[1] For a discussion of such strategies and activities, see the Council on Environmental Quality's 20th Environmental Quality report, at 215-257 (1989); 21st Environmental Quality report, at 79-133 (1990); and 22nd Environmental Quality report, at 151-158 (1991).

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Congress required all agencies of the federal government to act to preserve, protect, and enhance the environment. See 42 USC § 4331(b).

Further, Section 102 of NEPA requires the federal agencies to document the consideration of environmental values in their decisionmaking in "detailed statements" known as environmental impact statements (EIS). 42 USC § 4332(2)(C)). As the United States Supreme Court has noted, the "sweeping policy goals announced in § 101 of NEPA are thus realized through a set of 'action-forcing' procedures that require that agencies take a 'hard look' at environmental consequences." Robertson v. Methow Valley Citizens Council, 490 U.S. 332 (1989).

The very premise of NEPA's policy goals, and the thrust for implementation of those goals in the federal government through the EIS process, is to avoid, minimize, or compensate for adverse environmental impacts before an action is taken. Virtually the entire structure of NEPA compliance has been designed by CEQ with the goal of preventing, eliminating, or minimizing environmental degradation. Thus, compliance with the goals and procedural requirements of NEPA, thoughtfully and fully implemented, can contribute to the reduction of pollution from federal projects, and from projects funded, licensed, or approved by federal agencies.

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Defining Pollution Prevention

CEQ defines and uses the term "pollution prevention" broadly. In keeping with NEPA and the CEQ regulations implementing the procedural provisions of the statute, CEQ is not seeking to limit agency discretion in choosing a particular course of action, but rather is providing direction on the incorporation of pollution prevention considerations into agency planning and decisionmaking.

"Pollution prevention" as used in this guidance includes, and is not limited to, reducing or eliminating hazardous or other polluting inputs, which can contribute to both point and non-point source pollution; modifying manufacturing, maintenance, or other industrial practices; modifying product designs; recycling (especially in-process, closed loop recycling); preventing the disposal and transfer of pollution from one media to another; and increasing energy efficiency and conservation. Pollution prevention can be implemented at any stage--input, use or generation, and treatment--and may involve any technique--process modification, waste stream segregation, inventory control, good housekeeping or best management practices, employee training, recycling, and substitution. Indeed, any reasonable mechanism which successfully avoids, prevents, or reduces pollutant discharges or emissions other than by the traditional method of treating pollution at the discharge end of a pipe or a stack

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should, for purposes of this guidance, be considered pollution prevention.[2]

Federal Agency Responsibilities

Pursuant to the policy goals found in NEPA Section 101 and the procedural requirements found in NEPA Section 102 and in the CEQ regulations, the federal departments and agencies should take every opportunity to include pollution prevention considerations in the early planning and decisionmaking processes for their actions, and, where appropriate, should document those considerations in any EISs or environmental assessments (EA) prepared for those actions.[3] In this context, federal actions encompass policies and projects initiated by a federal agency

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[2] It should be noted that EPA, in accordance with the Pollution Prevention Act of 1990 (Pub. L. No. 101-508, §§ 6601 et seq.), uses a different definition, one which describes pollution prevention in terms of source reduction and other practices which reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources or the protection of natural resources by conservation. "Source reduction" is defined as any practice which reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, treatment, or disposal and which reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

[3] Under Section 309 of the Clean Air Act (42 USC § 7609), EPA is directed to review and comment on all major federal actions, including construction projects, proposed legislation, and proposed regulations. In addition, the Pollution Prevention Act of 1990 directs EPA to encourage source reduction practices in other federal agencies. EPA is using this authority to identify opportunities for pollution prevention in the federal agencies and to suggest how pollution prevention concepts can be addressed by the agencies in their EISs and incorporated into the wide range of government activities.

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itself, as well as activities initiated by a non-federal entity which need federal funding or approval. Federal agencies are encouraged to consult EPA's Pollution Prevention Information Clearinghouse which can serve as a source of innovative ideas for reducing pollution.

1. Federal Policies, Projects, and Procurements

The federal government develops and implements a wide variety of policies, legislation, rules, and regulations; designs, constructs, and operates its own facilities; owns and manages millions of acres of public lands; and has a substantial role as a purchaser and consumer of commercial goods and services--all of these activities provide tremendous opportunities for pollution prevention which the federal agencies should grasp to the fullest extent practicable. Indeed, some agencies have already begun their own creative pollution prevention initiatives:

Land Management

The United States Forest Service has instituted best management practices on several national forests. These practices include leaving slash and downed logs in harvest units, maintaining wide buffer zones around streams, and encouraging biological diversity by mimicking historic burn patterns and other natural processes in timber sale design and layout. The beneficial effects have been a reduction in erosion, creation of fish and wildlife habitat, and the

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elimination of the need to burn debris after logging--in other words, a reduction of air and water pollution.

The National Park Service and the Bureau of Reclamation have implemented integrated pest management programs which minimize or eliminate the use of pesticides. In addition, in some parks storm water runoffs from parking lots have been eliminated by replacing asphalt with the use of a "geo-block" system (interlocking concrete blocks with openings for grass plantings). The lot is mowed as a lawn but has the structural strength to support vehicles.

The Tennessee Valley Authority (TVA) has developed a transmission line right-of-way maintenance program which requires buffer zones around sensitive areas for herbicide applications and use of herbicides which have soil retention properties which allow less frequent treatment and better control. TVA is also testing whole tree chipping to clear rights-of-way in a single pass application, allowing for construction vehicle access but reducing the need for access roads with the nonpoint source pollution associated with leveling, drainage, or compaction. In addition, TVA is using more steel transmission line poles to replace traditional wooden poles which have been treated with chemicals.

For construction projects it undertakes, the Department of Veterans Affairs discusses in NEPA documents and implements pollution prevention measures such as oil

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separation in storm water drainage of parking structures, soil erosion and sedimentation controls, and the use of recycled asphalt.

Office Programs

Many agencies, including the Department of Agriculture's Economic Research Service and Soil Conservation Service, Department of the Army, Department of the Interior, Consumer Product Safety Commission, and Tennessee Valley Authority, have implemented pollution prevention initiatives in their daily office activities. These initiatives embrace recycling programs covering items such as paper products (e.g., white paper, newsprint, cardboard), aluminum, waste oil, batteries, tires, and scrap metal; procurement and use of "environmentally safe" products and products with recycled material content (e.g., batteries, tires, cement mixed with fly ash and recycled oil, plastic picnic tables); purchase and use of alternative-fueled vehicles in agency fleets; and encouragement of carpooling with employee education programs and locator assistance.

In planning the relocation of its headquarters, the Consumer Product Safety Commission (CPSC) is considering only buildings located within walking distance of the subway system as possible sites. By conveniently siting its headquarters facility, CPSC expects to triple the number of employees relying on public transportation for commuting and

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to substantially increase the number of agency visitors using public transportation for attendance at agency meetings or events.

Waste Reduction

The Department of Energy (DOE) has instituted an aggressive waste minimization program which has produced substantial results. DOE's nuclear facilities have reduced the sizes of radiological control areas in order to reduce low-level radioactive waste. Other facilities have scrap metal segregation programs which reduce solid waste and allow useable material to be sold and recycled. DOE facilities also are replacing solvents and cleaners containing hazardous materials with less or non-toxic materials.

The Department of the Army has a similar waste reduction program and is vigorously pursuing source reduction changes to industrial processes to eliminate toxic chemical usage that ultimately generates hazardous wastes. The Army's program includes material substitution techniques as well as alternative application technologies. For example, in an EIS and subsequent record of decision for proposed actions on Kwajalein Atoll, the Army committed to segregate solvents from waste oils in the Kwajalein power plant which will prevent continual contamination of large quantities of used engine oil with solvents. Oil recycling

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equipment will also be installed on power plant diesel generators allowing reuse of waste oil.

The Federal Aviation Administration (FAA) has also implemented a waste minimization program designed to eliminate or reduce the amount and toxicity of wastes generated by all National Airspace System facilities. This program includes using chemical life extenders and recycling additives to reduce the quantity and frequency of wastes generated at FAA facilities and providing chlorofluorocarbon (CFC) recycling equipment to each sector in the FAA to that CFCs used in industrial chillers, refrigeration equipment, and air conditioning units can be recaptured, recycled, and reused.

Inventory Control

DOE is improving procurement and inventory control of chemicals and control of materials entering radiologically controlled areas. This can minimize or prevent non-radioactive waste from entering a radioactive waste stream, thus reducing the amount of low-level waste needing disposal.

In two laboratories operated by the Consumer Product Safety Commission, pollution prevention is being practiced by limiting quantities of potentially hazardous materials on hand.

The Tennessee Valley Authority's nuclear program has established a chemical traffic control program to control

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the use and disposal of hazardous materials. As a result of the program, hazardous materials are being replaced by less hazardous alternatives and use of hazardous chemicals and products has been reduced by 66%.

2. Federal Approvals

In addition to initiating their own policies and projects, federal agencies provide funding in the form of loans, contracts, and grants and/or issue licenses, permits, and other approvals for projects initiated by private parties and state and local government agencies. As with their own projects and consistent with their statutory authorities, federal agencies could urge private applicants to include pollution prevention considerations into the siting, design, construction, and operation of privately owned and operated projects. These considerations could then be included in the NEPA documentation prepared for the federally-funded or federally-approved project, and any pollution prevention commitments made by the applicant would be monitored and enforced by the agency. Thus, using their existing regulatory authority, federal agencies can effectively promote pollution prevention throughout the private sector. Below are some existing examples of incorporation of pollution prevention into federal approvals:

The Nuclear Regulatory Commission has required licensees to perform mitigation measures during nuclear power plant construction. These measures include controlling drainage by means of ditches, berms, and

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sedimentation basins; prompt revegetation to control erosion; and stockpiling and reusing topsoil. Similarly, mitigation measures required during the construction of transmission facilities include the removal of vegetation by cutting and trimming rather than bulldozing and avoiding multiple stream crossings, wet areas, and areas with steep slopes and highly erodible soils. The mitigation conditions in licenses serve to prevent pollution from soil erosion and to minimize waste from construction.

In the implementation of its programs, the Department of Agriculture encourages farmers to follow management practices designed to reduce the environmental impacts of farming. Such practices include using biological pest controls and integrated pest management to reduce the toxicity and application of pesticides, controlling nutrient loadings by installing buffer strips around streams and replacing inorganic fertilizers with animal manures, and reducing soil erosion through modified tillage and irrigation practices. Further, encouraging the construction of structures such as waste storage pits, terraces, irrigation water conveyances or pipelines, and lined or grassed waterways reduces runoff and percolation of chemicals into the groundwater.

The Department of Transportation's Maritime Administration is conducting research on a Shipboard Piloting Expert System. If installed on vessels, this

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system would provide a navigation and pilotage assistance capability which would instantly provide warnings to a ship master or pilot of pending hazards and recommended changes in vessel heading to circumvent the hazard. The system could prevent tanker collisions or groundings which cause catastrophic releases of pollutants.

The Department of the Interior's Minerals Management Service (MMS) prepares EISs which examine the effects of potential outer continental shelf (OCS) oil exploration on the environment and the various mitigation measures that may be needed to minimize such effects. Some pollution prevention measures which are analyzed in these EISs and which have been adopted for specific lease sales include measures designed to minimize the effects of drilling fluids discharge, waste disposal, oil spills, and air emissions. For example, MMS requires OCS operations to use curbs, gutters, drip pans, and drains on drilling platforms and rig decks to collect contaminants such as oil which may be recycled.

Incorporating Pollution Prevention into NEPA Documents

NEPA and the CEQ regulations establish a mechanism for building environmental considerations into federal decisionmaking. Specifically, the regulations require federal agencies to "integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions

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reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." 40 CFR § 1501.2. This mechanism can be used to incorporate pollution prevention in the early planning stages of a proposal.

In addition, prior to preparation of an EIS, the federal agency proposing the action is required to conduct a scoping process during which the public and other federal agencies are able to participate in discussions concerning the scope of issues to be addressed in the EIS. See 40 CFR § 1501.7. Including pollution prevention as an issue in the scoping process would encourage those outside the federal agency to provide insights into pollution prevention technologies which might be available for use in connection with the proposal or its possible alternatives.

Pollution prevention should also be an important component of mitigation of the adverse impacts of a federal action. To the extent practicable, pollution prevention considerations should be included in the proposed action and in the reasonable alternatives to the proposal, and should be addressed in the environmental consequences section of the EIS. See 40 CFR §§ 1502.14(f), 1502.16(h), and 1508.20.

Finally, when an agency reaches a decision on an action for which an EIS was completed, a public record of decision must be prepared which provides information on the alternatives considered and the factors weighed in the decisionmaking process. Specifically, the agency must state whether all practicable means

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to avoid or minimize environmental harm were adopted, and if not, why they were not. A monitoring and enforcement program must be adopted if appropriate for mitigation. See 40 CFR § 1505.2(c). These requirements for the record of decision and for monitoring and enforcement could be an effective means to inform the public of the extent to which pollution prevention is included in a decision and to outline how pollution prevention measures will be implemented.

A discussion of pollution prevention may also be appropriate in an EA. While an EA is designed to be a brief discussion of the environmental impacts of a particular proposal, the preparer could also include suitable pollution prevention techniques as a means to lessen any adverse impacts identified. See 40 CFR § 1508.9. Pollution prevention measures which contribute to an agency's finding of no significant impact must be carried out by the agency or made part of a permit or funding determination.

Conclusion

Pollution prevention can provide both environmental and economic benefits, and CEQ encourages federal agencies to consider pollution prevention principles in their planning and decisionmaking processes in accordance with the policy goals of NEPA Section 101 and to include such considerations in documents

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prepared pursuant to NEPA Section 102, as appropriate.[4] In its role as a regulator, a policymaker, a manager of federal lands, a grantor of federal funds, a consumer, and an operator of federal facilities which can create pollution, the federal government is in a position to help lead the nation's efforts to prevent pollution before it is created. The federal agencies should act now to develop and incorporate pollution prevention considerations in the full range of their activities.

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[4] As a guidance document, this memorandum does not impose any new legal requirements on the agencies and does not require any changes to be made to any existing agency environmental regulations.

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NEWS & ANALYSIS

ARTICLES

NEPA at 19: A Primer on an "Old" Law with Solutions to New Problems

by Dinah Bear

Editors' Summary: Exactly 20 years ago this month, in February 1969, Senator Henry Jackson (D-Wash.) and Rep. John Dingell (D-Mich.) introduced draft legislation that led the way to the ultimate enactment of the National Environmental Policy Act. A product of the growing environmental consciousness of American society during the 1960s, NEPA was Congress' first modern environmental law, and it set the tone for the complex superstrucure of federal environmental law that was to follow. Even now, as NEPA approaches age 20, it stands out as probably the single most widely applicable federal environmental statute, and its visionary approach to environmental issues makes it as adaptable to the problems of 1989 as it was to the problems of 1969. In this Article the author, the General Counsel of the Council on Environmental Quality, outlines NEPA's purposes, scope, and implementation procedures. She describes current issues in NEPA practice and policy, and observes that NEPA has continuing vitality in the context of a new generation of environmental concerns that could only have been guessed at by its original supporters.

The National Environmental Policy Act (NEPA)[1] was the first of the major environmental laws enacted in the environmental decade of the 1970s, and its passage stimulated the type of citizen involvement and environmental litigation that has become characteristic of the environmental area as a whole. After 19 years of implementation, the law's influence remains strong at all levels of American government and in the international arena.

Even now, however, the potential importance of parts of NEPA remains generally unrecognized and unrealized, and the particulars of the environmental impact assessment process are often misunderstood. This Article will make some general observations about the statute, set forth the procedures for the conduct of environmental impact assessment under §102(2)(C) of NEPA, and discuss issues that need further attention.

Scope of the National Environmental Policy Act

The work of the 91st Congress in addressing the emerging concerns about environmental quality was encapsulated in NEPA.[2] The statute was rightfully viewed as the foundation for inserting consideration of environmental factors into federal decisionmaking and dramatically increasing both the availability of information to public citizens and the role of the judiciary in federal environmental decisions.

Ironically, however, the success of litigants suing to enforce the procedural provisions of NEPA has to some degree contributed to the identification of the law solely with the preparation of environmental impact statements. In fact, the statute is notable and unique in the environmental field for its depth and breadth. Both Congress' stated purposes in enacting NEPA and the "Declaration of National Environmental Policy" in the law should be reread in light of today's renewed interest in environmental challenges. The purposes of NEPA are:

> To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.[3]

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1. NEPA was passed by Congress on December 22, 1969, and signed by President Nixon on January 1, 1970. Pub.L. 91-190, 42 U.S.C. §§4321-4347, ELR STAT. NEPA 001-006.

2. NEPA's legislative history is discussed in F. ANDERSON, NEPA IN THE COURTS 1-14 (1973), and ENVIRONMENTAL LAW INSTITUTE, LAW OF ENVIRONMENTAL PROTECTION §9.02[2] (1987).

3. NEPA §2, 42 U.S.C. §4321, ELR STAT. NEPA 003.

19 *Envtl. L. Rep.* (Envtl. L. Inst.) 10060 (1989). Copyright © 1989 Environmental Law Institute. Reprinted with permission from the *Environmental Law Reporter*.

While this article is not official CEQ guidance, it was written while the author was CEQ General Counsel and is a useful basic reference.

The "Declaration of National Environmental Policy" states that:

> The Congress . . . declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.[4]

Far from addressing only administrative procedures, NEPA stresses that it is

> [T]he *continuing responsibility of the Federal government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may*—
>
> (1) fulfill the responsibilities of each generation as *trustees* of the environment for succeeding generations;
> (2) assure for all Americans safe, *healthful,* productive, and esthetically and culturally pleasing surroundings;
> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
> (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports *diversity,* and variety of individual choice;
> (5) achieve a balance between population and resource use which will permit *high standards of living* and a wide sharing of life's amenities; and
> (6) enhance the quality of renewable resources and approach the maximum attainable *recycling* of depletable resources.[5]

It is impossible to think of any environmental issue of current concern—whether beaches blighted by medical wastes, alarming predictions of climate change, or decline of species and ecosystem diversity—that is not already encompassed by NEPA.

Many of these issues can be and are currently addressed in the context of the environmental impact assessment process. For example, the Council on Environmental Quality is planning to issue guidance on how federal agencies should incorporate consideration of global climate change impacts in environmental documents prepared under NEPA. Similarly, the Senate Environment and Public Works Committee recently noted that the responsibilities of the federal government under NEPA include biological diversity, and that, "conservation of biological diversity under NEPA should be inherent in all facets of the NEPA decision-making process."[6]

However, other sections of NEPA, besides the well-known environmental impact assessment requirements, should also be considered in light of current issues. Such sections include the mandate to federal agencies to utilize a systematic, interdisciplinary approach to integrating natural and social sciences and the environment design arts in planning and decisionmaking,[7] and the requirement to "recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment."[8]

The Environmental Impact Assessment Process Under NEPA

Background

As one means of implementing the goals of the Act's national environmental policy, Congress included the well-known §102(2)(C), directing all federal agencies to include, in proposals for legislation and other major federal actions significantly affecting the quality of the human environment, a "detailed statement" by the responsible official.[9] The "detailed statement," now commonly referred to as an environmental impact statement (EIS), must, by law, include an analysis of:

> (i) the environmental impact of the proposed action;
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented;
> (iii) alternatives to the proposed action;
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[10]

Title II of NEPA created the Council on Environmental Quality (CEQ) in the Executive Office of the President, composed of three Members appointed by the President with the advice and consent of the Senate.[11] CEQ has a number of responsibilities, including preparation of an annual report on environmental quality, developing and recommending to the President national environmental policies, and documenting and defining environmental trends.[12]

CEQ Guidance and Regulations

Shortly after NEPA was signed into law, President Nixon issued Executive Order 11514 which, among other things, directed CEQ to issue guidelines on preparation of environmental impact statements.[13] Beginning in 1970, CEQ issued a series of these guidelines, which addressed the basic

4. NEPA §101(a), 42 U.S.C. §4331(a), ELR STAT. NEPA 003.
5. NEPA §101(b), 42 U.S.C. §4331(b), ELR STAT. NEPA 003 (emphasis added).
6. S. Rep. No. 100-502, 100th Cong., 2d Sess. 6 (1988).
7. NEPA §102(2)(A), 42 U.S.C. §4332(A), ELR STAT. NEPA 003.
8. NEPA §102(2)(F), 42 U.S.C. §4332(F), ELR STAT. NEPA 004.
9. 42 U.S.C.§4332(2)(C), ELR STAT. NEPA 003.
10. *Id.*
11. One Member is appointed Chairman by the President. NEPA §202, 42 U.S.C. §4342, ELR STAT. NEPA 005.
12. NEPA §204, 42 U.S.C. §4344, ELR STAT. NEPA 005. CEQ's various responsibilities, and those of the Office of Environmental Quality (OEQ—the legal entity created by the Environmental Quality Improvement Act of 1970) are, in some ways, as broad and all-encompassing as the scope of the declaration of national environmental policy. Both authorities have yet to be fully implemented. For CEQ and OEQ's authorities, see 42 U.S.C. §§4344 and 4372, ELR STAT. NEPA 005 and 013.
13. Exec. Order No. 11514, 3 C.F.R. §902 (1966-1970), ELR ADMIN. MAT. 45001. The directive to issue guidelines is found at §3(h). Executive Order 11514 was amended in 1977 by Executive Order 11991, 3 C.F.R. §123 (1977).

requirements of environmental impact assessment and administratively interpreted the thrust of the considerable case law that was occurring throughout the 1970s.[14]

While the guidelines were useful, the environmental impact assessment process, or "NEPA process," as it frequently is referred to in the federal establishment, acquired some unfortunate "barnacles" during the mid-1970s.[15] The most frequent complaints were the length of EISs and the delays that the NEPA process was perceived to cause in the decisionmaking process. Observers believed that the lack of uniformity throughout the government and uncertainty about what was required accounted to a large degree for these problems. Consequently, in 1977 President Carter issued Executive Order 11991, directing CEQ to issue binding regulations to federal agencies in an effort to make the process more uniform and efficient.[16] The regulations were to cover all procedural provisions of NEPA, and to include procedures for referral to CEQ of conflicts between agencies concerning the environmental impacts of proposed major federal actions.

In writing the new regulations, CEQ undertook an extensive effort to obtain and respond to the views of all parties, both public and private, that were affected or interested in the NEPA process. The regulations were written specifically to reduce the delay and paperwork associated with the NEPA process, while making the process more valuable to the decisionmaker. As promulgated in final form on November 29, 1978,[17] the regulations observed that:

> Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.[18]

To some unmeasurable but significant degree, the regulations have proven successful. Many (though by no means all) federal agencies have improved their compliance with procedural requirements of the statute. Litigation is decreasing.[19] During the review of federal regulations in the beginning years of President Reagan's administration, the NEPA regulations fared quite well: less than ten letters were received about them, and several of those letters urged their full implementation.[20] The regulations have been amended only once since their promulgation, to address the controversial "worst case analysis" regulation.[21]

Regulatory Structure

The CEQ regulations implementing the procedural provisions of NEPA apply to all federal agencies of the government, excluding Congress and any of its institutions, the judiciary, and the President, including the performance of staff functions for the President.[22] The CEQ regulations are generic in nature, and do not address the applicability of the various procedural requirements to specific agency actions. Instead, each federal department and agency is required to prepare its own NEPA procedures that address that agency's compliance in relation to its particular mission.[23] CEQ reviews and approves all agency procedures and amendments to those procedures.[24]

The agency procedures are required to establish specific criteria for and identification of three classes of actions: those that require preparation of an environmental impact statement; those that require preparation of an environmental assessment; and those that are categorically excluded from further NEPA review. Additionally, agencies are required to address NEPA compliance for actions initiated outside of the federal government that require federal approval, the introduction of supplemental EISs into the administrative record, the integration of NEPA analysis into the agency decisionmaking process, and to name a contact office for further information or documents prepared under NEPA.[25]

14. Interim guidelines were issued on April 30, 1970. 35 Fed. Reg. 7391 (1970), 1 ELR 46001 (1971). Although very brief, the guidelines focused on certain themes that CEQ has consistently addressed throughout the development of the NEPA process. For example, a rigorous exploration and objective evaluation of alternative actions was required. Federal decisionmakers were reminded that cumulative impacts of many small projects must be considered.

    The interim guidelines were finalized and published a year later, with some additional sections such as provisions for state and local review and emergency actions. 36 Fed. Reg. 7724 (1971).

    In 1973, CEQ revised the guidelines and, for the first time, published them in the Code of Federal Regulations. 40 C.F.R. §1500 (1973), 9 ELR 46003 (1979). In response to comments on the draft guidelines, CEQ lengthened the comment period for the draft EIS to 45 days, required agencies to publish their NEPA procedures in the Federal Register, required agencies to develop an early notice system for informing the public of a decision to prepare an EIS, and issued guidance on making environmental data available to the public. In response to case law, CEQ addressed the use of a programmatic EIS and the limitation on action by applicants while the NEPA review was in progress. The new guidelines also emphasized the need to begin preparation of impact statements at an early point in the decisionmaking process and addressed the question of supplementing an EIS.

15. For a detailed discussion of the factors that led to the development of binding regulations, see Yost, *Streamlining NEPA—An Environmental Success Story*, 9 B.C. ENVTL. AFF. L. REV. 507 (1981-82). *See also* Council on Environmental Quality, *Environmental Impact Statements: An Analysis of Six Years Experience by Seventy Federal Agencies* (1976); Liebesman, *The Council on Environmental Quality's Regulations To Implement the National Environmental Policy Act—Will They Further NEPA's Substantive Mandate?*, 10 ELR 50039 (1980); Caldwell, *Is NEPA Inherently Self-Defeating?*, 9 ELR 50001 (1979).

16. Exec. Order No. 11991, 3 C.F.R. §123 (1977), amending Exec. Order No. 11514, *supra* n.13. The directive to issue regulations is found at §3(h).

17. 40 C.F.R. §§1500-1508 (1978)

18. 40 C.F.R. §1500.1(c).

19. The rather notable decline in litigation based upon NEPA is partly, but not wholly, attributable to improved compliance. Another factor has been the decrease in the number of "major" federal actions funded by Congress. CEQ statistics, based on annual surveys of all federal agencies, show a low of 71 cases with NEPA causes of action filed in 1986, as contrasted with 189 cases in 1974.

20. Review by the Vice President's Task Force on Regulatory Relief, 1981. (*see, e.g.*, response from National League of Cities to the Vice President's request for specific recommendations, May 14, 1981).

21. 40 C.F.R. §1502.22. *See generally* the preamble at 51 Fed. Reg. 15619 (1986), ELR ADMIN. MAT. 35038.

22. 40 C.F.R. §1508.12. By virtue of a delegation provision under §104(h) of the Housing and Community Development Act of 1974, the federal agency designation also applies to state and local governments and Indian tribes that are the recipients of funds under the Community Development Block Grant and the Urban Development Action Grant programs.

23. 40 C.F.R. §1507.3. Implementing agency regulations are listed at ELR ADMIN. MAT. 46001.

24. 40 C.F.R. §1507.3(a).

25. 40 C.F.R. §1507.3(b).

Categorical Exclusions

"Categorical exclusions" refer to acts falling within a predesignated category of actions that do not individually or cumulatively have a significant effect on the human environment.[26] Thus, no documentation of environmental analysis is required. Agencies may list either very specific actions, or a broader class of actions with criteria and examples for guidance. However, federal officials must be alert to extraordinary circumstances[27] in which a normally excluded action may have a significant environmental effect. A categorical exclusion is *not* an exemption from compliance with NEPA, but merely an administrative tool to avoid paperwork for those actions without significant environmental effects.

Environmental Assessmenets

An environmental assessment (EA) is supposed to be a concise public document[28] that may be prepared to achieve any of the following purposes: to provide sufficient evidence and analysis for determining whether to prepare an EIS; to aid an agency's compliance with NEPA when no EIS is necessary; and to facilitate preparation of an EIS if one is necessary. An EA should include a brief discussion of the need for the proposal, of alternatives as required by NEPA §102(2)(E),[29] and of the environmental impacts of the proposed action and alternatives. It should list agencies and persons consulted.[30] An EA is followed by one of two conclusions: either a Finding of No Significant Impact (FONSI) or a decision to prepare an EIS. A FONSI briefly presents the reasons why an action, not otherwise categorically excluded, will not have a significant effect on the human environment. It may include a summary of the EA, or simply be attached to the EA.[31] Neither EAs nor FONSIs are filed in a central location (unlike EISs, which are filed with the Office of Federal Activities in the Environmental Protection Agency). However, they are public documents, and the agency responsible for their preparation must involve the public in an appropriate manner.[32]

Agencies have discretion in selecting the appropriate level of public circulation of EAs and FONSIs, but there are two circumstances in which an agency is required to make a FONSI available for public review for 30 days. The first situation is when the proposed action is, or is closely similar to, an action which normally requires an EIS; the second case arises if the nature of the proposed action is without precedent in the agency's experience.[33]

While the EA and FONSI process is a valuable and even essential tool, it has been subjected, far too often, to two types of abuse. On the one hand, some compliance has reduced the EA analysis to a one-page form that is so cursory that it is questionable whether the underlying decision about whether to prepare an EIS is sound. On the other hand, an EA all too frequently takes on the look, feel, and form of an EIS, complete with the same qualitative contents and volume and weight. There can be several reasons for this, but certainly one unfortunate rationale has been to avoid as much public involvement as an EIS would stimulate, while being prepared to turn the EA into an EIS rapidly if a court would so order. Agency officials thinking of that approach would be far better advised to simply proceed with circulation of the document as an EIS.

Environmental Impact Statements

The primary purpose of an EIS is to serve as an action-forcing device to ensure that the policies and goals defined in NEPA are infused into the ongoing programs and actions of the federal government. It must provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment. In preparing EISs, *agencies should focus on significant environmental issues and alternatives and reduce paperwork and the accumulation of extraneous background data.* Texts should be concise, clear, and to the point, and should be supported by evidence that the agency has made the necessary environmental analyses. An EIS is *more* than a disclosure document; it should be used by federal officials to plan actions and make decisions.

The threshold requirement for preparation of an EIS is, of course, the statutory threshold of a "major federal action significantly affecting the quality of the human environment."[34] As interpreted by the CEQ regulations and case law, "major federal actions" include a wide range of actions, certainly much more than the construction projects most commonly associated with NEPA compliance. For example, "actions" include adoption of rules, regulations, and interpretations of policy under the Administrative Procedure Act (APA), legislative proposals, treaties and international conventions or agreements, and adoption of programs.[35] Actions include circumstances where the responsible official fails to act and that failure to act is reviewable by courts or administrative tribunals under the APA or other applicable law as agency action.[36] The

26. 40 C.F.R. §1508.4.

27. Agencies must provide for the possibility of extraordinary circumstances in which a normally excluded action may have a significant environmental effect in their own NEPA procedures. 40 C.F.R. §1508.4. CEQ encourages agencies to identify criteria for possible extraordinary circumstances in those procedures. The presence of an endangered species, an impact on critical habitat, a significant impact on bottomland hardwoods, or a major impact on a historic site, for example, could trigger the requirement to prepare an EIS for an action that would normally fall under a categorical exclusion. See, for example, the U.S. Forest Service's NEPA procedures at 50 Fed. Reg. 26078 (1985).

28. CEQ's recommended length is 10 to 15 pages. *See*, Question 36a, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18026, 18036, ELR ADMIN. MAT. 35020, 35029. *See also* Sierra Club v. Marsh, 769 F.2d 868, 15 ELR 20911 (1st Cir. 1985), discussing the appropriate uses of EAs and how overly lengthy EAs often signal an inappropriate use of the document.

29. Section 102(2)(E) requires federal agencies to, "Study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §4332(2)(E).

30. 40 C.F.R. §1508.9.

31. *See* 40 C.F.R. §§1500.3, 1500.5(1), 1501.4(e), 1504.(q), 1508.13.

32. 40 C.F.R. §1506.6.

33. 40 C.F.R. §1501.4(e)(2)(i) and (ii).

34. NEPA §102(2)(C), 42 U.S.C. §4332(2)(c); ELR STAT. NEPA 003. The statutory term is amplified in the regulations. *See* 40 C.F.R. §1502.3.

35. 40 C.F.R. §1508.18(b).

36. 40 C.F.R. §1508.18.

only items specifically excluded as "actions" under NEPA are judicial or administrative enforcement actions (both civil and criminal) and funding assistance solely in the form of general revenue sharing funds distributed under the State and Local Financial Assistance Act of 1971, with no federal agency control over the subsequent use of such funds.[37]

The question of what is "significant," thus making EIS preparation necessary, has often been a difficult one. In fact, disagreement about whether a proposed action has "significant effects" has been the most frequent reason for NEPA litigation over the past 19 years.[38] CEQ's regulations do not define which particular federal actions are "significant" for purposes of NEPA; rather, they provide a discussion of the factors that should be considered by each agency when drafting their own NEPA procedures and when considering proposed actions. The regulations emphasize the need to consider "significantly" in terms of both context and intensity.[39] "Context" means that the significance of the proposed action must be analyzed in relation to the societal and environmental framework in which the action would occur. Factors to be considered in evaluating "intensity" include the degree to which the proposed action affects public health and safety, unique characteristics of the geographic area involved, the degree of controversy about the environmental impacts, the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks, the precedential value of the action, the presence of cumulative effects, the possible effects on historic, scientific, or cultural resources, the degree to which the action may adversely affect an endangered or threatened species or its habitat, and whether the proposed action would be a violation of a federal, state, or local law.[40] One frequently overlooked point is that the NEPA standard of significance applies to both *beneficial and adverse* impacts.[41]

Few federal courts have attempted to formulate a definition of the phrase "significantly affecting" that goes beyond the factual circumstances of a particular case. Instead, a review of the cases shows that almost all have been decided by the court determining whether the evidence in a given case pointed to the presence of potentially significant environmental effects and then deciding whether the agency's decision not to prepare an EIS was reasonable under the circumstances. Generally, however, the courts have rejected specific size or monetary factors as a guide to determining the significance of an action.[42] Courts are also increasingly concerned with adequate consideration of cumulative and indirect effects.[43] Although social and economic impacts alone do *not* trigger the requirement to prepare an EIS under NEPA, the courts have required the inclusion of such impacts once the threshold requirement for preparation of an EIS has been reached.[44]

Two types of EISs that have received less attention than the typical project-specific EIS are the programmatic EIS and the legislative EIS. Programmatic EISs must be prepared prior to an agency's decision regarding a major program, plan, or policy with significant environmental impacts. It may be broad in scope, followed by site-specific EISs or EAs prepared at subsequent stages. The process of preparing a broad statement and subsequent, more narrowly focused NEPA documents is referred to as tiering.[45]

Legislative EISs meet the statutory requirement for a "detailed statement on proposals for legislation which would significantly affect the quality of the human environment."[46] Although there are some modifications, the procedures for preparation of legislative EISs are similar to EISs prepared for proposals for executive branch action.[47]

Once the decision is made to prepare an EIS of any type, the proponent federal agency publishes a Notice of Intent (NOI) in the Federal Register. The NOI should describe the proposed action and possible alternatives, the agency's intent to prepare an EIS, the agency's proposed scoping process, and any planned scoping meetings and the name and address of a contact person in the agency.[48]

The agency must then engage in the "scoping process," a process to determine the scope of issues to be addressed in the EIS and for identifying the significant issues related to a proposed action. Scoping may or may not include meetings, but the process should involve interested parties at all levels of government, and all interested private citizens and organizations. Scoping is also the appropriate point to allocate responsibilities among lead and cooperating agencies,[49] identify other environmental requirements

37. 40 C.F.R. §1508.18(a).

38. NEPA litigation statistics and a discussion of significant NEPA case law can be found in the NEPA chapter of each Annual Report on Environmental Quality, published by CEQ. For cumulative NEPA litigation statistics, reflecting litigation from 1974-1985, see CEQ, *Environmental Quality* [17th Annual Report] 241 (1986).

To avoid the problem of defining significance, some countries and institutions have promulgated binding lists of specific projects that are subject to environmental impact assessment procedures. *See, e.g.,* "On Implementation of Environmental Impact Assessment," Cabinet Decision, August 28, 1984 (Japan); Council of the European Communities, "Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment," June 27, 1985.

39. 40 C.F.R. §1508.27(a) and (b).

40. 40 C.F.R. §1508.27(b)(1)-(10).

41. 40 C.F.R. §1508.27(b)(1). *See also* National Wildlife Federation v. Marsh, 751 F.2d 767, 14 ELR 20172 (11th Cir. 1983); Environmental Defense Fund v. Marsh, 651 F.2d 983, 11 ELR 21012 (5th Cir. 1981). The only exception to this is the analysis required under 40 C.F.R. 1502.22 (incomplete and unavailable information in an EIS), which has always been framed in terms of "adverse impacts." That regulation, however, applies once the decision to prepare an EIS has already been made.

42. *Compare, e.g.,* the decisions in Forty-Seventh Street Improvement Ass'n. v. Volpe, 3 ELR 20162 (D. Colo. 1973) (one-mile stretch of highway caused sufficient environmental impact to require preparation of an EIS) *with* James v. Tennessee Valley Authority, 538 F. Supp. 704, 12 ELR 21076 (E.D. Tenn. 1982) (TVA was not required to prepare an EIS before granting a permit for the construction of an inland coal-loading port even though the agency's own NEPA regulations indicated that port projects normally required an EIS).

43. *See, e.g.,* Fritiofson v. Alexander, 772 F.2d 1225, 15 ELR 21070 (5th Cir. 1985); Conner v. Burford, 605 F. Supp. 107, 15 ELR 20608 (D. Mont. 1985).

44. 40 C.F.R. §1508.14; Hanly v. Mitchell, 460 F.2d 640, 2 ELR 20216 (2d Cir. 1972), and 471 F.2d 823, 2 ELR 20717 (2d Cir. 1972) (*sub. nom.* Hanly v. Kleindienst).

45. 40 C.F.R. §§1502.20, 1508.28. For CEQ guidance on programmatic EISs and the tiering concept, see "Guidance Regarding NEPA Regulations," 48 Fed. Reg. 34263, 34267 (1983), ELR ADMIN. MAT. 35045, and Question 24, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18026, 18033 (1981), ELR ADMIN. MAT. 35020, 35026. *See also* California v. Block, 690 F.2d 753, 13 ELR 20092 (9th Cir. 1982) and Foundation on Economic Trends v. Lyng, 817 F.2d 882, 17 ELR 20902 (D.C. Cir. 1987).

46. NEPA §102(2)(c), 42 U.S.C. §4332(2)(C), ELR STAT. NEPA 003.

47. *See* 40 C.F.R. §1506.8 for the applicable requirements.

48. 40 C.F.R. §1508.22.

49. "Lead agency" and "cooperating agency" designations are used when

that are applicable to the proposal, set any time and page limits, and, in general, structure the process in such a way that all identifiable participants are informed and involved at appropriate points. A well designed scoping process can have an extremely positive ripple effect throughout the rest of the NEPA process.[50]

The next step is preparation of a draft EIS. The EIS may be prepared either by the lead agency, with assistance from any cooperating agencies, or by a contractor. However, if a contractor prepares the EIS, the contractor should be chosen by the agency and must execute a disclosure statement prepared by the lead agency, specifying that the contractor has no financial or other interest in the outcome of the project.[51] The agency may accept information from any party, including the applicant, but it *always* has the duty to independently evaluate such information.[52]

The content requirements of an EIS, from cover sheet to appendices, are set out in the CEQ regulations.[53] The "heart" of the EIS is the alternatives analysis, which inevitably leads to the question of which alternatives must be analyzed. The answer to that, like the answer to the question of what is "significant," is addressed on a case-by-case basis, with the key judicial standard being that of reasonableness.[54]

If the proposed action is the subject of a request for a federal permit or regulatory approval for a proposed action, the federal agency must consider both public and private purpose and need. Courts have stressed the need to consider the objectives of the permit applicant,[55] but they have also emphasized the requirement for the agency to exercise independent judgment as to the appropriate articulation of objective purpose and need.[56] Thus, NEPA requires the agency to consider both public and private purpose and need in formulating the alternatives to be examined in an EIS.

Once the draft EIS is prepared, it must be circulated for at least 45 days for public comment and review.[57] Federal agencies with jurisdiction by law or special expertise with respect to any of the relevant environmental impacts are expected to comment, although this may take the form of a "no comment" letter.[58] At the conclusion of the comment period, the agency must evaluate the comment letters and respond to the substantive comments in the final EIS.[59] The final EIS is sent to all parties who commented on the draft EIS. No decision may be made concerning the proposed action until at least 30 days after the Notice of Availability of the final EIS or 90 days after the publication of the Notice of Availability of the draft EIS, whichever is later.[60]

At the time of decision, the decisionmaker must sign a Record of Decision (ROD). The ROD states what the decision is, identifies which alternatives were considered by the agency in making the decision, specifies which alternatives were considered to be environmentally preferable, and discusses factors that were balanced by the decisionmaker. Further, the ROD states whether all practical methods to avoid or minimize environmental harm are being adopted, and if not, why not. The ROD also includes a description of any applicable enforcement and monitoring programs.[61]

The Referral Process

The referral process is a method for referring to CEQ those federal interagency disagreements concerning proposed major federal actions that might cause unsatisfactory environmental effects.[62] The head of a federal department or agency may refer a proposed major federal action to CEQ no later than 25 days after the Notice of Availability for the final EIS has been published by EPA. Under §309 of the Clean Air Act,[63] the Administrator of EPA has broader authority to refer to CEQ any proposed legislation, action, or regulation that he or she deems unsatisfactory from the standpoint of public health or welfare or environmental quality. The regulations provide guidance on procedures to be followed, criteria for referrals, contents of referring letters and supporting documents, responses by agencies, and involvement by the public. If CEQ accepts a referral, it has a number of options, including making recommendations to the President for action. However, most typically, CEQ publishes Findings and Recommendations regarding the issues under consideration. These

there is more than one federal agency either proposing an action or involved in the same action or group of actions. Federal, state, or local agencies, including at least one federal agency, may act as joint lead agencies. For criteria and responsibilities of lead and cooperating agencies, see 40 C.F.R. §§1501.5 and 1501.6. For resolution of disputes over which agency should be lead agency, see 40 C.F.R. §1501.5(c).

50. 40 C.F.R. §1501.7. *See also* "Memorandum for General Counsels, NEPA Liaisons, and Participants in Scoping: Scoping Guidance," (Apr. 30, 1981), ELR ADMIN. MAT. 35031. The U.S. Forest Service uses scoping techniques to good advantage for all proposed actions, regardless of whether an EIS is required. *See* Ketcham, *How Does the Scoping Process Affect the Substance of an EIS?* and O'Brien, *The Importance of Scoping*, in N. ROBINSON (ed.), PROCEEDINGS OF A CONFERENCE ON THE PREPARATION AND REVIEW OF ENVIRONMENTAL IMPACT STATEMENTS (1988).

51. 40 C.F.R. §1506.5(c). An applicant may prepare an EA. However, in this case, the agency must make its own evaluation of the environmental issues and take responsibility for the scope and content of the document. 40 C.F.R. §1406.5(b).

52. The agency may also incorporate information by reference in the EIS and adopt another agency's NEPA documents. However, the independent review standard still applies. *See* 40 C.F.R. §1502.21 for incorporation by reference and 40 C.F.R. §1506.3 for adoption procedures.

53. 40 C.F.R. §1502.10.

54. *See* Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 8 ELR 20288 (1978). Sometimes "reasonable alternatives" may include those outside the jurisdiction of the lead agency. Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 2 ELR 20029 (D.C. Cir. 1972).

55. Roosevelt Campobello International Park Comm'n. v. U.S. EPA, 684 F.2d 1034, 12 ELR 20911 (1st Cir. 1982).

56. Van Abbema v. Fornell, 807 F.2d 633, 17 ELR 20429 (7th Cir. 1986).

57. 40 C.F.R. §1506.10(c). Both the draft and final EISs are filed with the Office of Federal Activities in the Environmental Protection Agency, which then publishes the official Notice of Availability for the EISs. Timing periods run from publication of the Notice of Availability for comments on EISs and for referrals to CEQ.

58. 40 C.F.R. §1503.2.

59. 40 C.F.R. §1503.4(b). The CEQ regulations state that the text of final EISs "shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." 40 C.F.R. §1502.7. All participants in the process would be better served if agencies would take serious efforts to comply with this standard.

60. 40 C.F.R. §1506.10. Agencies that have internal appeal procedures that provide a real opportunity to alter the ultimate decision may make and record the ultimate decision at the same time the EIS is published. 40 C.F.R. §1506.10(b)(2).

61. 40 C.F.R. §1505.2.

62. *See* 40 C.F.R. Part 1504 for full referral procedures.

63. 42 U.S.C. §7609, ELR STAT. CAA 046.

recommendations are not binding on the lead agency, but they are most often accepted.[64]

Current Issues

Several issues related to NEPA are currently being examined, and still more should be addressed. Some of these issues were identified at a conference on the preparation and review of environmental impact statements sponsored by CEQ and the Environmental Law Section of the New York State Bar Association in November 1987 at West Point, New York;[65] others are the subject of legislative or judicial attention; and some issues have yet to be focused on seriously by anyone.

The Post-Decisional NEPA Process

NEPA implementation has focused on the pre-decisional aspects of the process. This emphasis has been essential to achieving the goal of integrating environmental considerations into agency decisionmaking. As the process matures, however, the post-decisional aspects of the NEPA process are beginning to receive attention. For example, questions are being asked about the enforceability of agency commitments to mitigation measures. Are commitments made in a Record of Decision (ROD) directly enforceable?[66] Does it make a difference if the action is a federally initiated action or a decision on a permit request from a non-federal applicant?

The scientific accuracy of the predictions in an EIS is another current issue. Generally, EISs are examined after the proposed action has been completed only if the agency is "tiering," that is, using the original EIS as a base from which to prepare additional analysis under NEPA. Few agencies systematically assess the predictions in an EIS in light of the actual after-the-decision impacts. The first study examining this issue was released in 1987, and, while it necessarily focused on EISs prepared in the early 1970s, the study dealt with a sample of 239 EISs and provides valuable insights.[67] The authors concluded that EIS forecasts were generally "not inaccurate," though many of the forecasts were "accurate" solely by virtue of vagueness and generalities.[68] The authors also found that "Despite some general cynicism about the veracity of government promises, agency managers prove to be quite responsible in carrying out promised mitigations."[69]

Finally, there are questions about whether NEPA requires an agency to undertake mitigation measures at all, and, if so, if there is a required order of priority in terms of types of mitigation. The issue of whether NEPA requires federal agencies to include in each EIS a fully developed plan to mitigate environmental harm will be addressed by the U.S. Supreme Court as it hears appeals from *Oregon Natural Resources Defense Council v. Marsh*[70] and *Methow Valley Citizens Council v. Regional Forester.*[71]

The question of whether mitigation measures must be undertaken in a particular order arises in the context of CEQ's regulatory definition of "mitigation."[72] Because the definition lists five types of mitigation in a logical order, beginning with avoidance of the impact and ending with compensation for the impact by replacement or substitution of the affected resource or environment, some have suggested that agencies are legally obligated to consider mitigation measures in the order presented in the regulation. While there is no support for that argument in the regulatory history, agencies are free to adopt such a course as a matter of policy.

The Extraterritorial Reach of NEPA

The question of whether the procedural requirements of NEPA apply to *all* proposed federal actions, wherever they occur, has been at issue for the past 19 years. Shortly after NEPA's passage, the Department of State argued that its procedural provisions do not apply to U.S. actions occurring in other nations.[73] The following year, the Legal Advisory Committee to CEQ studied the issue and concluded that §102(2)(C) applied to actions of federal agency actions anywhere, including those "carried out within the ter-

64. For an analysis of the referral process, see S. RAND & M. TAWATER, ENVIRONMENTAL REFERRALS AND THE COUNCIL ON ENVIRONMENTAL QUALITY 1986 (report by the Environmental Law Institute to the Council on Environmental Quality), *reprinted in* CEQ, Environmental Quality [17th Annual Report] 248-266 (1986).

65. *See* N. ROBINSON (ed.), PROCEEDINGS OF A CONFERENCE ON THE PREPARATION AND REVIEW OF ENVIRONMENTAL IMPACT STATEMENTS. (1988).

66. To date, this issue has received little attention in the courts. One answer often given is that the remedy for failure to comply with federal commitments made in a Record of Decision would be to require the agency to prepare a supplemental EIS or EA based on the "substantial change" or "new circumstances" criteria in 40 CFR §1502.9(c). Others have suggested that mitigation commitments made by either an agency or applicant should be directly enforceable. *Cf.* Question 34d, "Forty Most Asked Questions and Answers Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18026, 18037, ELR ADMIN. MAT. 35020, 35029 (1981) ("the terms of a Record of Decision are enforceable by agencies and private parties").

67. P. CULHANE, H. P. FRIESEMA, & J. BEECHER, FORECASTS AND ENVIRONMENTAL DECISIONMAKING—THE CONTENT AND PREDICTIVE ACCURACY OF ENVIRONMENTAL IMPACT STATEMENTS (1987).

68. *Id.* at 253.

69. *Id.* at 254. This conclusion was also supported by a General Accounting Office (GAO) investigation initiated in 1987 by the House Merchant Marine and Fisheries Committee. No report was ever filed by GAO, which recommended ending the study after identifying no significant problems in this area. Nonetheless, concern about fulfillment of mitigation measures remains in light of the overall budgetary situation. H.R. 2020 and S. 1792, introduced but not passed in the 100th Congress, would have amended NEPA to require CEQ to issue guidance for federal agencies to review a sample of implemented EISs, to measure the predicted environmental effects against actual effects, and evaluate the implementation of any mitigation requirements specified in the EISs. Agency reviews would have been submitted to CEQ for evaluation, which, in turn would have reported on its findings to Congress.

70. 832 F.2d 1489, 18 ELR 20321 (9th Cir. 1987).

71. 833 F.2d 810, 18 ELR 20163 (9th Cir. 1987). The cases also raise the issue of whether CEQ's 1986 amendment of 40 C.F.R. §1502.22 (incomplete or unavailable information) is consistent with NEPA, or whether a "worst case analysis" is specifically required under NEPA.

72. 40 C.F.R. §1508.20.

73. *See* Memorandum from Christian A. Herter, Jr., Special Assistant to the Secretary of State for Environmental Affairs, to Russell Train, Chairman, Council on Environmental Quality, and accompanying "Legal Memorandum: Application of National Environmental Policy Act of 1969 to Actions of the Federal Government Occurring Outside of the United States," May 4, 1970, *reprinted in* Hearings Before the Subcommittee on Fisheries and Wildlife Conservation, Committee on Merchant Marine and Fisheries, December 7-22, 1970. The State Department did conclude that NEPA's requirements could be applied to the high seas, outer space, and Antarctica.

ritorial jurisdiction of another nation."[74] Never decisively answered by the courts,[75] the issue was debated by both commentators[76] and federal agencies[77] throughout the 1970s.

During the course of working on the NEPA regulations in 1977-78, CEQ identified the issue of NEPA's applicability to federal actions as an issue which needed to be addressed in a regulatory context. That effort, involving a long and much publicized interagency debate,[78] resulted in the January 4, 1979, issuance by President Carter of Executive Order 12114,[79] "Environmental Effects Abroad of Major Federal Actions." Executive Order 12114 "represents the United States government's exclusive and complete determination of the procedural and other actions to be taken by Federal agencies to further the purpose of the National Environmental Policy Act, with respect to the environment outside the United States, its territories and possessions."[80] It does not create a cause of action in the courts.[81] It requires agencies to publish implementing procedures, in consultation with CEQ and the Department of State. The Executive Order provides for environmental analysis and documentation for actions affecting the global commons;[82] actions affecting the environment of a foreign nation not participating with the United States or otherwise involved in an action (the "innocent bystander" situation);[83] actions that provide a product that is prohibited or strictly regulated by United States law because its toxic effects on the environment create a serious public health risk; and actions that provide a project which in the United States is prohibited or strictly regulated to protect the environment against radioactive substances.[84] The Executive Order exempts a number of federal actions, including votes in international conferences and organizations, intelligence activities, arms transfers, and actions taken in the interests of national security.[85] Additionally, the Executive Order grants agencies broad authority to modify the contents, timing, and availability of documents to other affected federal agencies and affected nations for such reasons as "to enable the agency to decide and act promptly when required," "to avoid adverse impacts on foreign relations or infringement in fact or appearance of other nations' sovereign responsibilities," and "difficulties of obtaining information and agency ability to analyze meaningfully environmental effects of a proposed action," and other similar factors.[86]

Recently, CEQ surveyed all federal agencies with regard to their compliance with Executive Order 12114. Since 1985, over 200 documents have been prepared under it, by 7 federal agencies.[87] The vast majority of these documents are for the EPA Prevention of Significant Deterioration Permits under the Clean Air Act. Excluding these, approximately 45 documents have been prepared. The responses to the survey demonstrated some confusion among the uses of EISs, EAs, concise environmental reviews, and bilateral or multilateral environmental studies referenced under Executive Order 12114, and several agencies asked CEQ for guidance.

During the 1988 session of Congress, the Senate Environment and Public Works Committee approved S.1792, including an amendment to NEPA §102(2)(C) specifically extending that section's coverage to extraterritorial actions. The accompanying report language referred to federal involvement in the Three Gorges Dam on China's Yangtze River, and criticized Executive Order 12114 as being inconsistent with the policy and principles set forth in NEPA.[88] While the bill was not acted upon by the full Senate or the House of Representatives during 1988, it appears likely that the issue will be revisited in Congress in 1989.

Legislative Environmental Impact Statements

One issue that is not receiving attention in Congress, and that should be, is the use of the legislative EIS process. The language of §102(2)(C) specifically emphasizes *proposals for legislation* as being the subject of the "detailed statements," now known as EISs, and, of course, the CEQ regulations provide procedures for legislative EISs.[89] The legislative EIS process can raise difficult problems for agencies trying to clear proposed legislation through the

74. Report of the Legal Advisory Committee to the President's Council on Environmental Quality, December 1971, pp. 13-17.

75. *See* Natural Resources Defense Council, Inc. v. Nuclear Regulatory Commission, 647 F.2d 1345, 11 ELR 20266 (D.C. Cir. 1981); Environmental Defense Fund v. Agency for International Development, 6 ELR 20121 (D.D.C. 1975); Sierra Club v. Coleman, 405 F. Supp. 53, 6 ELR 20051 (D.D.C. 1975), 421 F. Supp. 63, 6 ELR 20798 (D.D.C. 1976); Sierra Club v. Atomic Energy Commission, 4 ELR 20685 (D.D.C. 1974); Wilderness Society v. Morton, 463 F.2d 1261, 2 ELR 20250 (D.C. Cir. 1972).

76. *See, e.g.*, Comment, *NEPA's Role in Protecting the World Environment*, 131 U. PA. L. REV. 353 (1982); Comment, *The Extraterritorial Scope of NEPA's Environmental Impact Statement Requirement*, 74 MICH. L. REV. 349 (1975); Robinson, *Extraterritorial Environmental Protection Obligations of the Foreign Affairs Agencies: The Unfulfilled Mandates of NEPA*, 7 N.Y.U.J. INT'L L. AND POL. 257 (1974); Tarlock, *The Application of the National Environmental Policy Act of 1969 to the Darien Gap Highway Project*, 7 N.Y.U.J. INT'L L. AND POL. 459 (1974).

77. CEQ consistently maintained that the procedural requirements of NEPA applied to U.S. international actions, reasoning that "The 'human environment' is not limited to the United States, but includes other countries and areas outside the jurisdiction of any country . . . . The Act contains no express or implied geographic limitation of environmental impacts to the United States or to any other area. Indeed, such a limitation would be inconsistent with the plain language of NEPA . . . ." CEQ, Memorandum to Heads of Agencies on the Applying the EIS Requirement to Environmental Impacts Abroad (Sept. 24, 1976). Agencies with a foreign assistance mission or other overseas programs continued to resist this interpretation.

78. *See President Orders Environmental Review of International Actions*, 9 ELR 10011 (1979); *Forthcoming CEQ Regulations to Determine Whether NEPA Applies to Environmental Impacts Limited to Foreign Countries*, 8 ELR 10111 (1978).

79. 3 C.F.R. 356 (1980), ELR ADMIN. MAT. 45023.

80. Exec. Order 12114, §1-1.

81. *Id.*, §3-1.

82. *Id.*, §2-3(a).

83. *Id.*, §2-3(b).

84. *Id.*, §2-3(c). A fourth category of actions requiring environmental analysis and documentation under the Executive Order is major federal actions that significantly affect natural or ecological resources of global importance designated for protection by the President, or in the case of a resource protected by international agreement binding on the United States, by the Secretary of State. No such designations have been made.

85. *Id.*, §2-5(a).

86. *Id.*, §2-5(c).

87. The seven agencies are the Defense Logistics Agency, the Defense Nuclear Agency, the Joint Chiefs of Staff—Pacific Command, Army, the State Department, the Environmental Protection Agency and the Coast Guard.

88. S. REP. No. 100-52, 100th Cong., 2d Sess. 6 (1988).

89. 40 C.F.R. §§1506.8, 1508.17.

Office of Management and Budget, and it raises questions of enforceability through the courts because of separation of powers questions.[90] Nonetheless, some agencies do attempt consistent compliance with the requirements.[91] With a few exceptions, the process appears to be ignored by the congressional recipients of the EISs. Congress has its own processes for gathering information, seeking public comment and making decisions, and may view the legislative EIS process as an unnecessary extension of an executive branch process into legislative decisionmaking. The situation is discouraging for those who try to comply with the dictates of the statute, and frustrating in terms of overall use of resources. Responsible officials in both the Congress and the executive branch should focus on if and how the process could be made more useful and relevant to congressional debate.

Cumulative Impacts

By now, most federal agencies with much experience in NEPA compliance are reasonably adept at analysis of direct and indirect environmental impacts. Cumulative impacts, however, pose more difficult legal and methodological problems. Cumulative impacts are the impacts on the environment that result from the incremental impact of the proposed action when added to other past, present, and reasonably likely future actions. Both federal and nonfederal actions must be taken into account when making this evaluation.[92]

Over the past few years, several court cases have highlighted the importance of cumulative impact analysis.[93] There probably will be further litigation defining the boundaries of this important requirement in particular factual situations. Meanwhile, some agencies have developed methodologies and guidance for the assessment of cumulative impact assessment.[94] Because this form of assessment presents unique challenges, CEQ has commissioned the Conservation Foundation to prepare an inventory of federal agency activities and documents related to cumulative impact assessments. An interagency work group, headed by CEQ, has been formed to focus on various methodological aspects of cumulative impact assessment.

Alternatives to NEPA Litigation

The development of NEPA law and its enforcement is closely intertwined with NEPA case litigation. Indeed, the ease with which litigants have been able to avail themselves of the judicial system has been viewed as either a major strength or a serious shortcoming of the environmental impact assessment in the United States, depending upon the viewpoint of the observer. Currently, the number of cases brought under NEPA is significantly decreasing, from a high of 189 cases in 1974 to a low of 71 cases in 1986.[95] The basic profile of NEPA disputes, however, has not changed over the years: the common forum for resolving claims of inadequate NEPA compliance remains the federal courts.

Meanwhile, parties in other environmental dispute situations have been searching for more effective and efficient means of resolving such matters.[96] Officials at EPA have encouraged and engaged in regulatory negotiation on several occasions.[97] The Administrative Conference of the United States has done much work in encouraging alternative dispute resolution (ADR).[98] Environmental organizations and industry groups have used such techniques to attempt to arrive at a consensus on legislative matters. While clearly not always successful, and subject to some criticism from environmental organizations,[99] there appear to be some situations in which ADR techniques can provide a more constructive solution to an environmental controversy than litigation. Yet with very few exceptions, ADR techniques have not been applied to NEPA controversies. Some aspects of the NEPA process, notably scoping, are quite compatible with ADR techniques. Efforts should be made to meld the procedural aspects of NEPA with successful ADR techniques to attempt to resolve incipient environmental controversies before court battles become inevitable.

Conclusion

While NEPA may be an old statute, by environmental law standards, it has important continuing vitality in light of current environmental problems. Its most important functions continue to be integrating environmental factors into federal decisionmaking and opening up that process to outside parties. Its breadth covers such timely concerns as biological diversity and global climate change, and it will continue to cover the concerns of future generations.

90. For example, what remedy can the courts impose if Congress is proceeding to debate and decide on a proposal that is unaccompanied by the appropriate NEPA documentation, or if an EIS that has been transmitted to Congress is arguably inadequate?

91. The Forest Service and the Bureau of Land Management, for example, have filed many legislative EISs for proposals for Wild and Scenic Rivers and Wilderness Areas. A legislative EIS was prepared for the Department of Interior's proposed oil and gas leasing program in the Alaska National Wildlife Refuge Area. EPA and the Department of State have submitted legislative NEPA documents related to various proposed international agreements and treaties.

92. 40 C.F.R. §1508.7.

93. *See, e.g.,* Connor v. Burford, 848 F.2d 1441, 18 ELR 21182 (9th Cir. 1988); Fritiofson v. Alexander, 722 F.2d 1225, 15 ELR 21070 (5th Cir. 1985); Thomas v. Peterson, 753 F.2d 754, 15 ELR 20225 (9th Cir. 1985).

94. *See, e.g.,* U.S. Forest Service, Region 6 Procedures for Cumulative Effects Analysis: Direction for Cumulative Effects Analysis in Forest Planning (Dec. 1986); J. Gosselink and L. Lee, Cumulative Impacts Assessment in Bottomland Hardwood Forests (Center for Wetland Resources, Louisiana State University) 1987 (prepared for the Environmental Protection Agency).

95. These totals are derived from annual CEQ NEPA litigation surveys, published in annual environmental quality reports.

96. For a survey and analysis of situations in which alternative dispute resolution techniques have been used, spanning a period from the early 1970s to spring of 1984, see G. Bingham, Resolving Environmental Disputes: A Decade of Experience (1986).

97. *See* Mays, *Alternate Dispute Resolution and Environmental Enforcement: A Noble Experiment or a Lost Cause?,* 18 ELR 10087 (1988).

98. *See* Administrative Conference Recommendation 86-3, calling on agencies to employ alternative means of dispute resolution in a broad range of controversies (adopted in June 1986), and Recommendation 86-8, on acquiring the services of "neutrals" for alternative means of dispute resolution (adopted in December 1986).

99. There is, for example, deep concern on the part of environmental organizations about available resources for intensive negotiating sessions. *See generally* Brunet, *The Costs of Environmental Alternative Dispute Resolution,* 18 ELR 10515 (1988).

Some aspects of both NEPA and the environmental impact assessment need clarification or further attention. During 1989 and 1990, there will be a series of forums for examining these issues in connection with the 20th year anniversary of the statute. CEQ is taking the lead role in coordinating these activities. These events should be useful in highlighting the strengths and weaknesses of current practices under NEPA.

federal register

Friday
April 24, 1992

Part II

Department of Energy

10 CFR 1021

National Environmental Policy Act; Implementing Procedures and Guidelines Revocation; Final Rule and Notice

DEPARTMENT OF ENERGY

10 CFR Part 1021

National Environmental Policy Act Implementing Procedures

AGENCY: Department of Energy.

ACTION: Final rule.

SUMMARY: The Department of Energy (DOE) is revising the existing rule at 10 CFR part 1021, titled "Compliance with the National Environmental Policy Act," to incorporate revised provisions of DOE's Guidelines for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA). DOE is also revoking its existing NEPA guidelines. This rule incorporates changes required by certain policy initiatives instituted by the Secretary of Energy to facilitate participation of the public and affected states in the NEPA process for proposed DOE actions. The rule also includes a revised and expanded list of typical classes of actions, including categorical exclusions. Categorical exclusions are classes of actions that normally do not require the preparation of either an environmental impact statement or an environmental assessment.

EFFECTIVE DATE: This rule will become effective May 26, 1992.

FOR FURTHER INFORMATION CONTACT: Carol Borgstrom, Director, Office of NEPA Oversight, EH–25, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586–4600 or (800) 472–2756.

SUPPLEMENTARY INFORMATION:

I. Background

On November 2, 1990 (55 FR 46444), DOE published a proposed rule that would revise 10 CFR part 1021, revoke the DOE NEPA Guidelines (52 FR 47662, December 15, 1987, as amended), and adopt the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR parts 1500–1508). Publication of the Notice of Proposed Rulemaking began a 45-day public comment period, ending December 17, 1990. As part of the notice and comment process, DOE held a public hearing on the proposed rule on December 5, 1990. Comments were received from 19 sources, including private individuals, state and Federal agencies, public interest groups, and other organizations. Copies of all written comments and the transcript of the public hearing have been provided to CEQ and are available for public inspection at the DOE Freedom of Information Reading Room, room 1E–190, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586–6020.

Today's notice adopts the revisions proposed at that time, with certain changes discussed below, and codifies them at 10 CFR Part 1021. A separate notice published today revokes the existing Guidelines on the date that these regulations become effective.

Copies of the final rule are available upon request to the information contact listed above.

In accordance with 40 CFR 1507.3, DOE has consulted with CEQ regarding this rule. CEQ has found that this regulation conforms with NEPA and the CEQ regulations and has no objection to its promulgation.

II. Statement of Purpose

The purpose of the rule is to revise the provisions of DOE's NEPA Guidelines, based on DOE's experience in the implementation of NEPA and on the directives of Secretary of Energy Notice 15–90 (SEN–15–90), to provide more specificity and detail than the Guidelines and to enhance public review opportunities. (For further information on SEN–15–90, issued February 5, 1990, see the Notice of Proposed Rulemaking (55 FR 46445, November 2, 1990); copies are available from the information contact listed above.) The rule is to be codified at 10 CFR part 1021. By issuing its NEPA Guidelines as regulations published in the Code of Federal Regulations, DOE will ensure that its NEPA procedures are more accessible to the public.

III. Comments Received and DOE's Responses

DOE has considered and evaluated the comments received during the public comment period. Many revisions suggested in these comments have been incorporated into the final rule. The following discussion describes the comments received, provides DOE's position on the comments, and describes any resulting changes to the rule. Section references, unless otherwise indicated, are to those in the proposed rule rather than the final rule; changed section designations are noted below, in response to corresponding comments.

Many of the commenters expressed overall support for DOE's efforts to improve its NEPA procedures, especially in the areas of increased public participation and requirements for programmatic and site-wide NEPA documentation and mitigation action plans. Because these comments are general in nature and do not require consideration of any changes to the proposed rule, they will not be discussed individually.

In addition to revisions made in response to comments and other revisions already discussed, DOE has made a number of editorial, stylistic, and format revisions. DOE also has made certain technical changes for clarity and consistency, which are described below under corresponding subject headings.

A. Procedural Comments

Several commenters addressed the procedural aspects of this rulemaking. One commenter requested that DOE hold public hearings on the proposed rule in the vicinity of its nuclear weapons facilities. DOE provided an opportunity for both oral and written comment on this rule. Written comments were given the same consideration as oral comments. For this reason, DOE determined that additional public hearings in the vicinity of its nuclear weapons facilities were not necessary.

One commenter disagreed with DOE's position—stated in the November 2, 1990, Preamble, regarding NEPA review requirements for the proposed rule—that the promulgation of this rule does not require an environmental assessment (EA) or environmental impact statement (EIS). The commenter asserted that, in light of the absence of documentary support for the many decisions made in the rule, especially the identification of classes of categorically excluded actions, not only is NEPA review required, but an EA or EIS would help to provide a basis for these decisions.

Issuance of this rule complies fully with NEPA's review requirements. DOE's NEPA Guidelines (52 FR 47662, December 15, 1987) list a categorical exclusion for "promulgation of rules and regulations which are clarifying in nature, or which do not substantially change the effect of the regulations being amended." The regulations adopted today will revise 10 CFR part 1021, which simply adopts the CEQ regulations. The amendment clarifies the previous rule by adding specificity, and contains only procedural requirements. Therefore, this action is categorically excluded from further NEPA review. (Also see section V, below.)

A number of commenters addressed the effective date of the final rule. One supported DOE's intention to have the rule become effective immediately upon publication. Another asserted that the rule should not become effective immediately upon publication because "good cause" does not exist within the meaning of the Administrative Procedure Act, 5 U.S.C. 535(d), to waive the standard 30-day period between publication and effective dates. Two

commenters asserted that because their comments suggested such substantial revisions to the proposed rule, the rule should be reissued as a proposed rule.

As indicated earlier in this Notice of Final Rulemaking, the effective date of the rule will be 30 days from the date of publication. DOE does not agree that the rule should be reproposed for further public comment. The revisions are a logical outgrowth of the Notice of Proposed Rulemaking published on November 2, 1990, reflecting responses to public comments and limited technical changes in the proposed rule.

B. General Comments on Subparts A Through C

Two commenters were concerned about the length of time needed to complete NEPA documentation. One commenter suggested that DOE establish time periods for internal DOE review and decisions. The other commenter suggested establishing limits on the total time allowed for the completion of each NEPA document process, as many states have done in connection with state processes under NEPA-equivalent laws. Although DOE is aware of the advantages of being able to predict the time the NEPA process will take for proposed actions, the variety of the type and complexity of DOE actions precludes establishing a single time period that would be practical for all actions. Therefore, DOE does not believe that establishing time limits for NEPA review is feasible.

One commenter was concerned in particular about the duplication of effort that might arise from the need to meet both Federal and state NEPA requirements and asserted that guidance on this issue should be provided in DOE's NEPA procedures. One of the goals of these regulations is to implement the CEQ regulation encouraging Federal agencies to cooperate with state agencies to the fullest extent possible to reduce duplication between NEPA and state requirements (see 40 CFR 1506.2). In the past, DOE has been successful in attaining that goal, and, in nearly all cases, a single document has sufficed for both NEPA and state requirements. Under this rule, DOE will continue to work to minimize duplication and to maximize coordination and cooperation. Should the unusual situation arise where there is a conflict between NEPA and state requirements, however, DOE is bound by the requirements of NEPA. Accordingly, DOE believes that no revisions to the proposed rule are necessary as a result of this comment.

There were three comments regarding DOE internal procedures related to the proposed rule. One commenter requested a discussion of the future role of the Action Description Memorandum (ADM). An ADM is an internal DOE document used to assist DOE in determining the appropriate level of NEPA review—EA or EIS—for a proposed action that is not listed in the classes of actions in the appendices to Subpart D of the rule or for which the appropriate initial level of review is unclear. The role of the ADM will not change with the promulgation of this rule.

One commenter requested clarification of how the final rule would be applied to NEPA documents that had been initiated before its effective date. DOE intends to apply the rule to ongoing activities and to environmental documents begun before the effective date of the rule to the fullest extent practicable. The rule will not apply to an EIS if the draft EIS was filed before the rule's effective date, and completed environmental documents will not be required to be redone as a result of this rule.

Two commenters stated that the proposed rule contains an overabundance of imprecise, subjective, and discretionary language, sometimes in provisions where discretionary language is inconsistent with NEPA and the CEQ regulations. The commenters urged DOE to eliminate such language from the proposed rule. DOE generally agrees with these comments and has removed the phrase "in DOE's judgment" from the following sections of the proposed rule: 1021.200(b), 212(b), 213(b), 301(d), 311(a), 332(a) and (c), 340(b), and 341(a) and (b). Similarly, the phrase "at its [or DOE's] discretion" has been removed from the following sections: 1021.300(b), 301(c) and (d), 311(b) and (e), 312(d), 313(d), 314(d)(3), 322(d), and 330(a). The phrase "at its option" has been removed from 1021.312(a).

C. Comments on Subpart A—General

Section 1021.102 Applicability

One commenter suggested that the phrase "any DOE action affecting the environment" be changed to the language in NEPA: "major Federal actions significantly affecting the quality of the human environment." Because DOE is required to examine all actions that affect the environment to determine whether they are major Federal actions that may significantly affect the human environment, the commenter's suggested change was not adopted.

Another commenter suggested that DOE follow the lead of other agencies with overseas activities (e.g., the U.S. Agency for International Development and the National Oceanic and Atmospheric Administration) and analyze all the environmental impacts of proposed activities, not just impacts within U.S. territory. Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions," states in section 1–1 that the Order "represents the United States government's exclusive and complete determination of the procedural and other actions to be taken by Federal agencies to further the purpose of [NEPA], with respect to the environment outside the United States, its territories and possessions." As explained in the proposed rule, DOE has adopted procedures (46 FR 1007, January 5, 1981) implementing E.O. 12114, pursuant to section 2–1 of that Order. As long as the Order is in effect, DOE will use these procedures in addressing the extraterritorial environmental effects of DOE actions, and no change is needed in this final rule.

Section 1021.104 Definitions

Section 1021.104(b). In addition to the comments discussed below, other comments that nominally relate to definitions are addressed elsewhere, in the discussion of sections of the rule where the comment has more substantive relevance.

Definition: Action and DOE decision. One commenter stated that the failure of officials to act was reviewable and thus should be included in DOE's definition of action. The commenter suggested that DOE should simply reference the CEQ definition at 40 CFR 1508.18. The proposed rule did reference § 1508.18 of the CEQ Regulations, and DOE's paraphrasing of that section in the proposed rule was not intended to exclude any activity covered by 40 CFR 1508.18, including the failure to act. In response to the comment, however, the final rule has been modified to more closely parallel 40 CFR 1508.18. (As a result of this change and a related comment on the definition of "DOE decision," DOE has deleted the definition of "DOE decision" from the final rule.) The definition of "action" has also been changed to make clear that these regulations do not apply to "ministerial actions," such as congressionally mandated funding passthroughs, which DOE does not propose and over which it has no discretion. (Also see the discussion of appendix A1 .5, below.)

Definition: Adjacent state. One commenter stated that the requirement that a state must have a common boundary with a host state in order to be an adjacent state was too limiting.

Specifically, they asserted that states may be downwind or downstream from the location of a proposed action or have vital social or economic interests in a proposed action without sharing a common boundary. In response to the comment, the definition of "adjacent state" has been deleted, and in corresponding provisions of the rule, DOE has replaced "adjacent state" with the concept of a state or American Indian tribe that may be affected by a proposed action.

Definition: American Indian tribe. This definition has been added to accommodate changes made in §§ 1021.301(c) and (d) in response to comments and the addition of § 1021.301(e).

Definition: Contaminant and hazardous substance. One commenter objected to defining these words by reference to their definitions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) because this would potentially exclude actions involving petroleum and natural gas products from NEPA review. DOE has addressed the commenter's concern by adding a definition for "CERCLA-excluded petroleum and natural gas products" and incorporating this phrase in appropriate parts of the final rule.

Definition: Documentation. One commenter stated that the proposed definition would supplant the environmental assessment that CEQ requires as the basis for determining the significance of the environmental effects of a proposed action. DOE agrees with the commenter's basic assertion that the purpose of "documentation" should be to have a record of a decision that categorical exclusion from environmental analysis is appropriate. This was DOE's intention, but comments on the definition of "documentation" and related parts of the proposed rule suggest that the intended purpose was not well understood. The CEQ regulations do not require documentation of the application of a categorical exclusion, and DOE is withdrawing the proposed regulatory requirement for such documentation. DOE believes that internal procedural and recordkeeping requirements for overseeing the application of categorical exclusions are more appropriate, and therefore has deleted the proposed definition and related provisions of the proposed rule.

Definition: EIS Implementation Plan. One commenter suggested that the definition be altered by adding "schedule" so as to read "that explains and supports the scope, *schedule*, and approach * * *" DOE accepts the comment, but has also added the qualifying word "target" because schedules are subject to change.

Definition: Host tribe. This definition has been added to accommodate changes made in 1021.301(c) and (d).

Definition: Interim action. One commenter thought that this definition would be more instructive if it cited the CEQ definition rather than referring to it. The commenter's suggested change, however, would include only one of the limitations from 40 CFR 1506.1. The proposed language that was the source of confusion has been rewritten.

Definition: NEPA document. One commenter would expand this definition by adding "Supplement Analysis," "Environmental Critique," and "Environmental Synopsis." DOE disagrees because these documents are not required by NEPA or the CEQ regulations. DOE has deleted "documentation of a categorical exclusion" from this definition because listing it was inappropriate at the outset, and the final rule does not require such documentation.

Definition: Pollutant. This definition has been affected indirectly by the addition of a new definition—"CERCLA-excluded petroleum and natural gas products"—in response to comments.

Definition: Project. DOE has modified this definition to more explicitly comport with CEQ's corresponding language, as a commenter suggested.

Definition: Site-wide NEPA document. The definition in the final rule acknowledges the programmatic nature of a site-wide NEPA document, in response to a commenter's request for clarification.

Section 1021.105 Oversight of Agency NEPA Activities

One commenter interpreted DOE's proposed offer to provide information on procedures and the status of NEPA reviews as an offer to provide written guidance and reports, and suggested that the rule make further provisions regarding such materials. DOE does not prepare written reports on individual NEPA reviews. The rule has been changed to clarify the original intent that DOE will make every effort to respond to public inquiries and to provide timely information regarding the status of NEPA review of specific projects.

D. Comments on Subpart B—DOE Decisionmaking

Section 1021.200 DOE Planning

Section 1021.200(a). A commenter stated that many DOE orders issued under the Department's Atomic Energy Act authority govern critical environmental, health, and safety matters with the potential for significant impacts on the human environment, and suggested that promulgation of DOE orders be included as an activity that may require NEPA review. DOE accepts the suggestion and § 1021.200(a) has been modified accordingly. Another commenter requested that the rule clearly state the criteria DOE will use in deciding when to initiate a NEPA review in order to ensure a consistent approach to the NEPA process. The commenter was concerned that DOE might begin NEPA review after committing to a course of action. Section 1021.210(b) has been modified to emphasize DOE's intention to complete NEPA review before committing to a course of action. However, DOE believes that specific criteria for individual types of actions can be more effectively administered through internal procedures.

Section 1021.200(b). One commenter suggested the addition of, or a reference to, the CEQ requirement (40 CFR 1501.2) to integrate the NEPA process with other planning as early as possible. In § 1021.200(a), DOE commits to performing an adequate and timely NEPA review in accordance with 40 CFR 1501.2. Section 1021.200(b) only amplifies the general directive for a proposed action and is not intended to eliminate that commitment.

Section 1021.211 Interim Actions

One commenter supported the intent of the section but was concerned that DOE commitment of resources to an action before completing NEPA review might bias the consideration of alternatives. This commenter also requested that criteria for determining whether future actions fall within the bounds of permissible interim actions under the CEQ regulations (40 CFR 1506.1) be proposed for public review and comment. The commenter expressed concern that DOE will interpret this section too loosely. The commenter did not offer additional criteria. DOE believes that the criteria in the CEQ regulations are adequate, and, therefore, no additional criteria are included in the final rule. The title and language of this section have been modified editorially, however, to more closely parallel the CEQ regulations.

Another commenter was concerned that ongoing and planned environmental restoration actions would be delayed until records of decision for larger "umbrella" EISs or supplemental EISs are issued. DOE believes that many such actions would satisfy the criteria of 40 CFR 1506.1 and, therefore, could

proceed while "umbrella" NEPA reviews are being prepared.

Section 1021.212 Research, Development, Demonstration, and Testing

Section 1021.212(b). One commenter requested that criteria be added for DOE to use in determining when to begin a NEPA review, but did not suggest additional criteria. DOE believes that the criteria in this section, in 40 CFR 1501.2, and elsewhere in this rule are sufficient for that purpose.

In the final rule DOE has moved the last part of proposed § 1021.212(b), which concerned completion of NEPA review before a decision to proceed with detailed design, to § 1021.210(b) in the final rule. This was done to emphasize that this aspect of timing has general applicability.

Section 1021.212(c). One commenter was concerned that this section might be read to allow improper segmentation of the NEPA review of a project. DOE's rule, at § 1021.212(b), provides for subsequent NEPA reviews to evaluate those environmental impacts that could not be meaningfully evaluated at the time the initial review was prepared. Accordingly, the rule does not sanction improper segmentation. In the event that there are legitimate phases to an action, each successive EA or EIS considers cumulative impacts as required under 40 CFR 1508.25.

Section 1021.213 Rulemaking

Section 1021.213(b). One commenter objected to the "internal, subjective" decisionmaking process for determining when to begin NEPA review, but did not offer specific suggestions for more objective criteria. DOE believes that the criteria contained in § 1021.213(b) are adequate and consistent with 40 CFR 1501.2, in that they emphasize conducting NEPA review early in the process.

Section 1021.214 Adjudicatory Proceedings

Sections 1021.214(a) and 1021.214(c). One commenter questioned the meaning of "adjudicatory proceeding" and how it is distinguished from "administrative action." The comma inadvertently placed after "administrative" has been deleted to clarify the provision and to be consistent with 40 CFR 1508.18(a). Also, the phrase "for formal adjudicatory proceedings" has been deleted from § 1021.214(c) to eliminate confusion.

Section 1021.215 Applicant Process

Section 1021.215(b)(6). In response to a comment, and to clarify DOE's original intent, language has been added indicating that DOE would take appropriate action if an applicant were about to take an action that would not satisfy the criteria in 40 CFR 1506.1(a) before DOE completes the NEPA process.

Section 1021.215(c). One commenter believed that the generic guidelines mentioned in this section should be proposed under the Administrative Procedure Act with adequate public notice and opportunity for comment. DOE has modified the section to clarify that any guidance issued to assist preparation of applications would be nonbinding on the applicants. Such guidance need not be subjected to public notice and comment.

Section 1021.216 Procurement and Financial Assistance

This section has been modified to clarify that it applies to DOE joint ventures entered into as a result of a competitive solicitation. Such joint ventures are authorized pursuant to the Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989 (Pub. L. 101–218).

E. Comments on Subpart C—Implementing Procedures

Section 1021.300 General Requirements

Section 1021.300(b). One commenter requested that this section be clarified to reflect the mandatory nature of NEPA review for ongoing activities. DOE agrees that NEPA applies to ongoing activities in appropriate circumstances; however, this section addresses preparation of NEPA documents that are not required by law or regulations. DOE has made clarifying changes.

Section 1021.301 Agency Review and Public Participation

Section 1021.301(a). The term "interested groups" has been added to the list of entities to which DOE will make its NEPA documents available, in response to a comment. In response to another commenter's general concern about the public's information and involvement opportunities regarding DOE's activities, DOE notes that the rule enhances such opportunities and exceeds CEQ's minimum requirements.

Section 1021.301(c). (Section 1021.301(d) of the final rule). Commenters addressed several aspects of this section, including to whom the proposed opportunity for pre-approval review of EAs should be offered, the length of the review period, and the fact that states may vary in making DOE's documents available to the public.

DOE accepts several commenters' suggestions that American Indian tribes be accorded the same pre-approval review opportunities as similarly situated states. The opportunity will not be extended to the public generally or to citizen groups, however, as several commenters also suggested. The pre-approval review opportunity implements the Secretary of Energy's policy to closely coordinate DOE's NEPA actions with host and potentially affected states and American Indian tribes. The courtesy established by this policy is consistent with the special relationship between the Federal Government and the sovereign states and American Indian tribes. The rule exceeds and does not detract from CEQ's public review requirements.

In regard to the length of the review period, two commenters stated that the proposed 14- to 30-day period was inadequate, and one commenter thought the proposed period was adequate. DOE believes that the proposed period is adequate, and notes that this period is a minimum that may be extended as appropriate. DOE believes that the phrase "[a]t DOE's discretion" regarding the review period is necessary to provide flexibility in tailoring the review process to the circumstances of an individual action.

One commenter questioned the meaning of the proposed language explaining how DOE will proceed after giving the opportunity for pre-approval review. DOE has clarified that it may take any appropriate action on the EA before the end of the review period if the states and American Indian tribes have already waived the opportunity or have responded.

Finally, as previously noted regarding the definition of "adjacent state," this definition has been replaced with the concept of a state or American Indian tribe that may be "affected" by a proposed action. DOE believes that it is necessary to maintain the phrase "in DOE's judgment," however, when determining which states or American Indian tribes may be affected by a proposed action, contrary to several commenters. In many cases, this determination will depend on subjective evaluations of multiple factors. Therefore, DOE believes that the rule should state that DOE retains the discretion to exercise judgment in these matters.

Section 1021.301(d). (Section 1021.301(c) of the final rule). Two commenters recommended that, in addition to adjacent (now "affected") states, Indian tribes should also be notified of DOE's determination to prepare an EA or EIS for a DOE action. DOE agrees. One of the commenters

further suggested that interested agencies, citizen groups, and the general public should be notified. This comment was not accepted for the same reasons described in the response to comments on proposed § 1021.301(c).

Section 1021.301(e). In considering the comments opposing the early notification and review and comment provisions of §§ 1021.301 (c) and (d), DOE concluded that there are circumstances when this process would be inappropriate. Therefore, DOE added this section to the final rule so that these provisions would not apply where providing such advance information to a state or American Indian tribe could create a conflict of interest. The rule specifically cites power marketing actions, such as rate-setting, in which a state or Indian tribe is a customer.

Section 1021.311 Notice of Intent and Scoping

Section 1021.311(a). One commenter suggested that a Notice of Intent (NOI) should include at least a brief discussion of potential alternatives. DOE agrees, and a reference to 40 CFR 1508.22, which includes potential alternatives within the NOI contents, has been added to the section.

One commenter objected to the lack of criteria on which DOE will base its decisions on publishing an NOI or an Advance NOI, and also suggested that the rule should allow for maximum public notice of any opportunity for public comment. DOE notes that the wording of the first portion of this subsection is almost a direct quotation of the CEQ regulations, and it is not intended to limit public notice and comment.

The same commenter also stated that the section could be interpreted to mean that DOE has a choice whether or not to provide a reasonable opportunity for public participation regarding a proposed action. DOE believes that this would not be a reasonable interpretation of the section. The provision allowing an NOI to be deferred is intended to ensure that scoping comments are timely, not to limit public participation.

Section 1021.311(b). Two commenters recommended that criteria be established for requiring the publication of an Advance NOI; one suggested that an Advance NOI should be required if the delay between the time DOE has decided to prepare an EIS and the beginning of the public scoping process will be longer than three months. DOE disagrees. The purpose of an Advance NOI is to enhance public involvement, not to restrict it. It is neither necessary nor practical to establish fixed criteria for providing this opportunity. Issuance of an Advance NOI exceeds the requirements of the CEQ regulations, and, therefore, no change is necessary to this section.

Section 1021.311(c). Three commenters suggested that the minimum scoping period should be at least 45 days; another commenter objected to extending the minimum scoping period from the current 20 days to 30 days. DOE has retained the proposed 30-day period as a minimum that can be extended when appropriate, commensurate with the importance, size, and complexity of an individual project and other factors (see 40 CFR 1501.8(b)(1)). Late comments may also be considered when practicable (see § 1021.311(e)). DOE believes that the rule provides an adequate opportunity for informed participation without risking significant project delay as a result of the NEPA process.

Section 1021.311(d). Three commenters suggested that there should be at least 30 days between the announcement of the scoping meeting and the meeting itself and that DOE should provide notice of meetings and schedule changes in the **Federal Register** and in other ways. DOE has retained the 15-day notice period as a minimum. DOE believes that a 15-day notice will generally provide adequate opportunity for informed public participation without risking significant project delay. The notice period may be extended when appropriate, commensurate with the importance, size, complexity of an individual project and other factors.

Regarding the request that DOE provide notice of meetings and schedule changes by publication in the **Federal Register** and through other means, DOE believes that the proposed rule reflects the Department's commitment to aggressively promote use of the most effective means of publicizing the details of public meetings, including schedule changes. As noted in § 1021.311(d), DOE intends to use various means of announcements, including the **Federal Register**, news releases, or letters to affected parties, to ensure that the public has adequate notification.

Section 1021.311(g). A commenter noted that the rule did not establish any criteria for determining the need for a scoping period for a supplemental EIS or any reason why such a scoping period should be optional. DOE believes that there is no need to repeat the public scoping process if the scope of the proposed action has not changed. This provision is consistent with 40 CFR 1502.9, which does not require public scoping for a supplemental EIS. When the scope has changed, however, or when the importance, size, or complexity of the proposal warrants, DOE may elect to have a scoping process.

Section 1021.312 EIS Implementation Plan

Section 1021.312(c). A commenter objected to the proposed rule's categorization of target schedules and anticipated consultations with other agencies in an EIS Implementation Plan as discretionary. DOE has modified the rule to include target schedules and anticipated consultations with other agencies in the list of required items (§ 1021.312(b)).

Section 1021.312(d). Several commenters objected to the provision in the proposed rule for making copies of the EIS Implementation Plan available in DOE public reading rooms. To enhance public access to EIS Implementation Plans, DOE has modified the rule to remove the discretionary language and to require that all EIS Implementation Plans be made available in the appropriate DOE public reading rooms or other appropriate locations.

Section 1021.313 Public Review of Environmental Impact Statements

Section 1021.313(a). Several commenters suggested that the minimum public review and comment period for a draft EIS should be 60 to 90 days or more, except under documented extraordinary circumstances. One commenter objected to the establishment of a minimum period and said that if a minimum is established, it should be no more than 30 days. DOE will retain the minimum comment period of 45 days, consistent with CEQ's minimum requirement (40 CFR 1506.10(c)). DOE may specify a longer comment period for an individual proposal, and often does.

Section 1021.313(b). Two commenters suggested that the minimum notice for a public hearing on a draft EIS should be 30 rather than 15 days. DOE does not agree. As noted in responses to comments at § 1021.311 (c) and (d), DOE believes that a 15-day notice will generally provide adequate opportunity for informed public participation without risking significant project delay due to the NEPA process. DOE may provide a longer period of notice before a hearing when the circumstances warrant, and often does.

Section 1021.313(d). Two commenters stated that DOE should be required to publicize the availability of draft and final EISs and the time and place for

public hearings, and to announce the availability of these documents through additional methods beyond a **Federal Register** notice. DOE agrees and has modified the section by removing discretionary language and clarifying that DOE shall use other appropriate means to publicize the availability of such events.

Section 1021.314 Supplemental Environmental Impact Statements

Section 1021.314(a). A commenter questioned why the phrase "new circumstances," which appears in the CEQ regulations (40 CFR 1502.9(c)(1)), was omitted from DOE's proposed rule. The omission in the proposed rule was inadvertent, and "new circumstances" has been added to the final rule.

Section 1021.314(c)(1). (Not included in the final rule). A commenter suggested that a supplemental EIS might be required even though the impacts may not change, such as when the need for the proposed action, the range of reasonable alternatives, or available mitigation measures may have changed. The commenter suggested that the proposed provision at § 1021.314(c)(1) was inconsistent with CEQ provisions at 40 CFR 1502.9(c) regarding when a supplemental EIS is required. DOE has deleted the proposed subsection from the final rule, and other provisions of the section have been redesignated as appropriate.

Section 1021.314(c)(2). (Not included in the final rule). No comments were received on this section, which provided that DOE could revise an existing Record of Decision (ROD) if a decision were subsequently made to proceed with an alternative that was evaluated in the EIS but was not part of the initial decision. The proposed provision has been deleted, however, because the circumstances under which it would apply are adequately addressed by § 1021.315(d) of the final rule (which was § 1021.315(f) of the proposed rule).

Section 1021.314(d). (Section 1021.314(c) of the final rule). Two commenters stated that DOE should provide a public notice and comment opportunity concerning its intent to prepare an EIS Supplement Analysis (SA) and publish a Notice of Availability of the SA and the resulting determination. One commenter further suggested treating an SA like an EA (i.e., providing the same review and comment opportunities as for an EA). An EA, in contrast to an SA, is a NEPA document required by the CEQ regulations. DOE does not believe parallel procedures for the two documents are appropriate, and does not believe it is necessary to seek public input prior to a determination whether a supplemental EIS is required. DOE will follow the criteria at 40 CFR 1502.9(c)(1) when determining whether to supplement an EIS. If a supplement is required, the public will be fully involved in the NEPA process per the requirements at 40 CFR 1502.9(c)(4) and § 1021.314(d) of these rules. In response to the comments, however, DOE has modified § 1021.314(d)(3) to provide that SAs shall be placed in the appropriate DOE public reading rooms or other appropriate locations.

Section 1021.314(d)(1). (Section 1021.314(c)(1) of the final rule). DOE modified this section in accordance with a commenter's suggestion that the content of an SA be described more specifically.

Section 1021.314(d)(2). (Section 1021.314(c)(2) of the final rule). Language in the proposed rule regarding revision of an existing ROD has been deleted from this subsection of the final rule to eliminate potential confusion regarding the basis for revising an ROD. As provided for in § 1021.315(d) of the final rule, DOE may revise an ROD only when it is adequately supported by an existing EIS.

Section 1021.314(d)(3). (Section 1021.314(c)(3) of the final rule). A commenter thought that it should be required, not discretionary, for the SA and the determination resulting from it to be provided to the public in relevant DOE reading rooms. Another commenter suggested that DOE should establish an affirmative system for providing access to SAs. (See response under § 1021.314(d)).

Section 1021.314(e). (Section 1021.314(d) of the final rule). Language of the proposed rule regarding revision of an ROD has been deleted to be consistent with changes made at § 1021.314(d)(2). Additionally, a reference to § 1021.315 of the final rule has been added to this section to clarify and emphasize provisions associated with issuing RODs.

Section 1021.315 Records of Decision

Section 1021.315(b). (Section 1021.313(c) of the final rule). DOE has moved the requirements in this proposed subsection to § 1021.313(c) of the final rule in order to be consistent with the requirements of 10 CFR part 1022. Part 1022 requires that a Statement of Findings for floodplain actions shall be noted in a final EIS.

Section 1021.315(d). (Not included in the final rule). A commenter objected to having the date of issuance of an ROD be the date of signature rather than the date it is published in the **Federal Register** because that could mean that the action might proceed before the public becomes aware of the decision. DOE has modified § 1021.315(b) of the final rule (§ 1021.315(a) of the proposed rule) to clarify that no action may be taken until the decision has been "made public"; proposed § 1021.315(d) has been deleted. Section 1021.315(c) of the proposed and final rule provide a requirement that RODs be published in the **Federal Register**, which exceeds CEQ's requirement. DOE may also provide initial public notification by a press release, for example, announcing the availability of the ROD in appropriate DOE public reading rooms.

Section 1021.315(e). (Section 1021.315(a) of the final rule). DOE agrees with the commenters that the CEQ regulations allow for situations when comments on a final EIS may be appropriate. The phrase leading to confusion regarding this subject has been deleted.

Section 1021.315(f). (Section 1021.315(d) of the final rule). One commenter stated that revision of the preferred alternative would only be appropriate if all of the alternatives had received the same level of analysis and discussion of mitigation. DOE acknowledges the general correctness of this comment, but believes strict equality of treatment among alternatives may not be necessary in all cases. Rather, each alternative must be analyzed to a degree commensurate with its potential for environmental impact, and sufficient information must be provided for all alternatives to allow a proper basis for comparison among them. Rather than making the rule more specific, as the commenter further suggested, DOE has added language to the final rule to assure that revisions of the ROD will only take place if the EIS "adequately" supports the revised decision.

Section 1021.321. Requirements for Environmental Assessments.

Section 1021.321(a). One commenter expressed concern about the breadth of DOE's proposal to prepare an EA for all proposed actions not listed in appendices A, B, or D to subpart D. No change has been made to the final rule. DOE will prepare an EA for such actions unless it has already decided to prepare an EIS. This is consistent with 40 CFR 1501.4(b). DOE may add classes of actions to the lists in appendices A, B, or D in accordance with the CEQ regulations (40 CFR 1507.3).

Section 1021.321(b). One commenter thought the proposed focus of an EA was too limited, in comparison with the CEQ requirements. The discussion in the proposed rule focused on the major

purpose of an EA but was not intended to be limiting. DOE has added clarifying language to indicate that an EA shall serve all the purposes identified in 40 CFR 1508.9(a).

Section 1021.321(c). One commenter suggested that DOE withdraw the requirement to analyze the no action alternative in an EA when a proposed action is required by law or court order. DOE believes that it is appropriate to retain this provision. Presentation of the impacts of the no action alternative establishes a "baseline" for judging the impacts of the proposed action. The purpose served by this requirement (i.e., informing Congress and the public, as well as the decisionmaker, of the implications of not taking the action) is consistent with the reasoning behind the judicial interpretations and the CEQ regulation requiring consideration of the no action alternative in EISs.

Section 1021.322 Findings of no Significant Impact

Section 1021.322(a). DOE accepts a commenter's suggestions regarding clarification of when it is appropriate to issue a Finding of No Significant Impact (FONSI). DOE has modified this section editorially to clarify that a FONSI will be issued only if the related EA supports the finding that the proposed action will not have a significant effect on the human environment.

Section 1021.322(b)(2). A commenter requested that DOE clarify this section to distinguish the types of environmental impacts that may be mitigated consistent with issuance of a FONSI from those warranting preparation of an EIS. Because of the varied nature of DOE's projects, it is not practical to define with precision the types of mitigation that would support the issuance of a FONSI. However, DOE does not view activities that are routine parts of proposed actions, such as routine erosion control, as "mitigation commitments" in the context of § 1021.322(b)(2). Rather, § 1021.322(b)(2) refers to mitigation actions over and above the proposed action that are necessary to render the impacts of the action insignificant. DOE agrees with the commenter's suggestion that actions requiring relocation of endangered species habitat or reconstruction of major wetlands are EIS candidates. DOE believes such determinations should be made case by case, however, taking account of all the pertinent circumstances. DOE has revised the appropriate parts of § 1021.322 to make these distinctions clearer.

Section 1021.322(c). One commenter suggested that DOE should add a commitment to the final rule to provide a notice of availability of FONSIs to interested state and Federal agencies, tribal governments, citizen groups, and members of the general public. The procedure proposed by DOE and retained in the final rule is in accordance with CEQ regulations for distribution of a FONSI. It includes options such as those proposed by the commenter. DOE believes this is adequate, but will accommodate the commenter's further suggestion to make FONSIs available in the appropriate DOE public reading rooms or other appropriate locations. The section is modified accordingly.

Section 1021.330 Programmatic NEPA Documents

A commenter requested clarification of the distinction between programmatic NEPA documents and site-wide NEPA documents as discussed in proposed § 1021.331, especially in view of DOE having proposed periodic review only for the latter. DOE considers site-wide NEPA documents to be programmatic in nature and, accordingly, has merged proposed § 1021.331 into § 1021.330 of the final rule. Many DOE sites contain facilities that support diverse and unrelated missions and activities. Site-wide NEPA documents are programmatic in the sense that they review the collective potential environmental effects of such facilities on a single geographic location, and in the sense that these facilities are operated under a single management. However, DOE has retained the requirement for periodic review of site-wide NEPA documents without extending it to programmatic NEPA documents in general. A site-wide NEPA review evaluates the potential individual and cumulative environmental impacts of ongoing and reasonably foreseeable activities at a DOE site (including potential mitigations of any environmental problems); periodic review of those evaluations is appropriate. Periodic review of programmatic NEPA documents (other than site-wide NEPA documents) would not be useful if the proposed program has been implemented, as often is the case.

Section 1021.330(a). A commenter observed that a programmatic EIS is required not only for "connected actions," but also for "cumulative actions" and "similar actions." DOE did not intend to limit the circumstances that require a programmatic EIS. The section has been revised to delete the reference to connected actions and to refer instead to the CEQ Regulations (40 CFR 1508.18(b)(3)), which define a program to include a group of concerted actions and systematic and connected agency decisions.

Section 1021.331 Site-wide NEPA Documents (Included in Section 1021.330 of the Final Rule)

Section 1021.331(a). A commenter maintained that DOE's requirement in the proposed rule to prepare site-wide EISs for certain large, multiple-facility sites is inconsistent with the definition of an EIS, would not significantly further the purposes of NEPA, and would mainly provide information that is already available from other sources. DOE believes, however, that site-wide NEPA review will serve to improve and coordinate agency plans, functions, programs, and resource utilization. A site-wide EIS provides an overall NEPA baseline for a site that is particularly useful for tiering or as a reference when preparing project-specific NEPA documents for new proposals. The requirement is retained.

Another commenter stated that inclusion of the phrase "as a matter of policy" was inappropriate because site-wide EISs may be required under NEPA in certain circumstances. DOE will prepare site-wide EISs when required, but may also, "as a matter of policy," prepare site-wide EISs for a number of reasons including, for example, to improve site planning efforts, to consolidate activities, and to maximize cost-saving efficiencies.

As discussed at § 1021.330, DOE considers site-wide NEPA documents to be programmatic in nature and, accordingly, has merged proposed § 1021.331 into § 1021.330 of the final rule.

Section 1021.331(b). Several commenters suggested public participation opportunities for the proposed periodic evaluation of site-wide NEPA documents. DOE does not believe it necessary to require public notice of its intent to conduct such evaluations and will evaluate case by case whether such notice is appropriate. DOE has modified the rule, however, so that analyses and determinations resulting from such reviews will be made available in the appropriate DOE public reading rooms or other appropriate locations.

One commenter requested that DOE define the starting time of the cycle for the five-year reviews. DOE does not agree that specifying procedural starting times in this regulation is necessary or appropriate.

Finally, DOE has modified this section of the final rule to delete an unintended reference in the proposed rule to supplementing an EA.

Section 1021.332 Mitigation Action Plans (Section 1021.331 of the Final Rule)

One commenter stated that DOE must narrow the scope of this section, which allows for mitigation in support of a FONSI, citing the answer to Question 40 of CEQ's "Forty Most Asked Questions" (46 FR 18038, March 23, 1981), which addresses the circumstances under which a FONSI based on mitigation is appropriate. DOE has not modified the rule in this regard because it believes that the rule, as proposed, is consistent with CEQ's guidance. The answer to Question 40 focuses on the principle that a FONSI cannot be based only on the possibility of mitigation. However, DOE action under a FONSI supported by mitigation would be based on a commitment to perform the mitigation, not the possibility. This section has been modified to clarify this point; in doing so, DOE separated the discussion of EISs and EAs into different subsections. The discussion regarding Mitigation Action Plans (MAPs) for EISs and EAs/FONSIs can now be found at § 1021.331(a) and (b), respectively.

Two commenters suggested that MAPs be made available for public review and comment. DOE believes that public review of the MAP is not necessary because commitments to perform the subject actions would be included in the FONSI or EIS and associated ROD. The MAP is an internal DOE document that describes the plan for implementing and monitoring mitigation commitments made in these documents. DOE, however, will make copies of MAPs available in the appropriate DOE public reading rooms or other appropriate locations (see § 1021.331(d) of the final rule).

Section 1021.332(a) (Section 1021.331(b) of the Final Rule)

One commenter suggested that the phrase "in significant part" was inappropriate and should be deleted because, no matter how small the mitigation, its accomplishment would be critical to avoid the need for an EIS. The phrase "in significant part" has been deleted from the final rule, and the section has been changed to clarify that DOE commits to performing all mitigations "essential to render the impacts of the proposed action not significant." However, as discussed under and clarified in § 1021.322(b)(2), DOE does not intend the term "commitments to mitigations" to apply to actions that are routinely taken as part of or are integral elements of a proposed action.

Section 1021.340 Classified, Confidential, and Otherwise Exempt Information

A commenter suggested that DOE exercise greater restraint in deciding which information to withhold from the public. DOE believes that this rule in many ways enhances public access to information. With respect to confidential or classified documents, however, DOE must comply with applicable laws and regulations. Procedures for classifying information are beyond the scope of this rule.

Although no comments were received to this effect, DOE has deleted the reference to disclosure of interagency memoranda transmitting comments on EISs. This modification was made to avoid the possible misconception that DOE intended to disclose classified comments. For unclassified comments, the provisions of the CEQ Regulations at 40 CFR 1506.6(f) would apply. Additionally, DOE has deleted from the final rule the inadvertent and unnecessary reference to "restricted" information made in the proposed rule.

Section 1021.340(a). A commenter expressed a concern that unless this section is limited, inappropriate material will be made available to the public, especially draft comments and attorney work product. The provision at issue addresses interagency memoranda transmitting comments. By their nature, such documents are final and become public comments (40 CFR 1506.6(f)). No exception in the requirement is made for the case where the agency's responding unit is its legal counsel. DOE legal counsel's comments (intraagency), like other internal deliberative documents, are exempt from release. The section is not changed.

Section 1021.340(b). One commenter suggested that the phrase "wherever possible" should be deleted because it might lead to a determination that the release of information was not "possible" because of costs or inconvenience. This section addresses the preparation of a document in the context of § 1021.340(c), in which cost and inconvenience are not issues. The final rule has been modified, however, to indicate that DOE will, to the fullest extent possible, segregate any information that is exempt from disclosure into an appendix to facilitate public review of the remainder of the document.

Another commenter suggested that the rule acknowledge that classified portions of documents will undergo an independent review by other Federal agencies whenever appropriate. This comment refers to the responsibilities of the Environmental Protection Agency under section 309 of the Clean Air Act. This rule need not restate review responsibilities that are otherwise provided for by law.

Section 1021.341 Coordination With Other Environmental Review Requirements

Section 1021.341(a). One commenter suggested that the rule provide for integrating NEPA with CERCLA requirements in order to preclude delays and unnecessary duplication of effort. Another expressed a concern that this rule should not prejudice an ongoing, broader discussion of the applicability of NEPA to the environmental restoration activities conducted by Federal agencies other than EPA. It is DOE's policy to integrate NEPA values into activities undertaken pursuant to CERCLA wherever practical. DOE's implementation of this policy is not intended to represent a statement on the legal applicability of NEPA to environmental restoration activities conducted under CERCLA or other legal authority, and DOE believes that this policy will not prejudice any subsequent resolution of the applicability issue.

Section 1021.341(b). DOE agrees with a comment noting that the determination of applicability of other environmental requirements (e.g., those of the Endangered Species Act, section 106 of the Historic Preservation Act, and section 404 of the Clean Water Act) is not always left to the agency proposing an action, but sometimes to other agencies with given program responsibilities. DOE did not intend to imply in the proposed rule that it could unilaterally determine the applicability of such requirements. The final rule has been modified from the proposed rule to state that DOE will determine the applicability of other environmental requirements in consultation with other agencies when necessary or appropriate.

Section 1021.342 Interagency Cooperation

One commenter requested clarification of DOE's procedures for the designation of a lead office within DOE and the designation of cooperating offices and agencies within and without DOE, including entities other than Federal agencies. Another commenter thought that the provisions for involvement of cooperating agencies should be expanded and improved to reference or acknowledge the CEQ regulations. DOE has reinforced its general obligation, acknowledged in § 1021.103, to comply with all CEQ requirements, including those for lead

and cooperating agencies, by establishing in § 1021.342 an affirmative policy to cooperate with other agencies, including the development of interagency agreements. The final rule cites specific CEQ requirements (i.e., 40 CFR 1501.5 and 1501.6) for greater clarity. DOE's internal procedures for carrying out its responsibilities are beyond the scope of this rulemaking, however.

Section 1021.343 Variances

Section 1021.343(a). DOE has modified the rule in response to a commenter's request to make the rule more clearly consistent with the CEQ regulation regarding consultation with CEQ about "alternative arrangements." The final rule also requires DOE to publish a notice in the Federal Register after taking an emergency action, which exceeds CEQ requirements.

Section 1021.343(b). A commenter suggested that DOE limit its reduction of time periods established in the rule to extraordinary situations that demand immediate attention. The only time periods that DOE has discretion to change are those established by DOE that exceed CEQ's requirements. DOE does not believe it is appropriate to establish criteria for reducing these time periods, because it is not possible to foresee all possible circumstances under which reductions may be needed. However, in no case would the time periods resulting from application of this subsection be less than the minimums established by CEQ.

Section 1021.343(c). One commenter suggested that the variance provision should be deleted, describing it as a "catch-all." Another suggested that a Federal Register notice be required for such variances. DOE believes the variance provision is reasonable and appropriate, and consistent with 40 CFR 1506.11. The rule has been modified, however, to require that a notice of variance be published in the Federal Register, as the commenter suggested. Editorial modifications were also made to clarify responsibilities of the Secretary of Energy.

F. General Comments on Subpart D—Typical Classes of Actions

DOE received extensive comments on the approach to NEPA compliance reflected in the proposed regulations and appendices of Subpart D, with the major focus of these comments on the classes of actions proposed in appendices A and B to be categorically excluded from the preparation of an EA or EIS.

Commenters pointed out that DOE failed in the proposed rule to make the finding required by the CEQ regulations (at 40 CFR 1508.4) that the classes of actions categorically excluded from the requirement to prepare an EA or EIS do not individually or cumulatively have a significant effect on the human environment. Two commenters further asserted that DOE must, for each class of action included in appendices A and B, make an explicit finding with an articulated basis, supported by documentation, that the actions encompassed by the class never, except in extraordinary circumstances, have a significant effect on the human environment.

DOE agrees that the CEQ regulations do require DOE to find that the classes of actions in appendices A and B will not individually or cumulatively have a significant effect on the human environment and that this finding be made in procedures adopted in implementing the CEQ regulations. Accordingly, DOE has included such a finding at § 1021.410(a) of the final rule. However, DOE does not believe that it is required to set forth in the preamble a detailed, individualized explanation for such finding for each of the classes of actions in appendices A and B. In finding that the classes of actions categorically excluded in the final rule will not individually or cumulatively have a significant effect on the human environment, DOE has considered, among other things, its own experiences with these classes of actions, other agencies' experiences as reflected in their NEPA procedures, and the comments received on the proposed rule.

One commenter also questioned DOE's exclusive reliance on experience to support its identification of categorical exclusions and the use of memoranda-to-file as a part of this experience record because, the commenter asserted, DOE has determined that memoranda-to-file do not constitute acceptable NEPA documentation. Although DOE stopped using the memorandum-to-file as part of its NEPA process on September 30, 1990, DOE believes that memoranda-to-file prepared before that date are valid documents that should be considered as part of DOE's experience with particular actions. The purpose of memoranda-to-file was to determine whether proposed actions, not included in the list of categorical exclusions, would have clearly insignificant impacts, and therefore not require either an EA or an EIS. This is precisely the type of document that is relevant for the finding required by 40 CFR 1508.4.

Some commenters stated that DOE's extensive list of categorical exclusions suggested a DOE position that classes of actions can be categorically excluded if, some of the time, they would not have significant impacts. The commenters compared this to the CEQ regulations, which clearly limit categorical exclusions to those classes of actions that have significant impacts only in extraordinary circumstances. DOE believes its categorical exclusions comply with the CEQ regulations and agrees that to be eligible for categorical exclusion, a class of actions must not individually or cumulatively have significant effects on the human environment except in extraordinary circumstances. DOE has determined that the classes of actions included in appendices A and B of the final rule meet this standard.

One commenter noted that if the individual actions encompassed by a categorical exclusion have the potential for significant impact on a cumulative basis, then the categorical exclusion is invalid. DOE agrees that it must find that classes of actions categorically excluded do not individually or cumulatively have a significant effect on the human environment. The commenter further noted that if a proposal encompasses actions within multiple categorical exclusions and cumulatively the actions have the potential for significant impacts, then the categorical exclusions encompassed are invalid. DOE agrees that such a proposal could not be categorically excluded but believes that the individual categorical exclusions would still be valid. DOE has added § 1021.410(b)(3) to address this concern and to preclude the segmentation of a proposal into component parts, which as discrete proposals are categorically excluded, to avoid preparation of an EA or EIS.

Commenters, expressing the view that DOE's proposed categorical exclusions are too broad, asserted that DOE should prepare more EAs and that DOE's extensive list of categorical exclusions results from a reluctance on DOE's part to prepare EAs because its internal EA requirements are so burdensome. Commenters asserted that the approach represented by the expanded list of categorical exclusions is not consistent with the requirements of NEPA and the CEQ regulations. One commenter noted that an increased reliance on EAs would not necessarily require vast new commitments of time and resources if DOE would take heed of CEQ regulations and guidance that intend the EA to be a concise and expeditious analysis. Other commenters criticized DOE for presenting a confusing and illogical mix of activities, ranging from

the payment of salaries to the restart of nuclear facilities, and for not having a *de minimis* level for actions to be subject to a NEPA review.

The extensive list of categorical exclusions results primarily from the fact that DOE is engaged in many different types of activities. DOE's extensive list of categorical exclusions also reflects DOE's policy that some NEPA review is required for all DOE actions potentially affecting the environment, even if there is no apparent potential for any significant effect. DOE believes the extensive list of categorically excluded actions in the final rule is consistent with NEPA and the CEQ regulations. The CEQ regulations require agencies to reduce excessive paper work and avoid delays by using categorical exclusions (40 CFR 1500.4(p) and 1500.5(k)). DOE will prepare EAs when necessary—that is, when the class of actions has not been excluded and/or when DOE is uncertain whether the proposed action would have significant environmental impacts. DOE believes it will serve environmental concerns best if it focuses its efforts on analyzing those actions that may or do have potential for significant impact.

One commenter stated that the categorical exclusions in proposed appendix B were inappropriate because they were vaguely drafted and were entirely without reference to size, volume, or significance in a way that would encompass major Federal actions that were likely to have significant environmental impacts. Others expressed concern about the broad scope of the classes of actions categorically excluded. DOE has reevaluated all categorical exclusions in the proposed rule to determine the appropriateness of more precise language, adding limiting factors or otherwise narrowing the scope of the categorical exclusions, and has modified several accordingly. DOE has decided not to categorically exclude some classes of actions that were included on the list in the proposed rule. These deletions and changes are described in more detail in the discussion under section III G below.

One commenter suggested that DOE delete proposed appendix B in its entirety, and instead add explicit limits on the size of each class of actions proposed in that appendix and move the classes of actions to proposed appendix A. The commenter further suggested that DOE prepare EAs or EISs for all proposed activities beyond the expressed size limit of the classes of action in the resulting appendix A.

DOE believes it is reasonable to retain two appendices for categorical exclusions but has revised the distinction between the types of classes of actions included in appendices A and B. Appendix A in the final rule lists categorical exclusions applicable to general agency actions and includes those classes of actions with impacts so remote or conjectural as to preclude meaningful consideration. Appendix A includes some classes of actions to which NEPA probably does not apply but that DOE has listed to clarify that neither an EA nor EIS is needed and to avoid any potential misunderstanding associated with the absence of such listing. Appendix B in the final rule lists categorical exclusions that are applicable to specific agency actions and have conditions specified as integral elements of the classes of actions. The conditions that are integral elements of the classes of actions in appendix B of the final rule were the eligibility criteria in § 1021.410(b) of the proposed rule. Even though originally proposed to apply to all categorical exclusions as eligibility criteria, DOE believes that inclusion of the conditions specified in appendix B would be meaningless for the categorical exclusions DOE retained in appendix A in the final rule. This is because appendix A is limited to classes of actions with impacts that cannot be meaningfully evaluated. DOE moved the classes of actions with impacts that are not so remote or conjectural as to preclude meaningful analysis that were included in appendix A of the proposed rule to appendix B in the final rule so that the conditions specified in appendix B would be integral elements of these classes of actions. Categorical exclusions in appendices A and B have been found by DOE not to individually or cumulatively have a significant effect on the human environment.

Two commenters were concerned that, while DOE's proposed rule purports to abolish the memorandum-to-file, DOE has merely substituted a new system, "documentation," which also would not be made available to the public. One commenter considered the documented categorical exclusions as "phantom" EAs that would reinsert into DOE's NEPA process the very subjectivity, discretion, and secrecy that SEN 15–90 was intended to eliminate. Another commenter viewed DOE's creation of the proposed Appendix B as indicating a lower level of certainty about those categorical exclusions and noted that, when an analysis is required to decide whether an action meets the criteria for a categorical exclusion, then the proper format for that analysis is an EA subject to public review, not documentation behind closed doors.

DOE has eliminated the requirements for documentation of categorical exclusions from its regulations. It was not DOE's intent that any categorical exclusion in appendix B be supported by an analysis of environmental effects ("phantom" EAs) or that the documented categorical exclusion be equivalent to the memorandum-to-file, which DOE has eliminated from its NEPA procedures. The documentation that DOE referred to for these categorical exclusions in the proposed rule was to be a record of the determination that the action was appropriately categorically excluded and was to be used for internal oversight purposes. Although the CEQ regulations require public review of categorical exclusions proposed for listing, the regulations do not require documentation, public review, or notification when categorical exclusions are applied.

One commenter was concerned that proper documentation is needed to ensure that an established process has been followed, and suggested that DOE use a checklist to demonstrate why an action has been excluded from further NEPA review. DOE is evaluating the need for internal recordkeeping procedures and, if such procedures are established, will consider the use of a checklist.

In contrast to the commenters who believed that the classes of actions proposed to be categorically excluded were too broad, some commenters believed the classes of actions to be categorically excluded should be broader than those proposed. One commenter thought that rather than listing specific classes of actions, DOE should establish "guiding criteria." Some commenters suggested that certain classes of actions, in addition to those in the proposed rule, should be categorically excluded in the final rule. DOE believes that the classes of actions categorically excluded in the final rule are appropriate and does not believe that it could make the necessary findings at this time for any broader classes of actions. As to the comments suggesting the categorical exclusion of classes of actions not proposed by DOE, DOE cannot categorically exclude in the final rulemaking any classes of actions not included in the proposed categorical exclusions. The CEQ regulations require that categorical exclusions be established only after public notice and the opportunity for public comment. DOE will consider the suggestions of the

commenters in determining whether to propose new or broader classes of actions for categorical exclusion in a future rulemaking.

The comment was made that because many of the classes of actions proposed to be categorically excluded in appendices A and B entail activities that could affect the character or use of historic properties, DOE should make absolutely clear in its final rule that the categorical exclusion of an action does not exempt it from the requirements of other environmental regulations. DOE's NEPA rule addresses NEPA compliance only, not other environmental requirements. Coordination with other environmental review requirements is addressed in § 1021.341; in addition, condition B.(4)(i) in appendix B of the final rule precludes a proposed action from categorical exclusion if the action would have an adverse effect on historic properties.

Four commenters expressed concern about the lack of public participation in, and public scrutiny of, the process of determining whether particular proposed actions are appropriately categorically excluded. One commenter suggested that records of determinations that proposed actions are categorically excluded be placed in public reading rooms. Another commenter felt that in view of the breadth of the classes of actions on the list of categorical exclusions and the discretion to be exercised in applying eligibility criteria to proposed actions, there should be public participation in the process.

The CEQ regulations do not provide for public participation in determinations that particular proposed actions are categorically excluded, nor do they require that records of such determinations be kept or made public. DOE believes that requiring public participation in categorical exclusion determinations or that documentation of categorical exclusion determinations be made available in public reading rooms would be contrary to the purposes of categorical exclusions, as stated in the CEQ regulations—reducing paperwork and avoiding delays.

G. Comments on Specific Sections of Subpart D—Typical Classes of Actions

Section 1021.400 Level of NEPA Review

A commenter suggested that § 1021.400 as proposed should address proposed actions covered by "memoranda-to-file." DOE does not believe a reference in the rule to memoranda-to-file is needed or appropriate because such documents are no longer part of DOE's NEPA procedures. To clarify the effect of this rulemaking on completed NEPA reviews and documents, DOE has changed § 1021.400(b) in the final rule to state that "any completed, valid NEPA review does not have to be repeated, and no completed NEPA documents need to be redone by reasons of these regulations, except as provided in § 1021.314" (which concerns supplemental EISs). Because a memorandum-to-file issued before September 30, 1990, is a valid NEPA document, § 1021.400(b) would apply. (See additional discussion under section III B above.)

A commenter suggested that clarification be provided in § 1021.400(b), as proposed, on the use of existing site-wide EAs or EISs during the evaluation of those documents or the preparation of new site-wide documents for continuing or new actions. DOE believes that this issue is generally addressed by § 1021.400(b) and that any further clarification is better addressed in internal guidance than in this rulemaking because of site-specific issues and circumstances. Accordingly, DOE did not provide the requested clarification in the final rule.

Another commenter was concerned that the language in § 1021.400(c), as proposed, did not make it sufficiently clear that the application of a categorical exclusion to a particular DOE proposal depends on the proposal meeting the eligibility criteria of proposed § 1021.410(b). DOE agrees with respect to those classes of actions listed in appendix B of the final rule. However, rather than modifying § 1021.400(c) in the final rule, DOE has included the eligibility criteria in § 1021.410(b) of the proposed rule in appendix B of the final rule as conditions that are integral elements of the classes of actions listed in appendix B. DOE has not included the proposed eligibility criteria in § 1021.410 of the final rule. DOE believes that this provides the clarification requested by the commenter.

A commenter expressed concern that the proposed rule did not provide for instances where actions falling within a category of categorically excluded actions might have significant environmental effects because of extraordinary circumstances. DOE intended to provide for such instances in § 1021.400(c) as proposed. In light of the commenter's concern, DOE has modified § 1021.400(c) in the final rule and added § 1021.410(b) (2) to clarify that DOE will not proceed with the level of review indicated in the appendices if there are extraordinary circumstances related to the proposal that may affect the significance of its environmental effects. DOE has included a circumstance cited by the commenter (i.e., the unresolved conflicts concerning alternative uses of available resources within the meaning of § 102(2)(E) of NEPA) as an example of an extraordinary circumstance in § 1021.410(b) (2) of the final rule. DOE also modified § 1021.400(d) in the final rule to be consistent with the revisions to § 1021.400(c).

Section 1021.410 Application of Categorical Exclusions (Classes of Actions That Normally Do Not Require EAs or EISs)

Section 1021.410(a) General. In the final rule, DOE has expanded this section to clarify the application of categorical exclusions and has divided the proposed section into four parts. DOE has incorporated § 1021.410(b) of the proposed rule into appendix B in the final rule. Therefore, § 1021.410(a) of the proposed rule as modified is § 1021.410 in the final rule, as explained below.

Section 1021.410(a) states DOE's required finding that the classes of actions listed in appendices A and B of subpart D are classes of actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment.

Section 1021.410(b)(1) clarifies that to be eligible for categorical exclusion, the proposal must be determined by DOE to fit within a class of actions listed in appendix A or B. For a proposal to fit within a class of actions in appendix B, it must meet the conditions specified in B.(1)–(4) in appendix B.

Section 1021.410(b)(2) clarifies that to find that a proposal is categorically excluded, DOE must determine that there are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. This section identifies three examples of extraordinary circumstances that could exclude actions within a class of actions in appendix A or B from eligibility for categorical exclusions. These examples are unresolved conflicts concerning alternative uses of available resources, scientific controversy about the environmental effects of the proposal, and uncertain effects or effects involving unique or unknown risks.

Section 1021.410(b)(3) clarifies that DOE, in determining that a proposal is categorically excluded, shall find that the proposal is not connected to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts (following 40 CFR 1508.25(a) (1) and (2)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of these regulations. Section 1021.410(b)(3) was included in

response to comments concerning cumulative impacts, as discussed above.

Section 1021.410(c) includes the statements contained in proposed § 1021.410(a) concerning the application of the classes of action by any element of DOE and the division of appendices A and B only for organizational purposes. In the final rule the word "organizational" was added before "element of DOE" to be consistent with § 1021.102(a).

Section 1021.410(d) modifies § 1021.410(a) as proposed to clarify that, to avoid segmentation, the classes of actions are intended to include all activities necessary to implement a proposal, such as transportation activities and award of implementing grants and contracts.

A commenter recommended that § 1021.410(a) as proposed be revised to provide for a case-by-case determination that a proposed action, not included within classes of actions listed in appendices A and B, be categorically excluded if the action meets the eligibility criteria set forth in § 1021.410(b). DOE has not made the requested revision because, as discussed above, the CEQ regulations require that categorically excluded classes of actions be identified in an agency's published procedures. The proposed eligibility criteria and the appendix B conditions in the final rule are not classes of actions.

Section 1021.410(b) Eligibility criteria for categorical exclusions (Appendix B of the final rule). One commenter expressed concern that DOE used as eligibility criteria for categorical exclusions some of the factors in 40 CFR 1508.27 intended for evaluating the intensity or severity of impacts and for determining the significance of the environmental impacts of proposed actions. The commenter pointed out that the analysis of such factors is more appropriately accomplished in an EA. The commenter acknowledged, however, that the use of these factors as eligibility criteria is better than no requirement for screening and suggested that, if such a screening mechanism is developed, it include several additional critical factors found in 40 CFR 1508.27. Another commenter also recommended that other factors in 40 CFR 1508.27 be added to DOE's list of eligibility criteria.

DOE agrees that subjective evaluation of the intensity or severity of an impact as prescribed in 40 CFR 1508.27 is not appropriate in a determination that an action fits within a categorically excluded class of actions. The conditions specified as integral elements of the classes of actions in appendix B in the final rule, which were the eligibility criteria in proposed § 1021.410(b)(1), require a factual determination. That is, the presence, not the severity, of the factor would make a proposed action ineligible for categorical exclusion. For example, 40 CFR 1508.27(b)(8) requires an evaluation of "(t)he degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places." On the other hand, condition B.(4)(i) of DOE's final rule screens from categorical exclusion status proposed actions that "adversely affect environmentally sensitive resources," which include property listed on the National Register.

The final rule retains the eligibility criteria proposed for classes of actions in appendix B as conditions that are integral elements of the classes of actions in appendix B in the final rule. DOE did not include, however, additional conditions based on the CEQ factors in 40 CFR 1508.27. DOE believes that controversial environmental effects (40 CFR 1508.27(b)(4)) and uncertain effects or effects that involve unique or unknown risks (40 CFR 1508.27(b)(5)) would not, except in extraordinary circumstances, be associated with any of the categorically excluded classes of actions included in the final rule. As explained earlier, DOE has identified these factors as possible extraordinary circumstances in § 1021.410(b)(2) of the final rule. The other CEQ criteria of establishing a precedent for future actions with significant effects (40 CFR 1507.28(b)(6)) or relation to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1507.28(b)(7)) are included in § 1021.400(b)(3) of the final rule, discussed above.

In the final rule, DOE has added a condition that is an integral element of the classes of actions listed in Appendix B: a proposal must be one that would not disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases (B.(3)). This condition is similar to an element of several categorical exclusions in the proposed rule (proposed A1.34, A3.1, A3.5, B3.3, B6.2, and B6.7) that concerned inadvertent or uncontrolled movement of hazardous substances, pollutants, contaminants, or non-native organisms.

In response to comments that many of the proposed categorical exclusions were too broad, DOE believes that condition B.(3) in the final rule, along with other changes described herein, will appropriately narrow the scope of categorical exclusions in appendix B. Proposed disturbance with subsequent unpermitted or uncontrolled releases of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products warrants analysis to determine if there is potential for significant impact. DOE is concerned that such an action, otherwise without potential for significant impact, may have the side-effect of spreading preexisting contamination in the environment.

As a consequence of adding condition B.(3) to the final rule, the corresponding restricting phrase proposed as part of several categorical exclusions is no included in those categorical exclusions in the final rule. With regard to proposed A1.34 (final B1.3) that concerns component testing (generally an indoor activity), condition B.(1) of the final rule (i.e., proposals cannot threaten applicable environment, safety, and health requirements) would provide the assurance that emissions are controlled. With regard to the condition in proposed A3.1 (site characterization/environmental monitoring) and proposed A3.5 (research related to conservation of fish and wildlife) that the proposals not result in the uncontrolled movement of non-native organisms, DOE now believes that these actions (final B3.1 and B3.3, respectively) will not foreseeably involve non-native organisms.

In response to a suggestion by a commenter that § 1021.410(b)(1)(i) should have a disjunctive effect, the word "and" in the phrase "applicable statutory, regulatory, and permit requirements" has been changed to "or" in condition B.(1) in appendix B in the final rule. DOE also added the phrase "for environment, safety, and health" to the condition in appendix B.(1) in the final rule to clarify its intent that the term "requirements" applies to safety and health as well as environment in response to a comment in this regard.

DOE has revised the proposed eligibility criterion in § 1021.410(b)(1)(ii) of the proposed rule as condition B.(2) in appendix B in the final rule, and that condition includes waste storage facilities because DOE believes the siting, construction, or major expansion of waste storage facilities cannot be categorically excluded.

DOE has revised proposed §§ 1021.410(b)(1)(iii) and (b)(2) of the proposed rule as condition B.(4) in the final rule, and that condition refers to "environmentally sensitive resources" rather than "environmentally sensitive areas" in light of a comment that the

proposed criteria reflected the sensitivity of the habitat of protected species but not the species themselves. Condition B.(4) also includes the protected species as well as its habitat as examples of environmentally sensitive resources.

In response to another comment on § 1021.410(b)(2) of the proposed rule, DOE added the phrase "but not limited to" after the word "include" in condition B.(4) in appendix B in the final rule to clarify that the listing of environmentally sensitive resources is not intended to be inclusive.

H. Comments on Appendices

In the following discussion of the comments on the appendices, the headings are those used in the table of contents of the appendices in the proposed rule. The conversion table on the following page shows which proposed classes of actions have not been included in the final rule and also refers the reader to the appropriate headings in the final rule for those proposed classes of actions that are included in the final rule. There were many numbering changes between the proposed and final rule because some classes of actions were deleted, combined with other classes of actions, or reordered to group similar classes of actions. As explained above, many classes of actions in proposed appendix A of the proposed rule were moved to appendix B in the final rule so that the conditions specified in appendix B would be integral elements of these classes of actions.

Proposed A1.1 Administrative Procurements (Final A1)

Proposed A1.2 Routine Financial Transactions (Final A1)

Proposed A1.16 Personnel Actions/ Personal Service Contracts (Final A1 and A8)

Proposed A1.25 Business Support Activities (Final A1)

DOE consolidated these four separate categorical exclusions into one inclusive categorical exclusion in the final rule. DOE believes that there was overlap among the four and that combining them into one categorical exclusion avoids segmentation. (See also discussion of proposed A1. 16 below.) A1 in the final rule categorically excludes routine actions necessary to support the normal conduct of business, which are those actions that are encompassed in the four proposed categorical exclusions.

Proposed A1.3 Grant/Contracts for Categorically-Excluded and Some Interim Actions (Not Included in the Final Rule)

DOE has not included this proposed categorical exclusion in the final rule because grants and contracts are merely elements of a proposed action rather than separate actions, as indicated in § 1021.410(d) of the final rule. Separating the award of grants or contracts to implement the proposed action from the proposed action for purposes of determining the level of NEPA review would constitute inappropriate segmentation.

Conversion Table

Subpart D—Typical Classes of Actions

Designation of Classes of Action in Subpart D

Proposed	Final
A1.1	A1.
A1.2	A1.
A1.3	Not included.[1]
A1.4	A2.
A1.5	Not included.[2]
A1.6	B1.1.
A1.7	Not included.[2]
A1.8	A3.
A1.9	A4.
A1.10	A5.
A1.11	A6.
A1.12	A6.
A1.13	Not included.
A1.14	A6.
A1.15	A7.
A1.16	A1, A8.
A1.17	A9.
A1.18	A9.
A1.19	A10.
A1.20	A11.
A1.21	A9.
A1.22	A12.
A1.23	B1.2.
A1.24	A13.
A1.25	A1.
A1.26	B1.3, B2.5.
A1.27	B1.15, B4.11.
A1.28	B1.3, B2.5.
A1.29	B1.4.
A1.30	B1.5.
A1.31	B1.6.
A1.32	B1.7.
A1.33	B1.8.
A1.34	B1.3.
A1.35	B1.3.
A1.36	B1.9.
A1.37	B1.10.
A1.38	B1.11.
A1.39	B5.1.
A1.40	B1.12.
A1.41	B1.13.
A1.42	Not included.[1]
A1.43	Not included.[1]
A1.44	Not included.[1]
A1.45	B1.14.
A1.46	Not included.[1]
A2.1	B2.1.
A2.2	B2.2.
A2.3	A12, B1.3, B2.2, B2.5.
A2.4	B2.3.
A2.5	B2.4.
A3.1	B3.1.
A3.2	B3.1.
A3.3	B3.1.
A3.4	B3.2.
A3.5	B3.3.
A3.6	B3.4.
A3.7	B3.5.
A3.8	B3.6.
A4.1	B4.1.
A4.2	A7.
A4.3	B4.2.
A4.4	B4.3.
A4.5	B4.4.
A4.6	Not included.
A4.7	B4.11.
A4.8	B4.5.
A4.9	B4.6.
A4.10	B4.7.
A5.1	B5.2.
A5.2	B5.3.
A5.3	B5.4.
A5.4	Not included.
A6.1	A14.
A6.2	A15.
A6.3	B7.1.
B1.1	B1.15.
B1.2	B1.3.
B1.3	B1.16.
B1.4	B1.17.
B1.5	B1.18.
B1.6	B1.19.
B1.7	B5.1.
B1.8	B1.20.
B1.9	Not included.[1]
B2.1	B2.5.
B3.1	B3.1, B3.8, B6.2.
B3.2	B3.7.
B3.3	B3.8, B6.2.
B3.4	B3.9.
B3.5	B3.10.
B3.6	B3.11.
B4.1	B4.8.
B4.2	B4.9.
B4.3	B4.10.
B4.4	B4.11.
B4.5	B4.12.
B4.6	B4.13.
B4.7	B1.21.
B5.1	B5.5.
B5.2	B5.6.
B5.3	B5.7.
B5.4	B5.8.
B5.5	B5.9.
B5.6	B5.10.
B5.7	B5.11.
B5.8	B5.12.
B5.9	B5.13.
B5.10	B5.14.
B5.11	B5.15.
B5.12	B5.16.
B6.1	B6.1.
B6.2	B6.2.
B6.3	B6.3.
B6.4	C16, B6.4, B6.5, B6.6.
B6.5	B6.6.
B6.6	B6.7.
B6.7	B1.22.
B6.8	B6.8.
B7.1	B7.2.
B7.2	Not included.
C1	C1.
C2	C8.
C3	C2.
C4	C3.
C5	C10, C11.
C6	C12.
C7	C4.
C8	C5.
C9	C6.
C10	C7.
C11	C13.

Proposed	Final
C12	C14.
C13	C15.
C14	C16.
C15	Not included.
C16	C9.
D1	D1.
D2	D2.
D3	D3.
D4	D4.
D5	D5.
D6	D6.
D7	D8.
D8	D9.
D9	D10.
D10	D11.
D11	Not included.
D12	D12.

[1] In scope of broader proposals.
[2] CEQ definition of action excludes this classification.

Proposed A1.5 Pass-throughs (Not Included in the Final Rule)

DOE has not included this proposed categorical exclusion in the final rule because congressionally mandated funding pass-throughs are "ministerial actions," which DOE does not propose and over which it has no discretion. Therefore, these are not DOE actions as discussed above under "action" in III C.

Proposed A1.7 Administrative Enforcement Actions (Not Included in the Final Rule)

DOE has not included this proposed categorical exclusion in the final rule because the CEQ definition of a "major Federal action" at 40 CFR 1508.18(a) specifically excludes administrative enforcement actions.

Proposed A1.11 Rulemaking for Technical and Pricing Proposals (Final A6)

Proposed A1.12 Rulemaking for Grants and Cooperative Agreements (Final A6)

Proposed A1.14 Procedural Rulemakings (Final A6)

DOE has consolidated these proposed categorical exclusions into one categorical exclusion in the final rule because rulemakings that are strictly procedural include those described in proposed A1.11 and A1.12.

Proposed A1.13 Rulemaking for Categorically-excluded Actions (Not Included in the Final Rule)

DOE has not included this categorical exclusion in the final rule. Specific classes of rulemakings that are categorically excluded are specified in appendix A of the final rule; other types of rulemaking will require an EA or EIS.

Proposed A1.15 Transfer of Property, Use Unchanged or Categorically Excluded (Final A7)

DOE has modified the wording of this categorical exclusion in the final rule. The phrase referring to proposed uses that are "categorically excluded in this subpart" has been deleted because DOE believes that transfers, leases, dispositions, or acquisitions of property that are part of a broader proposed action must be reviewed for NEPA purposes in the context of the broader proposed action. Separating these property transfers from the proposed new use would constitute inappropriate segmentation. DOE also deleted the phrase referring to disposition through the General Services Administration because the phrase was unnecessary.

Proposed A1.16 Personnel Actions/ Personal Service Contracts (Final A1 and A8)

One commenter was concerned that technical support contracts and management and operating (M&O) contracts should not be categorically excluded because hiring certain contractors or using ineffective contracting practices and procedures might have environmental impacts that could require an EA or EIS. DOE does not believe that contracts for technical services, management and operation of DOE facilities, or personal services, or even contracting procedures in general, have potential for significant environmental effects because they are merely arrangements to perform future actions, yet to be assigned. Subsequent actions carried out under such contracts, however, may have environmental consequences and will be the subject of NEPA review. Furthermore, Federal procurement policy requires that contracts be awarded only to responsible contractors (48 CFR part 9), and based on this standard, DOE will not knowingly contract with an environmentally irresponsible party. DOE believes that discussion of the purported environmental merits of potential contractors in a NEPA document would be extremely speculative and not amenable to meaningful analysis.

The commenter also mentioned that DOE's proposed "Alternate Contracting System" would benefit from NEPA analysis. DOE believes that this reference is to the alternate business strategy for environmental restoration (Notice of Intent to develop an environmental restoration alternate business strategy, 55 FR 48544, October 31, 1990). This strategy would establish environmental restoration management contractors at certain DOE field offices, separate from the M&O contractors that otherwise manage DOE facilities. DOE believes that establishing the framework for these contracts does not have the potential for significant environmental impact. Specific restoration activities carried out under the contracts will be subject to separate NEPA review.

DOE has revised the categorical exclusion in the final rule to refer only to the award of contracts (final A8) and has rephrased it to clarify that contracts for technical support services and for management and operation of a government-owned facility are not subsets of contracts for personal services. In the final rule, personnel actions are included in the categorical exclusion for actions necessary to support the normal conduct of business (Final A1). (See also discussion of proposed A1.1, A1.2, A1.16, and A1.25, above.)

Proposed A1.17 Document Preparation (Final A9)

Proposed A1.18 Information Gathering/Analysis/Dissemination (Final A9)

Proposed A1.21 Classroom Training and Informational Programs (Final A9)

DOE has consolidated these categorical exclusions into one covering information gathering, analysis, documentation preparation, and dissemination of information. DOE believes that these proposed categorical exclusions are interrelated, and combining them into one categorical exclusion avoids segmentation. One commenter suggested that the list of documents given as examples should be expanded to include monitoring reports, permit applications, project scope, and cost estimating. DOE does not believe that additional examples are necessary to ensure that the scope of the consolidated categorical exclusion is clearly understood to be paperwork activities.

Proposed A1.19 Reports or Recommendations on non-DOE Legislation (Final A10)

One commenter suggested that the proposed categorical exclusion be expanded to include reports or recommendations on legislation or rulemaking proposed by DOE. This change was not made because DOE-proposed legislation and rulemaking that is not categorically excluded in the final rule may require preparation of an EA or an EIS.

Proposed A1.26 Routine Maintenance/ Custodial Services for Building Structures and Equipment (Final B1.3 and B2.5)

Proposed A1.34 Routine Testing/ Calibration of Facility Components (Final B1.3)

Proposed A1.35 Routine Decontamination, not part of Decommissioning (Final B1.3)

Proposed B1.2 Removal of Contamination, not Decommissioning Project (Final B1.3)

DOE has revised the definition and scope of proposed A1.26 to clarify that the scope includes work on infrastructures (such as roads), maintenance work of a predictive nature (i.e., continuous or periodic monitoring or diagnosis to forecast component degradation), and suspension of operations to perform maintenance and subsequent resumption of operations. In addition, DOE has included custodial services in the general description and scope paragraph in the final rule (rather than as an example of routine maintenance, as proposed).

DOE has added two examples of routine maintenance. One example (example B1.3(n) in the final rule) concerns predictive maintenance and incorporates proposed A1.34 (discussed below under that heading). The other example (example B1.3(o) in the final rule) concerns routine decontamination of the interior surfaces of buildings and removal of contaminated equipment and other material. This last example incorporates activities in proposed A1.35 and proposed B1.2, as discussed below under those headings.

One commenter objected to categorically excluding the repair and maintenance of transmission facilities (example (m) of proposed A1.26 and final B1.3) because of the potential for polychlorinated biphenyl (PCB) contamination, noting that maintenance of transformers at many DOE facilities has resulted in environmental contamination. The routine maintenance procedure referred to by the commenter (i.e., draining a small amount, about one quart, of transformer oil into the ground to flush out impurities before sampling) was common practice before regulations controlling PCBs were established in 1979 (40 CFR part 761). This practice has now been discontinued. DOE believes that maintenance activities involving PCBs carried out in compliance with applicable regulations are appropriate for a categorical exclusion. For purposes of clarity, DOE has added a stipulation to the example that the activities be conducted in accordance with 40 CFR part 761.

The commenter was concerned that cumulative maintenance activities involving PCBs would have significant impact and stated that an EA or EIS might be a valuable means of demonstrating long-term benefits of a systematic phaseout of PCB-containing equipment. In establishing this categorical exclusion, DOE has determined, based on its experience, that the class individually and cumulatively has no potential for significant environmental effect.

In response to two commenters' requests that applicable statutory and regulatory requirements be added to the example concerning removal and replacement of tanks and piping (example (n) of proposed A1.26), DOE has included citations of applicable statutory and regulatory requirements. As one commenter also requested, DOE has added a requirement that there be no evidence of leakage based on regulatory performance requirements. On further analysis, DOE determined that removal and replacement of tanks and piping form an example of an upgrade rather than routine maintenance. Accordingly, DOE has deleted it as an example of routine maintenance and included it as an example in B2.5 in the final rule (B2.1 in the proposed rule), which addresses safety and environmental improvements and facility upgrades.

Proposed A1.27 Siting/Construction/ Operation of Storage Area for Maintenance/Administrative Supplies/ Equipment (Final B1.15 and B4.11)

To avoid inappropriate segmentation, DOE has not included this categorical exclusion as a separate class of actions in the final rule but incorporated this categorical exclusion into proposed B1.1 (B1.15 of the final rule) as one of several categorically excluded support facilities and into proposed B4.4 (B4.11 of the final rule). (See the discussion under proposed B1.1, below.)

Proposed A1.28 Replacement/ Extension of Existing Utility Systems for Categorically-Excluded Actions (Final B1.3 and B2.5)

Commenters requested that the concepts of repair, modification, and upgrade be added to this categorical exclusion. DOE has not included this categorical exclusion in the final rule because it duplicates activities (e.g., replacement of existing utility systems) in both proposed A1.26 (B1.3 of the final rule) and B2.1 (B2.5 of the final rule). DOE also now recognizes that extension of utility systems required as a result of categorically excluded actions is part of the larger action and the exclusion would have resulted in inappropriate segmentation.

Proposed A1.31 Installation of/ Improvements to Liquid Retention Tanks, Small Basins (Final B1.6)

DOE has narrowed the scope of this categorical exclusion by limiting the size of basins installed or modified to generally less than one acre. One commenter felt that the term "liquid retention" implied the exclusion of holding tanks for gas and other materials and suggested that the term be deleted. DOE intended the categorical exclusion to apply to a facility's improved handling of materials (such as sludges, wastewater, or stormwater) to control spills and runoff. DOE deleted the term "liquid" and otherwise modified the categorical exclusion to clarify this intent.

Proposed A1.32 Acquisition/ Installation/Operation of Communication Systems, Data Processing Equipment (Final B1.7)

In response to a comment on this categorical exclusion, DOE has added "removal" to the stated activities.

Proposed A1.34 Routine Testing/ Calibration of Facility Components (Final B1.3)

In response to a comment, DOE has added portable equipment in the list of proposed items. Because testing and calibration of equipment is predictive maintenance, DOE has incorporated this proposed categorical exclusion as an example (example (n)) in the categorical exclusion for routine maintenance (proposed A1.26 and final B1.3).

Proposed A1.35 Routine Decontamination, not Part of Decommissioning (Final B1.3)

One commenter objected to categorically excluding decontamination activities, even if they are not part of a decommissioning project. At many DOE facilities, decontamination of equipment, rooms, hot cells, and the interior of buildings is a daily or weekly activity, which includes wiping with rags, using strippable latex, and minor vacuuming. These activities are part of routine maintenance. The commenter interpreted a much broader scope to this proposed categorical exclusion than DOE intended. Therefore, DOE incorporated the categorical exclusion as an example (along with proposed B1.2) into the categorical exclusion for routine maintenance (proposed A1.26, final B1.3, example (o)).

Another commenter suggested that exterior decontamination activities should be categorically excluded as well. Exterior decontamination is addressed in categorical exclusion B6.1, CERCLA removals/similar actions under RCRA or other authorities.

Proposed A1.37 On-site Storage of Activated Material at Existing Facility (Final B1.10)

One commenter suggested that this categorical exclusion be deleted because it allowed too broad a range of actions, given the risks of storing any radionuclides. DOE has revised this categorical exclusion in the final rule to emphasize that its scope is the routine storage of activated equipment and construction materials to allow radionuclides with short halflives (days or weeks) to decay sufficiently before reuse. The activation-produced radioisotopes are in the matrix of the material and are not likely to leak out.

Proposed A1.40 Detonation of High Explosives in Reserved Areas (Final B1.12)

One commenter objected to this categorical exclusion because, based on its vague wording, it could be interpreted to apply broadly to all high explosive detonations. DOE has revised the categorical exclusion to clarify that it applies only to the detonation or burning of failed or damaged explosives or propellants under an existing permit issued by state or local authorities.

Proposed A1.42 Routine Transportation of Nonhazardous Materials and Nonradioactive, Nonwaste Hazardous Materials (Not included in the final rule)

Proposed A1.43 Routine Transportation of Waste (Not Transuranic, not High Level) (Not Included in the final rule)

One commenter objected to the broad scope of proposed A1.42, based on concern about the transport of hazardous substances (including CERCLA-excluded petroleum and natural gas products), uncertainty regarding DOE's adoption of the Nuclear Regulatory Commission's Below Regulatory Concern level, and the lack of eligibility criteria to screen for potential impacts on public health and safety and for cumulative impacts. DOE believes that reviewing transportation for proposals separately from the proposals themselves would be inappropriate segmentation. DOE will consider the transportation impacts of proposed actions in EAs and EISs, as appropriate. As indicated in § 1021.410(d) of the final rule, DOE views classes of actions as including all activities necessary to implement a proposal within the class of actions, such as associated transportation activities. DOE has not adopted the Nuclear Regulatory Commission's Below Regulatory Concern level. DOE has revised the proposed eligibility criterion concerning statutory, regulatory, and permit requirements and, as explained above, included it as condition B.(1) in appendix B of the final rule to clearly indicate that public health and safety issues are covered. DOE also has added § 1021.410(b)(3) to address cumulative impacts.

Proposed A1.44 Temporary Shutdown/ Restart of a Facility for Inventory, Routine Maintenance (Not Included in the Final Rule)

Proposed A1.46 Shutdown of an Operating Facility (Not Included in the Final Rule)

DOE now recognizes that in proposing these two categorical exclusions, it inappropriately identified suspension and resumption of operations as separate and distinct actions. These exclusions identified activities that are part of ongoing routine operations of an existing facility and thus by themselves are not subject to NEPA. The final rule has been revised to focus on the activities to be performed while operations are suspended. (See, e.g., proposed A1.26 (final B1.3), proposed A1.45 (final B1.14), and proposed B1.9 (final B2.5). See also the discussion below for proposed A1.45 (final B1.14) and proposed B1.9 (final B2.5).) Therefore, DOE has not included proposed A1.44 and A1.46 in the final rule.

One commenter, in reference to proposed A1.44, was concerned about the vagueness of the terms related to maintenance and about the potential for DOE to carry out substantial work to correct safety or environmental concerns through repeated shutdowns. The categorical exclusion for routine maintenance (proposed A1.26, final B1.3) provides many examples that describe and limit the nature and scope of these activities.

Another commenter, in reference to proposed A1.44 and A1.46, stated that it was unreasonable for DOE to predetermine that a shutdown for up to two years would not require an EA or EIS and expressed concern, in reference to proposed A1.44, that the magnitude of problems at DOE facilities can easily be underestimated. DOE agrees that it cannot predetermine the length of time that activities appropriately categorically excluded might take, and has not included a time period in those categorical exclusions that may involve a suspension and resumption of operations. DOE must determine the appropriate level of NEPA review and complete it before taking the proposed action. If a proposed action changes as a result of initial activities, DOE will complete a new NEPA review before taking further action.

One commenter, in reference to proposed A1.46, was concerned that this categorical exclusion would exempt shutdown of facilities intended primarily for environmental mitigation or improvement (e.g., a wastewater treatment plant or a renewable energy facility), and that such a shutdown could have potential for significant adverse impacts. DOE believes that temporary suspension of operation and subsequent resumption (e.g., for routine maintenance) would not have potential for significant impacts except in extraordinary circumstances. This commenter also requested clarification that permanent shutdown may require additional NEPA review if decontamination and decommissioning activities are proposed. DOE agrees and notes the lack of a categorical exclusion for facility decommissioning, as well as the inclusion of decommissioning in several of the classes of actions found in appendix D to Subpart D of the rule, which normally require an EIS.

Proposed A1.45 Temporary Shutdown/ Restart of a Nuclear Reactor for Refueling (Final B81.14)

DOE has retained this categorical exclusion, but it is revised to focus on the refueling activity, while acknowledging that operations may be suspended and resumed for such activity.

Proposed A2.3 Establishment of/ Improvements to Warning Systems Monitors, Evacuation Routes (Final A12, B1.3, B2.2, and B2.5)

DOE has not included this proposed categorical exclusion in the final rule because DOE believes the actions are encompassed by proposed A2.2 (final B2.2), which addresses building instrumentation, and proposed A1.22, A1.26, and B2.1 (final A12, B1.3, and B2.5, respectively), which cover emergency evacuation road designation, repair, and improvement. DOE clarified the scope of B2.2 and A12 in the final rule.

Proposed A2.4 Promotion/Maintenance of Employee Health (Final B2.3)

One commenter requested that radiation monitoring devices and fumehoods with associated collection and exhaust systems be added to the list of examples in this categorical exclusion and that a reference be made to applicable regulations. DOE has added the additional example to the categorical exclusion in the final rule (B2.3), but has not provided the requested reference to applicable regulations because there are no regulations specifically applicable to this categorical exclusion.

Proposed A3.1 Site Characterization/Environmental Monitoring (Final B3.1)

Proposed B3.1 Siting/Construction/Operation of Small-Scale Laboratory Building or Renovation of Room for Sample Analysis for Site Characterization/Environmental Monitoring (Final B3.1, B3.8, and B6.2)

In response to a comment, DOE has modified proposed A3.1 to clarify that site characterization and environmental monitoring activities for remedial investigation and feasibility studies are within the scope of the categorical exclusion.

Another commenter stated that proposed A3.1 should be limited to existing waste site cleanups and should not apply to site characterization for the construction of new facilities. DOE has not limited the categorical exclusion in this way because it believes that the environmental impacts of activities covered by this categorical exclusion are insignificant whether performed for possible restoration or construction. Site characterization may be necessary before formulating a proposal involving new construction and for which preparation of an EA or EIS is necessary, as the data may be needed for conceptual design and to evaluate impacts of construction, operation, and, as appropriate, eventual decommissioning. DOE believes that § 1021.410(b)(3), which clarifies that DOE's categorically excluded actions will not be connected to other actions with potentially significant impacts or otherwise be related to actions with cumulatively significant impacts, addresses the commenter's concern that the site characterization activities not establish a precedent for future actions with significant impacts or represent a decision in principle about a future consideration.

DOE has included the scope of activities of proposed B3.1 into proposed A3.1 (final B3.1), proposed B3.3 (final B3.8 and B6.2) and proposed B6.2 (final B6.2) to avoid inappropriate segmentation.

Proposed A3.2 Geochemical Surveys/Geological Mapping/Geophysical Investigation (Final B3.1)

DOE has not included this categorical exclusion in the final rule because DOE believes the categorical exclusion is encompassed by proposed A3.1, which is B3.1 in the final rule. In the final rule, example (a) in B3.1 was modified accordingly to clarify the scope of that categorical exclusion.

Proposed A3.3 Archeological/Cultural Resource Identification (Final B3.1)

DOE has included this proposed categorical exclusion as an example of a site characterization activity in the final rule (B3.1(j)).

Proposed A3.5 Research Related to Conservation of Fish and Wildlife Conservation (Final B3.3)

In response to a comment that categorically excluded research should not significantly reduce the study populations of non-nuisance species, DOE has narrowed this proposed categorical exclusion. In the final rule, the categorical exclusion is limited to research activities that would involve only negligible population reduction.

Another commenter asserted that this categorical exclusion was inconsistent with 40 CFR 1506.1, proposed § 1021.410, and proposed appendix C2 to subpart D. In the final rule under § 1021.410(b)(3), all categorically excluded actions must meet the criteria in 40 CFR 1506.1 (limitations on actions during NEPA process). Because the categorically excluded research activities in this class of actions might directly involve fish and wildlife resources that are not environmentally sensitive (section 1021.410(b)(2)(ii) in the proposed rule, condition B.(4) in Appendix B in the final rule), the categorical exclusion emphasizes minimization of animal mortality, population reduction, or habitat destruction regardless of whether these resources are protected by other statutes. The class of actions in proposed C2 (Protection of fish and wildlife habitat), which is final C8, and in proposed B1.8 (Protect/restore/improve fish and wildlife habitat), which is final B1.20, concern habitat modification, rather than research as in this categorical exclusion.

Proposed A3.8 Indoor Bench-Scale Research Projects/Conventional Operation (Final B3.6)

One commenter asserted that this proposed categorical exclusion might be used to exempt laboratory operations that are conducted with radioactive and hazardous materials as part of a larger development project. The commenter had specific concerns that categorically excluded research could lead to violations of National Pollutant Discharge Elimination System permits and larger programs with significant environmental impacts. DOE had proposed an eligibility criterion for categorical exclusions (section 1021.410(b)(1)(i) in the proposed rule) that the proposed actions would not threaten a violation of applicable permit requirements. In the final rule, DOE has revised this criterion to be condition B.(1), which is an integral element of all the classes of actions in appendix B. DOE has also added § 1021.410(b)(3) to this final rule to clarify that DOE's categorically excluded proposals will not involve segmentation. DOE believes that this type of laboratory work, even involving radioactive and hazardous materials, does not have potential for significant impact.

Another commenter suggested expanding the list of examples of conventional laboratory operations and adding the restriction that operations be in accordance with applicable requirements, permits, and DOE orders. This restriction was covered in DOE's proposed eligibility criteria at proposed § 1021.410(b)(1) and is in condition B.(1) in appendix B in the final rule. DOE does not believe it is necessary to augment the list of examples but has revised the categorical exclusion to explicitly state that the activities will be conducted within existing laboratory facilities. Establishing a laboratory facility is a separate action, for which DOE will prepare an EA or EIS to address, among other issues, overall wastewater treatment and pollution prevention and the impacts from discharges related to research performed therein.

Proposed A4.1 Contracts/Marketing Plans/Policies for the Short Term (Final B4.1)

Proposed A4.5 Power Marketing Services Within Normal Operating Limits (Final B4.4).

Proposed A4.8 Temporary Adjustments to River Operations (Final B4.5)

One commenter strongly objected to these categorical exclusions because of concern for cumulative impacts as well as immediate, direct effects from changes in the timing and flow of rivers. The commenter stated that marketing plans and contracts have the potential

for significant environmental effects and pointed out the ambiguity in timeframes in proposed A4.1. The same commenter thought that the use of hydropower resources to meet peak demands may tend to displace oil- and gas-fired thermal generation. Another commenter stated that proposed A4.1 should not apply when there is increased emissions from fossil-fueled powerplants or major changes in reservoir levels or streamflows.

After consideration of the comments, DOE has determined that the three proposed categorical exclusions do not individually or cumulatively have a significant effect on the human environment. Repeatedly and consistently, DOE has found no significant impacts associated with actions by the power marketing agencies that are within the existing constraints of a particular hydrosystem operation, including past decisions concerning actions that would be beyond the parameters of the proposed categorical exclusions.

DOE considers a five-year limit for categorical exclusion (proposed A4.1, final B4.1) of disposition, allocation, or acquisition of excess power appropriate because it is consistent with (1) the delineation of a "major" resource in the Northwest Power Act (that is, sections 3(12) and 6(c) of the act define resources of more than 50 average megawatts acquired for more than 5 years as "major" and impose special procedures for such acquisitions) and (2) the Bonneville Power Administration's normal multiyear planning process (promulgated, in accordance with the Pacific Northwest Coordination Agreement, to effect short-term marketing actions to optimize the system economically or short-term power acquisitions to avoid power shortages).

Excess power refers to nonfirm power or surplus firm power derived from existing resources. Proposed A4.1 (final B4.1) would not apply to transactions enabling the construction of new resources. (See the discussion of proposed C10, below.)

In response to the commenter's concern regarding the subjectivity of proposed A4.5 (final B4.4) and proposed A4.8 (final B4.5), including the use of such terms as "temporary" and "minor," DOE believes that the limitations within the final categorical exclusions, while not eliminating, will minimize the need for subjective judgment.

DOE agrees that the establishment of basic hydrosystem operating parameters is appropriately addressed through means other than categorical exclusions. (See discussion below under proposed C10.) The Bonneville Power Administration, for example, is preparing the Columbia River System Operation Review EIS to consider the balance of uses on the Columbia River.

One commenter indicated that the categorical exclusion for temporary river adjustments (proposed A4.8, final B4.5) should not be applied if the changes would reduce instream flows below minimum requirements. This categorical exclusion would not apply in this situation because such changes would exceed the existing constraints of a particular hydrosystem operation and would not be regarded as a minor change to reservoir levels or streamflows.

Proposed A4.2 Leasing of Existing Transmission Facilities (Final A7)

DOE has not included this categorical exclusion in the final rule. This categorical exclusion is unnecessary because the leasing of existing transmission facilities is encompassed by proposed A1.15, which is A7 in the final rule.

Proposed A4.6 Buffer Rights-of-Way at Existing Transmission Facilities (Not included in the final rule)

DOE has not included this categorical exclusion in the final rule. DOE recognizes that there is potential for significant impact from acquisition of rights-of-way because of possible changes in land use related to establishing buffer zones; therefore, a categorical exclusion is inappropriate. If land use in the buffer zone will not change, proposed A1.15 (A7 in the final rule) may apply to the action.

Proposed A4.7 Minor Substation Modifications/Expansions (Final B4.11)

In the final rule, DOE included the scope of this proposed categorical exclusion into the scope of proposed B4.4 (final B4.11), which concerns construction and modification of substations, to avoid segmentation.

Proposed A5.4 Removal of Oil Field Waste to Permitted Disposal Facility (Not Included in the Final Rule)

One commenter strongly objected to this categorical exclusion, stating that research conducted by EPA had indicated that there are significant environmental impacts from disposal practices used for oil field wastes. DOE reconsidered its proposal of this categorical exclusion and, because of uncertainty as to the potential for significant impacts, has not included it in the final rule.

Proposed A6.2 Umbrella Agreements for Cooperation in Energy Research and Development (Final A15)

DOE has not included phrase (b) in proposed A6.2 (that referred to categorically excluded projects and activities) in the categorical exclusion in the final rule (A15). The phrase was unnecessary because specific energy research and development projects that are categorically excluded are specified in Appendix B of the final rule.

Proposed B1.1 Siting/Construction/Operation of Support Structures (Final B1.15)

Proposed A1.27 Siting/Construction/Operation of Storage Area for Maintenance/Administrative Supplies, Equipment (Final B1.15 and B4.11)

One commenter stated that the scope of proposed B1.1 was too broad; it would essentially exempt all construction and operation of service and support buildings regardless of size, soil contamination, resuspended dust from construction, environmental and energy impacts of operation, and alternative designs and locations that could minimize impacts.

In response to the comment, DOE has narrowed the scope of proposed B1.1 in the final rule (B1.15). The siting and construction of structures covered by the categorical exclusion are limited to small-scale support buildings and structures within or contiguous to an already developed area where site utilities and roads are available. DOE has added a condition in the final rule, B.(3), that is an integral element of the classes of actions in appendix B: Construction activities that would disturb hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases would not be categorically excluded. (See additional discussion under section III F, above.)

In addition, DOE incorporated proposed A1.27 into this categorical exclusion for support buildings and structures as an example (as noted above in the discussion of proposed A1.27) because small-scale storage areas for maintenance and administrative supplies are support facilities.

In the final rule, DOE has added the phrase "and similar support purposes" to the list of support functions for which buildings and structures may be constructed because DOE believes that siting, construction, and operation of

any small-scale support structure will not individually or cumulatively have a significant impact on the human environment and that it is appropriate to categorically exclude these activities. DOE had not intended this categorical exclusion to be limited to only those support buildings and structures for the purposes listed in the proposed rule. DOE has also added the phrase "but excluding facilities for waste storage activities" to clarify that it does not consider these to be support activities for which construction may necessarily be categorically excluded except as provided in the final rule. (See the discussion of proposed B6.4 for categorically excluded waste storage facilities.)

Proposed B1.2 Removal of Contamination, Not Decommissioning Project (Final B1.3)

Two commenters suggested that this categorical exclusion be deleted because they did not believe that the only test for deciding whether to prepare an EA or EIS is whether the action is part of a decommissioning project. One of the commenters was concerned that certain activities at the Rocky Flats Plant and at the Portsmouth and Paducah Uranium Enrichment Plants might inappropriately come under this exclusion.

DOE intended the proposed categorical exclusion to cover routine actions where intact equipment (e.g., labware) and other materials (such as gloves) that are radioactive or otherwise contaminated are removed from a facility for disposal. The comment implied a much broader scope to the categorical exclusion than DOE intended. Therefore, DOE combined the categorical exclusion with proposed A1.35 as an example under routine maintenance (B1.3(o) in the final rule).

DOE is conducting a program to remove plutonium from contaminated ducts at the Rocky Flats Plant. The current activities include routine decontamination techniques commonly used to maintain facility operations (e.g., wiping with rags, vacuuming, and stripping with latex). These limited activities are encompassed within the existing routine maintenance categorical exclusion under DOE's NEPA guidelines (52 FR 47662, December 15, 1987) and would be encompassed by the categorical exclusion for routine maintenance in this final rule (B1.3). Removal of plutonium from ducts at the Rocky Flats Plant that are more difficult to access or are impossible to clean using routine maintenance techniques may require dismantling and replacement. DOE is currently preparing an EA to evaluate these types of proposed activities for the Rocky Flats Plant. Similarly, if DOE were to propose large equipment replacement actions, such as the Cascade Improvement and Cascade Upgrading Programs at the Paducah and Portsmouth Uranium Enrichment Plants in the 1970s to which the commenter referred, those large programs would not be categorically excluded.

Proposed B1.5 Construction/Operation of Additional/Replacement Water Supply Wells (Final B1.18)

One commenter stated that the proposed categorical exclusion should be limited to those circumstances where DOE can demonstrate that a steady-state drawdown occurs (i.e., the withdrawal from the supply wells is compensated by the recharge from the surrounding area). Another commenter was concerned that although the construction and operation of a few additional water supply wells might not be a major Federal action, construction and operation of a substantial well field could be. In response to these comments, DOE has added to the categorical exclusion in the final rule the additional stipulation that new wells must be within an existing well field and that there can be no resulting long-term decline of the water table. DOE has also added "siting" to the list of activities for completeness.

Proposed B1.6 Construction/Operation of Microwave/Radio Communication Towers (Final B1.19)

In response to a comment that construction of microwave or radio communications towers in areas considered to be of great visual value could have potential for significant impacts, the categorical exclusion in the final rule has been limited to areas that are not of great visual value. In the final rule, DOE did not include the restrictive phrase concerning prejudice of future site selection decisions for substations and other facilities that was in this categorical exclusion in the proposed rule because the final rule sets forth the restriction in § 1021.410(b)(3) that categorical exclusions may not involve inappropriate segmentation.

Proposed B1.9 Restart of Facility After Categorically Excluded Safety/Environmental Improvements (Not Included in the Final Rule)

Several commenters strongly objected to this categorical exclusion. One commenter viewed it as an attempt to allow DOE to "jump-start" problem-plagued facilities and stated that facilities that have been closed for modifications (particularly safety modifications) should be subject to an EA or EIS before restart. Another commenter noted that DOE has already had one court require an EIS for restart of a nuclear reactor at the Savannah River Site, and believed that the magnitude of DOE's work at the Rocky Flats Plant is also a major Federal action with significant impacts. A third commenter stated that the categorical exclusion was overly broad.

A fourth commenter said that this categorical exclusion was one of the most troubling of all the proposed categorical exclusions, stating that it conflicts directly with DOE decisions to prepare EISs on such facilities as the Savannah River reactors, the N Reactor, and the PUREX plant at Hanford and with various court decisions. The commenter stated that the effects of both accidental and routine releases from nuclear reactors or chemical processing plants are both highly controversial and involve uncertain risks (factors highlighted by the CEQ regulations as bearing on significance). The commenter asserted that the limitation in the proposed categorical exclusion (that restart would only be categorically excluded after categorically excluded improvements) was meaningless because virtually any improvement to a facility could fit into one of the other proposed categorical exclusions. This commenter noted the elaborate and complex standards and practices for the restart of reactors and chemical processing plants and that these warrant at least an EA. The commenter stated that DOE must eliminate this categorical exclusion and adopt a regulation requiring NEPA analysis of a reactor or chemical processing plant that has been shut down for safety/environmental modifications.

DOE has not included this categorical exclusion in the final rule. DOE recognizes that it inappropriately focused on the resumption of operations rather than the proposed action in proposing this categorical exclusion. DOE has not established a categorical exclusion for resumption of operations after shutdown for safety or environmental improvements, because DOE believes such shutdown is part of routine, ongoing operations.

Proposed B2.1 Improvement of a Facility, Replacement/Upgrade of Facility Components (Final B2.5)

One commenter stated that this categorical exclusion was much too broad; many DOE facilities require significant improvements to even

approach current design and operating parameters. Another commenter, referring to this categorical exclusion as "frightfully wide open," asserted that it could cover major initiatives aimed at rebuilding a nuclear reactor. This commenter referred to the CEQ regulations, which state that a significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. The commenter stated that DOE must substantially narrow this categorical exclusion or eliminate it altogether. Another commenter asserted that given the age and condition of some DOE facilities, these actions have potential for significant impact. The commenter further stated that DOE cannot predetermine the degree of impacts because of the absence of current, adequate NEPA documentation.

DOE has narrowed the scope of this categorical exclusion in the final rule to emphasize that the activities cannot result in a substantial change in function of a facility and that the categorical exclusion does not apply to rebuilding or modifying substantial portions of a facility. These modifications, along with § 1021.410(b)(3) in the final rule, which addresses segmentation, should ensure that improvements with significant impacts (beneficial or adverse) are not categorically excluded. The categorical exclusion was also modified to acknowledge that operations may be suspended while the action takes place and then be resumed. In accordance with the CEQ regulations, DOE has procedures (section 1021.410(b)(2) in the final rule) for review of individual proposals to determine whether there are extraordinary circumstances that would indicate that a categorical exclusion is not appropriate.

DOE has added an example to this categorical exclusion for an environmental improvement (removal and replacement of underground storage tanks); DOE proposed the example as part of A1.26 (example (n)) but believes it is more appropriately considered as an upgrade. (See the discussion under proposed A1.26.)

Proposed B3.1 Siting/Construction/Operation of Small-Scale Laboratory Building or Renovation of Room for Sample Analysis for Site Characterization/Environmental Monitoring (Final B3.1, B3.8, and B6.2)

Proposed B3.3 Outdoor Ecological/Environmental Research Activities (Final B3.8 and B6.2)

In the final rule, DOE has incorporated the scope of activities in proposed B3.1 (construction and renovation activities related to sample analysis) into the scope of proposed A3.1 (final B3.1) (discussed above under proposed A3.1), proposed B3.3 (final B3.8), and proposed B6.2 (final B6.2) to avoid inappropriate segmentation.

DOE has narrowed the scope of proposed B3.3 in the final rule (final B3.8) to outdoor ecological and other environmental research activities, none of which could result in any permanent change to the ecosystem. Some environmental restoration experiments concerned with waste, originally in the scope of this categorical exclusion, are now included in the scope of proposed B6.2 (final B6.2) where they are limited by size (further discussion below under proposed B6.2). The restriction concerning release or movement of hazardous and other substances proposed as part of proposed B3.3 was not included in these categorical exclusions in the final rule because the condition that proposals not disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products such that there would be uncontrolled or unpermitted releases is now an integral element of the classes of actions in appendix B under condition B.(3). (See additional discussion under section III F, above.)

Proposed B3.5 Research and Development Activities/Small Scale Testing at Existing Facility, Preceding Demonstration (Final B3.10)

One commenter asserted that this categorical exclusion, because of the inadequacy of proposed eligibility criteria, would exempt activities that have the potential to establish a precedent for future actions with significant effects or that represent a decision in principle about a future consideration. In response to this comment (and similar comments on other categorical exclusions), DOE has added section 1021.410(b)(3) to the final rule that clarifies that the Department will not categorically exclude a proposal if it involves segmentation.

The commenter noted that DOE has prepared EAs for research and development projects involving nonradioactive and nonhazardous materials, and was concerned that this categorical exclusion represented a step backward for DOE. DOE has modified this categorical exclusion in the final rule (B3.10) to clarify its intent (i.e., to include small-scale research and development projects and small-scale pilot projects) and has also narrowed the scope of the categorical exclusion to projects generally less than two years in duration.

The commenter misinterpreted the example for research to improve the capability or efficiency of existing accelerators as applying to accelerator upgrades, for which DOE would prepare an EA or EIS. The commenter also requested a change in the example concerning accelerator beams with insufficient energy to produce reactions. DOE believes the broad examples were misleading and has deleted them.

Proposed B4.1 New Electricity Transmission Agreements, System Operation Within Normal Operation Limits (Final B4.8)

DOE has modified this categorical exclusion in the final rule to clarify that the use of a transmission facility of one system to transfer power of and for another system is the only scope for categorically excluded new or modified transmission agreements. DOE deleted the phrase referring to normal operating limits because it was not necessary, and comments on other categorical exclusions (proposed A4.5 and A4.8) indicated its subjectivity.

Proposed B6.1 CERCLA Removals/Similar Actions Under RCRA or Other Authorities (Final B6.1)

A commenter requested that this categorical exclusion be explicitly restricted to situations involving small-scale removal operations or where there is a threat of a release. The categorical exclusion in the final rule states that DOE's categorically excluded removal actions will meet CERCLA regulatory cost and time limits (currently $2 million or 1 year from the time activities begin on site) or will satisfy one of two regulatory exemptions. Neither CERCLA nor EPA has set cost or time limits for exempted actions.

The same commenter also recommended that DOE include a period of time (e.g., one year) within which some exposure is expected to occur to qualify for the categorical exclusion. DOE does not believe that the timing of potential exposure from a release is a measure of the significance of impacts expected from cleaning up the release. EPA's National Contingency Plan and written guidance for removal actions do not present a limitation based on the period of time within which some exposure is likely.

Two other commenters requested that DOE address in Subpart D the level of NEPA review required for final corrective or remedial actions and other typical restoration activities, such as waste packaging and repackaging, onsite waste stabilization/ treatment, and bioremediation techniques. As DOE

gains experience in remediation, DOE may propose additions to the listings in subpart D.

A commenter stated that the removal of underground storage tanks (example (c) in the proposed and final rule) should not be categorically excluded, except in the case of the threat of a release, because tank removals are typically large actions and tanks are often used to store petroleum and its byproducts, which are exempted from RCRA review. DOE believes that tank removal that meets the criteria for this categorical exclusion can be appropriately excluded. DOE believes that its phrase concerning reduction of "the likelihood of spillage, leakage, or the spread of, or direct contact with, contamination" is essentially the same as removing "the threat of a release." DOE will review individual activities to determine whether they present extraordinary circumstances such that there is potential for significant impacts on the human environment. (The commenter noted that DOE had removed "tanks" from the list of excluded containers in proposed example (b) (removal of bulk containers); DOE removed "tanks" to avoid overlap and confusion with proposed example (c), not to limit the scope of the categorical exclusion. DOE has not changed this terminology in the final rule.) In the final rule, however, DOE has included citations of applicable statutory and regulatory requirements in this example in response to a comment.

DOE has moved proposed example (p) (transportation, treatment, recovery, storage, or disposal of wastes at existing facilities) to the lead statement of the categorical exclusion to emphasize that these activities (part of any removal action) must occur at existing facilities. DOE did not include transportation in the lead statement of the categorical exclusion because the Department considers it an activity necessary to and included in the categorical exclusion (as discussed under § 1021.410(d)). A commenter was confused by a phrase in this example that concerned reducing the likelihood of human, animal, or food chain exposure, thinking that there would either be only rare opportunities for applying this categorical exclusion, or DOE would have to perform more extensive investigation of the potential exposures from its activities to qualify for the exemption. DOE did not include this confusing and unnecessary phrase in the lead statement of the categorical exclusion in the final rule.

Proposed B6.2 Siting/Construction/Operation of Temporary Pilot-Scale Waste Collection/Treatment Facilities (Final B6.2)

DOE has modified this categorical exclusion in the final rule to include other temporary pilot-scale waste management systems (i.e., stabilization and containment) that were proposed in B3.3 of the proposed rule. This categorical exclusion in the final rule has a one acre size restriction, rather than five acres, as in proposed B3.3. DOE has also modified this categorical exclusion in the final rule to include the scope of activities in proposed B3.1 (construction or renovation of facilities for sample analysis) to avoid inappropriate segmentation. (Also see the discussion under proposed B3.3.)

Proposed B6.3 Improvements to Environmental Control Systems (Final B6.3)

In response to a comment requesting clarification on whether work on outdoor systems was within the scope of the categorical exclusion, DOE has rewritten this categorical exclusion in the final rule for clarity and in so doing included a reference to systems "of" an existing building or structure rather than "within" a building or structure. Categorically excluded activities could include work on piping or duct work leading to a building or structure, but could not include new construction.

Proposed B6.4 Siting/Construction/Operation of Waste Storage Facility (not Transuranic, High Level) (Final C16, B6.4, B6.5 and B6.6)

Proposed B6.5 Modification (not expansion) of Existing Transuranic Waste Storage Facility (Final B6.6)

A commenter was concerned about the potential for long-term storage of waste under proposed B6.4. Two other commenters believed that there was no reasonable basis for DOE's distinction between waste storage facilities for transuranic (TRU) and non-TRU waste (other than high-level waste or spent nuclear fuel). One commenter noted that there are very likely certain hazardous or non-TRU mixed wastes that pose equal or greater dangers than TRU or TRU-mixed wastes. The commenter urged DOE to eliminate this unprincipled distinction and to prepare an EA for storage facilities for all the wastes listed in proposed B6.4 as well as for TRU wastes.

In response to these comments and the general comments that appendix B categorical exclusions are too broad, DOE has included in the final rule two categorical exclusions for waste storage and staging activities that are smaller in scope and that represent subsets of the originally proposed categorical exclusion (i.e., 90-day hazardous waste storage (final B6.4) and characterizing and sorting previously packaged waste or overpacking waste (final B6.5)).

DOE believes that it is appropriate to analyze the environmental impacts from waste handling (mainly worker exposure), the deterioration of containers during extended storage (which could result in environmental releases), and the establishment of and increases in storage capacity (because of, for example, general radiation from a given volume of waste or the potential for release of hazardous fumes, including explosive fumes, especially if there are accidental releases). Therefore, DOE has categorically excluded only those activities that do not involve direct handling of waste (packaging waste or opening waste containers) or establishing or increasing storage capacity, unless the storage time is quite limited (e.g., 90 days) or the volume of waste generated is very small (e.g., less than 1,000 kilograms in a calendar month).

DOE has modified proposed B6.5 (final B6.6) to address modification of existing structures for storage of wastes proposed to be categorically excluded in proposed B6.4. DOE also has modified proposed C10 (final C7) to address new structures for storage of wastes that had been proposed to be categorically excluded in proposed B6.4.

DOE did not follow another commenter's suggestion that the definition of hazardous waste also refer to applicable state and local regulations because DOE's citation is to a definition or designation of hazardous waste, not to regulations applicable to handling the waste.

Proposed B6.7 Relocation/Demolition/Disposal of Buildings (Final B1.22)

In the final rule, DOE has moved this categorical exclusion to section B1.22 (categorical exclusions applicable to facility operation). This was in response to a request to clarify whether the scope of the categorical exclusion was limited to environmental restoration and waste management, although DOE's division of appendix B is only for purposes of organization and is not limiting. DOE narrowed the scope of the categorical exclusion in the final rule by restricting the relocation of buildings to an already developed area where site utilities and roads are available.

Proposed B7.2 Retransfers of source, special nuclear, and byproduct materials (Not Included in the Final Rule)

DOE has not included proposed B7.2 in the final rule. As proposed the categorical exclusion did not involve transport within the United States or its territorial seas, and therefore these NEPA regulations would not apply to the retransfer actions. DOE actions having environmental effects outside the United States, its territories or possessions are subject to, as set forth in § 1021.102 of the final rule, Executive Order 12114, DOE's guidelines implementing that Order, and Department of State procedures.

Appendix C to Subpart D—Classes of Actions That Normally Require EAs but Not Necessarily EISs

Appendix D to Subpart D—Classes of Actions That Normally Require EISs

A commenter suggested that an item be added relating to research on the conservation of endangered, threatened, or proposed to be listed species. Another commenter requested that DOE consider including chemical, thermal, and other types of process pilot plants in appendix C.

DOE had listed only those classes of actions that are typical classes of actions for DOE (i.e., DOE proposes the type of action frequently) and for which DOE has enough experience to be reasonably confident that an EA will normally be the required level of NEPA review. Therefore, DOE has not added typical classes of actions to appendix C for research on endangered species or for additional process pilot plants.

Substantial changes to proposed Appendix C involved three classes of actions, two of which were modified in response to comments (C10 and C14) and one of which was not included in the final rule (C15) (discussed above under proposed B6.4 and below under proposed C10 and C15). Other minor changes were made in response to comments (discussed below under proposed C8 and C9) or for clarity.

Substantial changes to proposed appendix D involved two classes of action, one of which was not included in the final rule (discussed below under proposed D11) and one of which is new (in response to comments, as discussed below under proposed C10).

C8 Implementation of System-wide vegetation management program (Power Marketing Administrations) (Final C5).

C9 Implementation of System-wide Erosion control program (Power Marketing Administrations) (Final C6).

In response to a commenter's request, DOE clarified that the term "system-wide" in these classes of actions in the final rule refers to a program of general application regarding all the facilities of a power marketing administration.

C10 Long-term allocation of power (Final C7 and D7).

One commenter believes that long-term (five years or longer) power marketing contracts, policies, marketing plans, or allocation plans should normally be subject to review in an EIS. The commenter noted that two courts that have addressed this issue have determined that EISs were indeed necessary before implementing long-term marketing plans for major river basins. The commenter noted wide-ranging effects, from direct riverine effects (resulting from peak power generation to meet capacity commitments) to indirect effects on air quality and greenhouse gas emissions (that may result from Federal hydropower displacement of different forms of thermal power generation). This commenter added that, because Federal hydropower is generally inexpensive, its availability can reduce incentives for energy conservation. The commenter noted that Federal hydropower dams are some of the largest sources of hydropower generation in the country, contributing substantially to the overall mix of power generation in some regions, and that the long-term marketing plans for these facilities are usually developed on a comprehensive basis for many facilities in an entire river basin.

In response to this comment and comments on proposed A4.1, DOE has added conditions to the various power marketing agreements (i.e., contracts, policies, marketing plans, or allocation plans) to distinguish those that would normally require EAs but not necessarily EISs (final C7) from those that would normally require EISs, and has added a class of actions that normally requires an EIS (final D7). DOE normally will prepare an EIS for long-term (five years or longer) contracts, policies, marketing plans, or allocation plans when the DOE proposal involves adding a major new generation resource or service to a major new load or causes major changes in the operating parameters of power generation resources; otherwise, DOE normally will prepare an EA.

DOE does not consider power marketing actions with durations of five years or longer appropriate for a categorical exclusion because such actions have a duration exceeding the Bonneville Power Administration's normal multiyear planning process (promulgated in accordance with the Pacific Northwest Coordination Agreement), and, in the case of resource acquisitions, they would be inconsistent with the delineation of a "major" resource in the Northwest Power Act (that is, sections 3(12) and 6(c) of the act define resources of more than 50 megawatts acquired for more than 5 years as "major" and impose special procedures for such acquisitions). The Northwest Power Act also contains a size limit (50 average megawatts) above which a resource acquisition would be considered "major" if acquired for more than five years. This size limit is what DOE determined should differentiate between an EA and EIS relative to resource acquisitions.

C15 Siting/construction/operation of waste disposal facility in contaminated area (not TRU or high-level waste) (Not included in the final rule).

D11 Siting/construction/expansion of waste disposal facility in uncontaminated area (not transuranic or high-level waste) (Not included in the final rule).

Four commenters did not understand how DOE distinguished between EA and EIS levels of review on the basis of the presence or absence of previous contamination. One commenter pointed out that a disposal facility located in a contaminated area may not only add to existing contamination but could actually exacerbate its spread through physical means or its toxicity through synergistic chemical reactions. This commenter noted that impacts from the actual construction of a disposal site in a contaminated area are far more likely to be significant than at an uncontaminated site. This commenter urged DOE to include all siting, construction, and operation of waste disposal sites in appendix D.

Another commenter stated that to proceed as suggested by DOE's proposed rule provides an unwarranted "credit" for prior DOE environmental degradation and does not permit a true evaluation of significant environmental impacts and alternatives of the proposed action. Another commenter believed that nonhazardous solid waste disposal should be a class of action normally requiring an EA but not necessarily an EIS.

DOE has withdrawn the proposed listings and will determine the level of NEPA review required (EA or EIS level) on a case-by-case basis. DOE recognizes that there are many action- and site-specific circumstances that raise questions about the reasonableness of general listings at this time.

IV. Revocation of Existing Guidelines and Replacement of Regulations

On the effective date of this rule, May 26, 1992, DOE revokes the existing DOE NEPA Guidelines and revises the existing regulations at 10 CFR part 1021 by striking the current text and replacing it with this rule.

V. Environmental Review

Section D of the DOE NEPA Guidelines categorically excludes "promulgation of rules and regulations which are clarifying in nature, or which do not substantially change the effect of the regulations being amended." This rule establishes and clarifies procedures for considering the environmental effects of DOE actions within its decisionmaking process, thereby enhancing compliance with the letter and spirit of NEPA, and therefore fits within this categorical exclusion. DOE has determined that promulgation of this rule is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Consequently, neither an EIS nor an EA is required for this rule. DOE will continue to examine individual actions to determine the appropriate level of NEPA review.

VI. Review Under Executive Order 12291

This rule has been reviewed in accordance with Executive Order 12291, which directs that all regulations achieve their intended goals without imposing unnecessary burdens on the economy, individuals, public or private organizations, or state and local governments. The Executive Order also requires that a regulatory impact analysis be prepared for a "major rule." The Executive Order defines "major rule" as any regulation that is likely to result in: (1) An annual effect on the economy of $100 million or more; (2) a major increase in costs or prices for consumers, individual industries, Federal, state, and local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, or innovation or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets.

This rule amends and codifies already existing policies and procedures for compliance with NEPA. The rule contains no substantive changes in the requirements imposed on applicants for a DOE license, financial assistance, permit or other similar actions, which are the areas where one might anticipate an economic effect. Therefore, DOE has determined that the incremental effect of today's rule will not have the magnitude of effects on the economy to bring this rule within the definition of a "major rule."

Pursuant to the Executive Order, this rule was submitted to the Office of Management and Budget for regulatory review.

VII. Review Under Executive Order 12612

Executive Order 12612 requires that rules be reviewed for Federalism effects on the institutional interest of states and local governments. If the effects are sufficiently substantial, preparation of a Federalism assessment is required to assist senior policymakers. The rulemaking to revoke DOE's NEPA Guidelines and revise 10 CFR part 1021 will not have any substantial direct effects on state and local governments within the meaning of the Executive Order. It will, however, allow states the opportunity to play a more significant role in DOE's NEPA process. This final rule will affect Federal NEPA compliance procedures, which are not subject to state regulation.

VIII. Regulatory Flexibility Act

The Regulatory Flexibility Act, Pub.L. 96-345 (5 U.S.C. 601-612), requires that an agency prepare an initial regulatory flexibility analysis to be published at the time the proposed rule is published. The requirement (which appears in section 603 of the act) does not apply if the agency "certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." This rule modifies existing policies and procedural requirements for DOE compliance with NEPA. It makes no substantive changes to requirements imposed on applicants for DOE licenses, permits, financial assistance, and similar actions as related to NEPA compliance. Therefore, DOE certifies that this rule will not have a "significant economic impact on a substantial number of small entities."

IX. List of Subjects in 10 CFR Part 1021

Environmental assessment, environmental impact assessment, National Environmental Policy Act.

Issued in Washington, DC, April 16, 1992.

Paul L. Ziemer,

Assistant Secretary, Environment, Safety and Health.

For reasons set out in the preamble, 10 CFR part 1021 is revised to read as set forth below:

PART 1021—NATIONAL ENVIRONMENTAL POLICY ACT IMPLEMENTING PROCEDURES

Subpart A—General

Sec.

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1021.330 Programmatic (including site-wide) NEPA documents.
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Subpart D—Typical Classes of Actions

1021.400 Level of NEPA review.
1021.410 Application of categorical exclusions (classes of actions that normally do not require EAs or EISs).

Appendix A to Subpart D—Categorical Exclusions Applicable to General Agency Actions

Appendix B to Subpart D—Categorical Exclusions Applicable to Specific Agency Actions

Appendix C to Subpart D—Classes of Actions that Normally Require EAs but not Necessarily EISs

Appendix D to Subpart D—Classes of Actions that Normally Require EISs

Authority: 42 U.S.C. 7254; 42 U.S.C. 4321 *et seq.*

Subpart A—General

§ 1021.100 Purpose.

The purpose of this part is to establish procedures that the Department of Energy (DOE) shall use to comply with section 102(2) of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4332(2)) and the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 CFR parts 1500–1508). This part supplements, and is to be used in conjunction with, the CEQ Regulations.

§ 1021.101 Policy.

It is DOE's policy to follow the letter and spirit of NEPA; comply fully with the CEQ Regulations; and apply the NEPA review process early in the planning stages for DOE proposals.

§ 1021.102 Applicability.

(a) This part applies to all organizational elements of DOE except the Federal Energy Regulatory Commission.

(b) This part applies to any DOE action affecting the quality of the environment of the United States, its territories or possessions. DOE actions having environmental effects outside the United States, its territories or possessions are subject to the provisions of Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions" (3 CFR, 1979 Comp., p. 356; 44 FR 1957, January 4, 1979), DOE guidelines implementing that Executive Order (46 FR 1007, January 5, 1981), and the Department of State's "Unified Procedures Applicable to Major Federal Actions Relating to Nuclear Activities Subject to Executive Order 12114" (44 FR 65560, November 13, 1979).

§ 1021.103 Adoption of CEQ NEPA Regulations.

DOE adopts the regulations for implementing NEPA published by CEQ at 40 CFR parts 1500 through 1508.

§ 1021.104 Definitions.

(a) The definitions set forth in 40 CFR part 1508 are referenced and used in this part.

(b) In addition to the terms defined in 40 CFR part 1508, the following definitions apply to this part:

Action means a project, program, plan, or policy, as discussed at 40 CFR 1508.18, that is subject to DOE's control and responsibility. Not included within this definition are purely ministerial actions with regard to which DOE has no discretion. For example, ministerial actions to implement congressionally mandated funding for actions not proposed by DOE and as to which DOE has no discretion (i.e., statutorily mandated, congressionally initiated "passthroughs").

Advance NOI means a formal public notice of DOE's intent to prepare an EIS, which is published in advance of an NOI in order to facilitate public involvement in the NEPA process.

American Indian tribe means any Indian tribe, band, nation, pueblo, or other organized group or community, including any Alaska native entity, which is recognized as eligible for the special programs or services provided by the United States because of their status as Indians.

Categorical exclusion means a category of actions, as defined at 40 CFR 1508.4 and listed in appendix A or B to subpart D of this part, for which neither an EA nor an EIS is normally required.

CEQ means the Council on Environmental Quality as defined at 40 CFR 1508.6.

CEQ Regulations means the regulations issued by CEQ (40 CFR parts 1500–1508) to implement the procedural provisions of NEPA.

CERCLA-excluded petroleum and natural gas products means petroleum, including crude oil or any fraction thereof, that is not otherwise specifically listed or designated as a hazardous substance under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601.101(14)) and natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel or of pipeline quality (or mixtures of natural gas and such synthetic gas).

Contaminant means a substance identified within the definition of contaminant in section 101(33) of CERCLA (42 U.S.C. 9601.101(33)).

Day means a calendar day.

DOE means the U.S. Department of Energy.

DOE proposal (or *proposal*) means a proposal, as discussed at 40 CFR 1508.23 (whether initiated by DOE, another Federal agency, or an applicant), for an action, if the proposal requires a DOE decision.

EA means an environmental assessment as defined at 40 CFR 1508.9.

EIS means an environmental impact statement as defined at 40 CFR 1508.11, or, unless this part specifically provides otherwise, a Supplemental EIS.

EIS Implementation Plan means a document that explains and supports the scope, target schedule, and approach DOE will use to prepare an EIS.

EPA means the U.S. Environmental Protection Agency.

FONSI means a Finding of No Significant Impact as defined at 40 CFR 1508.13.

Hazardous substance means a substance identified within the definition of hazardous substances in section 101(14) of CERCLA (42 U.S.C. 9601.101(14)). Radionuclides are hazardous substances through their listing under section 112 of the Clean Air Act (42 U.S.C. 7412) (40 CFR part 61, subpart H).

Host state means a state within whose boundaries DOE proposes an action at an existing facility or construction or operation of a new facility.

Host tribe means an American Indian tribe within whose tribal lands DOE proposes an action at an existing facility or construction or operation of a new facility. For purposes of this definition, "tribal lands" means the area of "Indian country," as defined in 18 U.S.C. 1151, that is under the tribe's jurisdiction. That section defines Indian country as:

(i) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation;

(ii) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state; and

(iii) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

Interim action means an action concerning a proposal that is the subject of an ongoing EIS and that DOE proposes to take before the ROD is issued, and that is permissible under 40 CFR 1506.1: Limitations on actions during the NEPA process.

Mitigation Action Plan means a document that describes the plan for implementing commitments made in a DOE EIS and its associated ROD, or, when appropriate, an EA or FONSI, to mitigate adverse environmental impacts associated with an action.

NEPA means the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*).

NEPA document means a DOE NOI, EIS, ROD, EA, FONSI, or any other document prepared pursuant to a requirement of NEPA or the CEQ Regulations.

NEPA review means the process used to comply with section 102(2) of NEPA.

NOI means a Notice of Intent to prepare an EIS as defined at 40 CFR 1508.22.

Notice of Availability means a formal notice, published in the **Federal Register**, that announces the issuance and public availability of a draft or final EIS. The EPA Notice of Availability is the official public notification of an EIS; a DOE Notice of Availability is an optional notice used to provide information to the public.

Pollutant means a substance identified within the definition of pollutant in section 101(33) of CERCLA (42 U.S.C. 9601.101(33)).

Program means a sequence of connected or related DOE actions or projects as discussed at 40 CFR 1508.18(b)(3) and 1508.25(a).

Programmatic NEPA document means a broad-scope EIS or EA that identifies and assesses the environmental impacts of a DOE program; it may also refer to an associated NEPA document, such as an NOI, ROD, or FONSI.

Project means a specific DOE undertaking including actions approved by permit or other regulatory decision as well as Federal and federally assisted activities, which may include design, construction, and operation of an individual facility; research, development, demonstration, and testing for a process or product; funding for a facility, process, or product; or similar activities, as discussed at 40 CFR 1508.18(b)(4).

ROD means a Record of Decision as described at 40 CFR 1505.2.

Scoping means the process described at 40 CFR 1501.7; "public scoping process" refers to that portion of the scoping process where the public is invited to participate, as described at 40 CFR 1501.7 (a)(1) and (b)(4).

Site-wide NEPA document means a broad-scope EIS or EA that is programmatic in nature and identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site; it may also refer to an associated NEPA document, such as an NOI, ROD, or FONSI.

Supplement Analysis means a DOE document used to determine whether a supplemental EIS should be prepared pursuant to 40 CFR 1502.9(c), or to support a decision to prepare a new EIS.

Supplemental EIS means an EIS prepared to supplement a prior EIS as provided at 40 CFR 1502.9(c).

The Secretary means the Secretary of Energy.

§ 1021.105 Oversight of Agency NEPA activities.

The Assistant Secretary for Environment, Safety and Health, or his/her designee, is responsible for overall review of DOE NEPA compliance. Further information on DOE's NEPA process and the status of individual NEPA reviews may be obtained upon request from the Office of NEPA Oversight, EH-25, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585.

Subpart B—DOE Decisionmaking

§ 1021.200 DOE planning.

(a) DOE shall provide for adequate and timely NEPA review of DOE proposals, including those for programs, policies, projects, regulations, orders, or legislation, in accordance with 40 CFR 1501.2 and this section. In its planning for each proposal, DOE shall include adequate time and funding for proper NEPA review and for preparation of anticipated NEPA documents.

(b) DOE shall begin its NEPA review as soon as possible after the time that DOE proposes an action or is presented with a proposal.

(c) DOE shall determine the level of NEPA review required for a proposal in accordance with § 1021.300 and subpart D of this part.

(d) During the development and consideration of a DOE proposal, DOE shall review any relevant planning and decisionmaking documents, whether prepared by DOE or another agency, to determine if the proposal or any of its alternatives are considered in a prior NEPA document. If so, DOE shall consider adopting the existing document, or any pertinent part thereof, in accordance with 40 CFR 1506.3.

§ 1021.210 DOE decisionmaking.

(a) For each DOE proposal, DOE shall coordinate its NEPA review with its decisionmaking. Sections 1021.211 through 1021.214 of this part specify how DOE will coordinate its NEPA review with decision points for certain types of proposals (40 CFR 1505.1(b)).

(b) DOE shall complete its NEPA review for each DOE proposal before making a decision on the proposal (e.g., normally in advance of, and for use in reaching, a decision to proceed with detailed design), except as provided in 40 CFR 1506.1 and §§ 1021.211 and 1021.216 of this part.

(c) During the decisionmaking process for each DOE proposal, DOE shall consider the relevant NEPA documents, public and agency comments (if any) on those documents, and DOE responses to those comments, as part of its consideration of the proposal (40 CFR 1505.1(d)) and shall include such documents, comments, and responses as part of the administrative record (40 CFR 1505.1(c)).

(d) If an EIS or EA is prepared for a DOE proposal, DOE shall consider the alternatives analyzed in that EIS or EA before rendering a decision on that proposal; the decision on the proposal shall be within the range of alternatives analyzed in the EA or EIS (40 CFR 1505.1(e)).

(e) When DOE uses a broad decision (such as one on a policy or program) as a basis for a subsequent narrower decision (such as one on a project or other site-specific proposal), DOE may use tiering (40 CFR 1502.20) and incorporation of material by reference (40 CFR 1502.21) in the NEPA review for the subsequent narrower proposal.

§ 1021.211 Interim actions: Limitations on actions during the NEPA process.

While DOE is preparing an EIS that is required under § 1021.300(a) of this part, DOE shall take no action concerning the proposal that is the subject of the EIS before issuing an ROD, except as provided at 40 CFR 1506.1. Actions that are covered by, or are a part of, a DOE proposal for which an EIS is being prepared shall not be categorically excluded under subpart D of these regulations unless they qualify as interim actions under 40 CFR 1506.1.

§ 1021.212 Research, development, demonstration, and testing.

(a) This section applies to the adoption and application of programs that involve research, development, demonstration, and testing for new technologies (40 CFR 1502.4(c)(3)). Adoption of such programs might also lead to commercialization or other broad-scale implementation by DOE or another entity.

(b) For any proposed program described in paragraph (a) of this section, DOE shall begin its NEPA review (if otherwise required by this part) as soon as environmental effects can be meaningfully evaluated, and before DOE has reached the level of investment or commitment likely to determine subsequent development or restrict later alternatives, as discussed at 40 CFR 1502.4(c)(3).

(c) For subsequent phases of development and application, DOE shall prepare one or more additional NEPA documents (if otherwise required by this part).

§ 1021.213 Rulemaking.

(a) This section applies to regulations promulgated by DOE.

(b) DOE shall begin its NEPA review of a proposed rule (if otherwise required by this part) while drafting the proposed regulation, and as soon as environmental effects can be meaningfully evaluated.

(c) DOE shall include any relevant NEPA documents, public and agency comments (if any) on those documents, and DOE responses to those comments, as part of the administrative record (40 CFR 1505.1(c)).

(d) If an EIS is required, DOE will normally publish the draft EIS at the time it publishes the proposed rule (40 CFR 1502.5(d)). DOE will normally combine any public hearings required for a proposed rule with the public hearings required on the draft EIS under § 1021.313 of this part. The draft EIS need not accompany notices of inquiry or advance notices of proposed rulemaking that DOE may use to gather information during early stages of regulation development. When engaged in rulemaking for the purpose of protecting the public health and safety, DOE may issue the final rule simultaneously with publication of the EPA Notice of Availability of the final EIS in accordance with 40 CFR 1506.10(b).

(e) If an EA is required, DOE will normally complete the EA and issue any related FONSI prior to or simultaneously with issuance of the proposed rule; however, if the EA leads to preparation of an EIS, the provisions of paragraph (d) of this section shall apply.

§ 1021.214 Adjudicatory proceedings.

(a) This section applies to DOE proposed actions that involve DOE adjudicatory proceedings, excluding judicial or administrative civil or criminal enforcement actions.

(b) DOE shall complete its NEPA review (if otherwise required by this part) before rendering any final adjudicatory decision. If an EIS is required, the final EIS will normally be completed at the time of or before final staff recommendation, in accordance with 40 CFR 1502.5(c).

(c) DOE shall include any relevant NEPA documents, public and agency comments (if any) on those documents, and DOE responses to those comments, as part of the administrative record (40 CFR 1505.1(c)).

§ 1021.215 Applicant process.

(a) This section applies to actions that involve application to DOE for a permit, license, exemption or allocation, or other similar actions, unless the action is categorically excluded from preparation of an EA or EIS under subpart D of this part.

(b) The applicant shall:

(1) Consult with DOE as early as possible in the planning process to obtain guidance with respect to the appropriate level and scope of any studies or environmental information that DOE may require to be submitted as part of, or in support of, the application;

(2) Conduct studies that DOE deems necessary and appropriate to determine the environmental impacts of the proposed action;

(3) Consult with appropriate Federal, state, regional and local agencies, American Indian tribes and other potentially interested parties during the preliminary planning stages of the proposed action to identify environmental factors and permitting requirements;

(4) Notify DOE as early as possible of other Federal, state, regional, local or American Indian tribal actions required for project completion to allow DOE to coordinate the Federal environmental review, and fulfill the requirements of 40 CFR 1506.2 regarding elimination of duplication with state and local procedures, as appropriate;

(5) Notify DOE of private entities and organizations interested in the proposed undertaking, in order that DOE can consult, as appropriate, with these parties in accordance with 40 CFR 1501.2(d)(2); and

(6) Notify DOE if, before DOE completes the environmental review, the applicant plans to take an action that is within DOE's jurisdiction that may have an adverse environmental impact or limit the choice of alternatives. If DOE determines that the action would have an adverse environmental impact or would limit the choice of reasonable alternatives under 40 CFR 1506.1(a), DOE will promptly notify the applicant that DOE will take appropriate action to ensure that the objectives and procedures of NEPA are achieved in accordance with 40 CFR 1506.1(b).

(c) For major categories of DOE actions involving a large number of applicants, DOE may prepare and make available generic guidance describing the recommended level and scope of environmental information that applicants should provide.

(d) DOE shall begin its NEPA review (if otherwise required by this part) as soon as possible after receiving an application described in paragraph (a) of this section, and shall independently evaluate and verify the accuracy of information received from an applicant in accordance with 40 CFR 1506.5(a). At DOE's option, an applicant may prepare an EA in accordance with 40 CFR 1506.5(b). If an EIS is prepared, the EIS shall be prepared by DOE or by a contractor that is selected by DOE and that may be funded by the applicant, in accordance with 40 CFR 1506.5(c). The contractor shall provide a disclosure statement in accordance with 40 CFR 1506.5(c), as discussed in § 1021.312(b)(4) of this part. DOE shall complete any NEPA documents (or evaluation of any EA prepared by the applicant) before rendering a final decision on the application and shall consider the NEPA document in reaching its decision, as provided in § 1021.210 of this part.

§ 1021.216 Procurement, Financial Assistance, and Joint Ventures.

(a) This section applies to DOE competitive and limited-source procurements, to awards of financial assistance by a competitive process, and to joint ventures entered into as a result of competitive solicitations, unless the action is categorically excluded from preparation of an EA or EIS under Subpart D of this part. Paragraphs (b), (c), and (i) of this section apply as well to DOE sole-source procurements of sites, systems, or processes, to noncompetitive awards of financial assistance, and to sole-source joint ventures, unless the action is categorically excluded from preparation of an EA or EIS under Subpart D of this part.

(b) When relevant in DOE's judgment, DOE shall require that offeror's submit environmental data and analyses as a discrete part of the offeror's proposal. DOE shall specify in its solicitation document the type of information and level of detail for environmental data and analyses so required. The data will be limited to those reasonably available to offerors.

(c) DOE shall independently evaluate and verify the accuracy of environmental data and analyses submitted by offerors.

(d) For offers in the competitive range, DOE shall prepare and consider an environmental critique before the selection.

(e) The environmental critique will be subject to the confidentiality requirements of the procurement process.

(f) The environmental critique will evaluate the environmental data and analyses submitted by offerors; it may also evaluate supplemental information developed by DOE as necessary for a reasoned decision.

(g) The environmental critique will focus on environmental issues that are

pertinent to a decision on proposals and will include:

(1) A brief discussion of the purpose of the procurement and each offer, including any site, system, or process variations among the offers having environmental implications;

(2) A discussion of the salient characteristics of each offeror's proposed site, system, or process as well as alternative sites, systems, or processes;

(3) A brief comparative evaluation of the potential environmental impacts of the offers, which will address direct and indirect effects, short-term and long-term effects, proposed mitigation measures, adverse effects that cannot be avoided, areas where important environmental information is incomplete and unavailable, unresolved environmental issues and practicable mitigating measures not included in the offeror's proposal; and

(4) To the extent known for each offer, a list of Federal, Tribal, state, and local government permits, licenses, and approvals that must be obtained.

(h) DOE shall prepare a publicly available environmental synopsis, based on the environmental critique, to document the consideration given to environmental factors and to record that the relevant environmental consequences of reasonable alternatives have been evaluated in the selection process. The synopsis will not contain business, confidential, trade secret or other information that DOE otherwise would not disclose pursuant to 18 U.S.C. 1905, the confidentiality requirements of the competitive procurement process, 5 U.S.C. 552(b) and 41 U.S.C. 423. To assure compliance with this requirement, the synopsis will not contain data or other information that may in any way reveal the identity of offerors. After a selection has been made, the environmental synopsis shall be filed with EPA, shall be made publicly available, and shall be incorporated in any NEPA document prepared under paragraph (i) of this section.

(i) If an EA or EIS is required, DOE shall prepare, consider and publish the EA or EIS in conformance with the CEQ Regulations and other provisions of this part before taking any action pursuant to the contract or award of financial assistance (except as provided at 40 CFR 1506.1 and § 1021.211 of this part). If the NEPA process is not completed before the award of the contract, financial assistance, or joint venture, then the contract, financial assistance, or joint venture shall be contingent on completion of the NEPA process (except as provided at 40 CFR 1506.1 and § 1021.211 of this part). DOE shall phase subsequent contract work to allow the NEPA review process to be completed in advance of a go/no-go decision.

Subpart C—Implementing Procedures

§ 1021.300 General requirements.

(a) DOE shall determine, under the procedures in the CEQ Regulations and this part, whether any DOE proposal:

(1) Requires preparation of an EIS;

(2) Requires preparation of an EA; or

(3) Is categorically excluded from preparation of either an EIS or an EA.

DOE shall prepare any pertinent documents as required by NEPA, the CEQ Regulations, or this part.

(b) Notwithstanding any other provision of these regulations, DOE may prepare a NEPA document for any DOE action at any time in order to further the purposes of NEPA. This may be done to analyze the consequences of ongoing activities, support DOE planning, assess the need for mitigation, fully disclose the potential environmental consequences of DOE actions, or for any other reason. Documents prepared under this paragraph shall be prepared in the same manner as DOE documents prepared under paragraph (a) of this section.

§ 1021.301 Agency review and public participation.

(a) DOE shall make its NEPA documents available to other Federal agencies, states, local governments, American Indian tribes, interested groups, and the general public, in accordance with 40 CFR 1506.6, except as provided in § 1021.340 of this part.

(b) Wherever feasible, DOE NEPA documents shall explain technical, scientific, or military terms or measurements using terms familiar to the general public, in accordance with 40 CFR 1502.8.

(c) DOE shall notify the host state and host tribe of a DOE determination to prepare an EA or EIS for a DOE proposal, and may notify any other state or American Indian tribe that, in DOE's judgment, may be affected by the proposal.

(d) DOE shall provide the host state and host tribe with an opportunity to review and comment on any DOE EA prior to DOE's approval of the EA. DOE may also provide any other state or American Indian tribe with the same opportunity if, in DOE's judgment, the state or tribe may be affected by the proposed action. At DOE's discretion, this review period shall be from 14 to 30 days. DOE shall consider all comments received from a state or tribe during the review period before approving or modifying the EA, as appropriate. If all states and tribes afforded this opportunity for preapproval review waive such opportunity, or provide a response before the end of the comment period, DOE may proceed to approve or take other appropriate action on the EA before the end of the review period.

(e) Paragraphs (c) and (d) of this section shall not apply to power marketing actions, such as rate-setting, in which a state or American Indian tribe is a customer, or to any other circumstances where DOE determines that such advance information could create a conflict of interest.

§ 1021.310 Environmental impact statements.

DOE shall prepare and circulate EISs and related RODs in accordance with the requirements of the CEQ Regulations, as supplemented by this subpart.

§ 1021.311 Notice of intent and scoping.

(a) DOE shall publish an NOI in the **Federal Register** in accordance with 40 CFR 1501.7 and containing the elements specified in 40 CFR 1508.22 as soon as practicable after a decision is made to prepare an EIS. However, if there will be a lengthy period of time between its decision to prepare an EIS and the time of actual preparation, DOE may defer publication of the NOI until a reasonable time before preparing the EIS, provided that DOE allows a reasonable opportunity for interested parties to participate in the EIS process. Through the NOI, DOE shall invite comments and suggestions on the scope of the EIS. DOE shall disseminate the NOI in accordance with 40 CFR 1506.6.

(b) If there will be a lengthy delay between the time DOE has decided to prepare an EIS and the beginning of the public scoping process, DOE may publish an Advance NOI in the **Federal Register** to provide an early opportunity to inform interested parties of the pending EIS or to solicit early public comments. This Advance NOI does not serve as a substitute for the NOI provided for in paragraph (a) of this section.

(c) Publication of the NOI in the **Federal Register** shall begin the public scoping process. The public scoping process for a DOE EIS shall allow a minimum of 30 days for the receipt of public comments.

(d) Except as provided in paragraph (g) of this section, DOE shall hold at least one public scoping meeting as part of the public scoping process for a DOE EIS. DOE shall announce the location, date, and time of public scoping meetings in the NOI or by other

appropriate means, such as additional notices in the Federal Register, news releases to the local media, or letters to affected parties. Public scoping meetings shall not be held until at least 15 days after public notification. Should DOE change the location, date, or time of a public scoping meeting, or schedule additional public scoping meetings, DOE shall publicize these changes in the Federal Register or in other ways as appropriate.

(e) In determining the scope of the EIS, DOE shall consider all comments received during the announced comment period held as part of the public scoping process. DOE may also consider comments received after the close of the announced comment period.

(f) The results of the scoping process shall be documented in the EIS Implementation Plan as provided in § 1021.312 of this part.

(g) A public scoping process is optional for DOE supplemental EISs (40 CFR 1502.9(c)(4)). If DOE initiates a public scoping process for a supplemental EIS, the provisions of paragraphs (a) through (f) of this section shall apply.

§ 1021.312 EIS implementation plan.

(a) DOE shall prepare an EIS Implementation Plan to provide guidance for the preparation of an EIS and record the results of the scoping process. DOE shall complete the EIS Implementation Plan as soon as possible after the close of the public scoping process, but in any event before issuing the draft EIS. DOE may amend the EIS Implementation Plan to incorporate changes in schedules, alternatives, or other content.

(b) The EIS Implementation Plan shall include:

(1) A statement of the planned scope and content of the EIS;

(2) The purpose and need for the proposed action;

(3) A description of the scoping process and the results (as needed to document DOE compliance with 40 CFR 1501.7), including a summary of comments received and their disposition;

(4) Target schedules;

(5) Anticipated consultation with other agencies; and

(6) A disclosure statement executed by any contractor (or subcontractor) under contract with DOE to prepare the EIS document in accordance with 40 CFR 1506.5(c).

(c) At DOE's option, the Implementation Plan may include target page limits for the EIS, planned work assignments, anticipated consultation with other organizations, or any other information to support the approach to be used in preparing the EIS.

(d) DOE shall make the EIS Implementation Plan and any formal revisions available to the public for information. DOE shall make copies available for inspection in the appropriate DOE public reading room(s) or other appropriate location(s) for a reasonable time. Copies of these documents shall also be provided upon written request.

§ 1021.313 Public review of environmental impact statements.

(a) The public review and comment period on a DOE draft EIS shall be no less than 45 days (40 CFR 1506.10(c)). The public comment period begins when EPA publishes a Notice of Availability of the document in the Federal Register.

(b) DOE shall hold at least one public hearing on DOE draft EISs. Such public hearings shall be announced at least 15 days in advance. The announcement shall identify the subject of the draft EIS and include the location, date, and time of the public hearings.

(c) DOE shall prepare a final EIS following the public comment period and hearings on the draft EIS. The final EIS shall respond to oral and written comments received during public review of the draft EIS, as provided at 40 CFR 1503.4. In addition to the requirements at 40 CFR 1502.9(b), a DOE final EIS shall include any Statement of Findings required by 10 CFR part 1022, "Compliance with Floodplain/Wetlands Environmental Review Requirements."

(d) DOE shall use appropriate means to publicize the availability of draft and final EISs and the time and place for public hearings on a draft EIS. The methods chosen should focus on reaching persons who may be interested in or affected by the proposal and may include the methods listed in 40 CFR 1506.6(b)(3).

§ 1021.314 Supplemental environmental impact statements.

(a) DOE shall prepare a supplemental EIS if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns, as discussed in 40 CFR 1502.9(c)(1).

(b) DOE may supplement a draft EIS or final EIS at any time, to further the purposes of NEPA, in accordance with 40 CFR 1502.9(c)(2).

(c) When it is unclear whether or not an EIS supplement is required, DOE shall prepare a Supplement Analysis.

(1) The Supplement Analysis shall discuss the circumstances that are pertinent to deciding whether to prepare a supplemental EIS, pursuant to 40 CFR 1502.9(c).

(2) The Supplement Analysis shall contain sufficient information for DOE to determine whether:

(i) An existing EIS should be supplemented;

(ii) A new EIS should be prepared; or

(iii) No further NEPA documentation is required.

(3) DOE shall make the determination and the related Supplement Analysis available to the public for information. Copies of the determination and Supplement Analysis shall be provided upon written request. DOE shall make copies available for inspection in the appropriate DOE public reading room(s) or other appropriate location(s) for a reasonable time.

(d) DOE shall prepare, circulate, and file a supplement to a draft or final EIS in the same manner as any other draft and final EISs, except that scoping is optional for a supplement. If DOE decides to take action on a proposal covered by a supplemental EIS, DOE shall prepare a ROD in accordance with the provisions of § 1021.315 of this part.

(e) When applicable, DOE will incorporate an EIS supplement, or the determination and supporting Supplement Analysis made under paragraph (c) of this section, into any related formal administrative record on the action that is the subject of the EIS supplement or determination (40 CFR 1502.9(c)(3)).

§ 1021.315 Records of decision.

(a) No decision may be made on a proposal covered by an EIS during a 30-day "waiting period" following completion of the final EIS, except as provided at 40 CFR 1506.1 and 1506.10(b) and § 1021.211 of this part. The 30-day period starts when the EPA Notice of Availability for the final EIS is published in the Federal Register.

(b) If DOE decides to take action on a proposal covered by an EIS, a ROD shall be prepared as provided at 40 CFR 1505.2 (except as provided at 40 CFR 1506.1 and § 1021.211 of this part). No action shall be taken until the decision has been made public.

(c) DOE RODs shall be published in the Federal Register and made available to the public as specified in 40 CFR 1506.6, except as provided in 40 CFR 1507.3(c) and § 1021.340 of this part.

(d) DOE may revise a ROD at any time, so long as the revised decision is adequately supported by an existing EIS. A revised ROD is subject to the provisions of paragraphs (b) and (c) of this section.

§ 1021.320 Environmental assessments.

DOE shall prepare and circulate EAs and related FONSIs in accordance with the requirements of the CEQ Regulations, as supplemented by this subpart.

§ 1021.321 Requirements for environmental assessments.

(a) *When to prepare an EA.* As required by 40 CFR 1501.4(b), DOE shall prepare an EA for a proposed DOE action that is described in the classes of actions listed in appendix C to subpart D of this part, and for a proposed DOE action that is not described in any of the classes of actions listed in appendices A, B, or D to subpart D, except that an EA is not required if DOE has decided to prepare an EIS. DOE may prepare an EA on any action at any time in order to assist agency planning and decisionmaking.

(b) *Purposes.* A DOE EA shall serve the purposes identified in 40 CFR 1508.9(a), which include providing sufficient evidence and analysis for determining whether to prepare an EIS or to issue a FONSI. If appropriate, a DOE EA shall also include any floodplain/wetlands assessment prepared under 10 CFR part 1022 and may include analyses needed for other environmental determinations.

(c) *Content.* A DOE EA shall comply with the requirements found at 40 CFR 1508.9. In addition to any other alternatives, DOE shall assess the no action alternative in an EA, even when the proposed action is specifically required by legislation or a court order.

§ 1021.322 Findings of no significant impact.

(a) DOE shall prepare a FONSI only if the related EA supports the finding that the proposed action will not have a significant effect on the human environment. If a required DOE EA does not support a FONSI, DOE shall prepare an EIS and issue a ROD before taking action on the proposal addressed by the EA, except as permitted under 40 CFR 1506.1 and § 1021.211 of this part.

(b) In addition to the requirements found at 40 CFR 1508.13, a DOE FONSI shall include the following:

(1) A summary of the supporting EA, including a brief description of the proposed action and alternatives considered in the EA, environmental factors considered, and projected impacts;

(2) Any commitments to mitigations that are essential to render the impacts of the proposed action not significant, beyond those mitigations that are integral elements of the proposed action, and a reference to the Mitigation Action Plan prepared under § 1021.331 of this part;

(3) Any "Statement of Findings" required by 10 CFR Part 1022, "Compliance with Floodplain/Wetlands Environmental Review Requirements";

(4) The date of issuance; and

(5) The signature of the DOE approving official.

(c) DOE shall make FONSIs available to the public as provided at 40 CFR 1501.4(e)(1) and 1506.6; DOE shall make copies available for inspection in the appropriate DOE public reading room(s) or other appropriate location(s) for a reasonable time.

(d) DOE shall issue a proposed FONSI for public review and comment before making a final determination on the FONSI if required by 40 CFR 1501.4(e)(2); DOE may issue a proposed FONSI for public review and comment in other situations as well.

(e) Upon issuance of the FONSI, DOE may proceed with the proposed action subject to any mitigation commitments expressed in the FONSI that are essential to render the impacts of the proposed action not significant.

(f) DOE may revise a FONSI at any time, so long as the revision is supported by an existing EA. A revised FONSI is subject to all provisions of paragraph (d) of this section.

§ 1021.330 Programmatic (including Site-wide) NEPA documents

(a) When required to support a DOE programmatic decision (40 CFR 1508.18(b)(3)), DOE shall prepare a programmatic EIS or EA (40 CFR 1502.4). DOE may also prepare a programmatic EIS or EA at any time to further the purposes of NEPA.

(b) A DOE programmatic NEPA document shall be prepared, issued, and circulated in accordance with the requirements for any other NEPA document, as established by the CEQ Regulations and this part.

(c) As a matter of policy when not otherwise required, DOE shall prepare site-wide EISs for certain large, multiple-facility DOE sites; DOE may prepare EISs or EAs for other sites to assess the impacts of all or selected functions at those sites.

(d) DOE shall evaluate site wide NEPA documents prepared under § 1021.330(c) at least every five years. DOE shall evaluate site-wide EISs by means of a Supplement Analysis, as provided in § 1021.314. Based on the Supplement Analysis, DOE shall determine whether the existing EIS remains adequate or whether to prepare a new site-wide EIS or supplement the existing EIS, as appropriate. The determination and supporting analysis shall be made available in the appropriate DOE public reading room(s) or in other appropriate location(s) for a reasonable time.

(e) DOE shall evaluate site-wide EAs by means of an analysis similar to the Supplement Analysis to determine whether the existing site-wide EA remains adequate, whether to prepare a new site-wide EA, revise the FONSI, or prepare a site wide EIS, as appropriate. The determination and supporting analysis shall be made available in the appropriate DOE public reading room(s) or in other appropriate location(s) for a reasonable time.

§ 1021.331 Mitigation action plans.

(a) Following completion of each EIS and its associated ROD, DOE shall prepare a Mitigation Action Plan that addresses mitigation commitments expressed in the ROD. The Mitigation Action Plan shall explain how the corresponding mitigation measures, designed to mitigate adverse environmental impacts associated with the course of action directed by the ROD, will be planned and implemented. The Mitigation Action Plan shall be prepared before DOE takes any action directed by the ROD that is the subject of a mitigation commitment.

(b) In certain circumstances, as specified in § 1021.322(b)(2), DOE shall also prepare a Mitigation Action Plan for commitments to mitigations that are essential to render the impacts of the proposed action not significant. The Mitigation Action Plan shall address all commitments to such necessary mitigations and explain how mitigation will be planned and implemented. The Mitigation Action Plan shall be prepared before the FONSI is issued and shall be referenced therein.

(c) Each Mitigation Action Plan shall be as complete as possible, commensurate with the information available regarding the course of action either directed by the ROD or the action to be covered by the FONSI, as appropriate. DOE may revise the Plan as more specific and detailed information becomes available.

(d) DOE shall make copies of the Mitigation Action Plans available for inspection in the appropriate DOE public reading room(s) or other appropriate location(s) for a reasonable time. Copies of the Mitigation Action Plans shall also be available upon written request.

§ 1021.340 Classified, confidential, and otherwise exempt information.

(a) Notwithstanding other sections of this part, DOE shall not disclose

classified, confidential, or other information that DOE otherwise would not disclose pursuant to the Freedom of Information Act (FOIA) (5 U.S.C. 552) and 10 CFR 1004.10(b) of DOE's regulations implementing the FOIA, except as provided by 40 CFR 1506.6(f).

(b) To the fullest extent possible, DOE shall segregate any information that is exempt from disclosure requirements into an appendix to allow public review of the remainder of a NEPA document.

(c) If exempt information cannot be segregated, or if segregation would leave essentially meaningless material, DOE shall withhold the entire NEPA document from the public; however, DOE shall prepare the NEPA document, in accordance with the CEQ Regulations and this part, and use it in DOE decisionmaking.

§ 1021.341 Coordination with other environmental review requirements.

(a) In accordance with 40 CFR 1500.4(k) and (o), 1502.25, and 1506.4, DOE shall integrate the NEPA process and coordinate NEPA compliance with other environmental review requirements to the fullest extent possible.

(b) To the extent possible, DOE shall determine the applicability of other environmental requirements early in the planning process, in consultation with other agencies when necessary or appropriate, to ensure compliance and to avoid delays, and shall incorporate any relevant requirements as early in the NEPA review process as possible.

§ 1021.342 Interagency cooperation.

For DOE programs that involve another Federal agency or agencies in related decisions subject to NEPA, DOE will comply with the requirements of 40 CFR 1501.5 and 1501.6. As part of this process, DOE shall cooperate with the other agencies in developing environmental information and in determining whether a proposal requires preparation of an EIS or EA, or can be categorically excluded from preparation of either. Further, where appropriate and acceptable to the other agencies, DOE shall develop or cooperate in the development of interagency agreements to facilitate coordination and to reduce delay and duplication.

§ 1021.343 Variances.

(a) *Emergency Actions.* DOE may take an action without observing all provisions of this part or the CEQ Regulations, in accordance with 40 CFR 1506.11, in emergency situations that demand immediate action. DOE shall consult with CEQ as soon as possible regarding alternative arrangements for emergency actions having significant environmental impacts. DOE shall document, including publishing a notice in the **Federal Register**, emergency actions covered by this paragraph within 30 days after such action occurs; this documentation shall identify any adverse impacts from the actions taken, further mitigation necessary, and any NEPA documents that may be required.

(b) *Reduction of Time Periods.* On a case-by-case basis, DOE may reduce time periods established in this part that are not required by the CEQ Regulations. If DOE determines that such reduction is necessary, DOE shall publish a notice in the **Federal Register** specifying the revised time periods and the rationale for the reduction.

(c) *Other.* Any variance from the requirements of this part, other than as provided by paragraphs (a) and (b) of this section, must be soundly based on the interests of national security or the public health, safety, or welfare and must have the advance written approval of the Secretary; however, the Secretary is not authorized to waive or grant a variance from any requirement of the CEQ Regulations (except as provided for in those regulations). If the Secretary determines that a variance from the requirements of this part is within his/her authority to grant and is necessary, DOE shall publish a notice in the **Federal Register** specifying the variance granted and the reasons.

Subpart D—Typical Classes of Actions

§ 1021.400 Level of NEPA review.

(a) This subpart identifies DOE actions that normally:

(1) Do not require preparation of either an EIS or an EA (are categorically excluded from preparation of either document) (appendices A and B to this subpart D);

(2) Require preparation of an EA, but not necessarily an EIS (appendix C to this subpart D); or

(3) Require preparation of an EIS (appendix D to this subpart D).

(b) Any completed, valid NEPA review does not have to be repeated, and no completed NEPA documents need to be redone by reasons of these regulations, except as provided in § 1021.314.

(c) If a DOE proposal is encompassed within a class of actions listed in the appendices to this subpart D, DOE shall proceed with the level of NEPA review indicated for that class of actions, unless there are extraordinary circumstances related to the specific proposal that may affect the significance of the environmental effects of the proposal.

(d) If a DOE proposal is not encompassed within the classes of actions listed in the appendices to this subpart D, or if there are extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal, DOE shall either:

(1) Prepare an EA and, on the basis of that EA, determine whether to prepare an EIS or a FONSI; or

(2) Prepare an EIS and ROD.

§ 1021.410 Application of categorical exclusions (classes of actions that normally do not require EAs or EISs).

(a) The actions listed in appendices A and B to this subpart D are classes of actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment (categorical exclusions).

(b) To find that a proposal is categorically excluded, DOE shall determine the following:

(1) The proposal fits within a class of actions that is listed in appendix A or B to this subpart D;

(2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. Extraordinary circumstances are unique situations presented by specific proposals, such as scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; or unresolved conflicts concerning alternate uses of available resources within the meaning of section 102(2)(E) of NEPA; and

(3) The proposal is not "connected" (40 CFR 1508.25(a)(1)) to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts (40 CFR 1508.25(a)(2)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of this part.

(c) All categorical exclusions may be applied by any organizational element of DOE. The sectional divisions in appendix B to this subpart D are solely for purposes of organization of that appendix and are not intended to be limiting.

(d) A class of actions includes activities foreseeably necessary to proposals encompassed within the class of actions (such as associated transportation activities and award of implementing grants and contracts).

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A6 Rulemakings that are strictly procedural, such as rulemaking (under 48 CFR part 9) establishing procedures for technical and pricing proposals and establishing contract clauses and contracting practices for the purchase of goods and services, and rulemaking (under 10 CFR part 600) establishing application and review procedures for, and administration, audit, and closeout of, grants and cooperative agreements.

A7 Transfer, lease, disposition, or acquisition of interests in property, if property use is to remain unchanged.

A8 Award of contracts for technical support services, management and operation of a government-owned facility, and personal services.

A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modelling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring. (Also see B3.1.)

A10 Reports or recommendations on legislation or rulemaking that is not proposed by DOE.

A11 Technical advice and planning assistance to international, national, state, and local organizations.

A12 Emergency preparedness planning activities, including the designation of onsite evacuation routes.

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B. Conditions that are Integral Elements of the Classes of Actions in Appendix B

B. The classes of actions listed below include the following conditions as integral elements of the classes of actions. To fit within the classes of actions listed below, a proposal must be one that would not:

(1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE orders;

(2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators and facilities for treating wastewater, surface water, and groundwater);

(3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; or

(4) Adversely affect environmentally sensitive resources. An action may be categorically excluded if, although sensitive resources are present on a site, the action would not adversely affect those resources (e.g., construction of a building with its foundation well above a sole-source aquifer or upland surface soil removal on a site that has wetlands). Environmentally sensitive resources include, but are not limited to:

(i) Property (e.g., sites, buildings, structures, objects) of historic, archeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places;

(ii) Federally-listed threatened or endangered species or their habitat (including critical habitat), Federally- proposed or candidate species or their habitat, or state-listed endangered or threatened species or their habitat;

(iii) Floodplains and wetlands;

(iv) Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries;

(v) Prime agricultural lands;

(vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and

(vii) Tundra, coral reefs, or rain forests.

B1. *Categorical Exclusions Applicable to Facility Operation*

B1.1 Rate increases for products or services marketed by parts of DOE other than Power Marketing Administrations and approval of rate increases for non-DOE entities that do not exceed the change in the overall price level in the economy (inflation), as measured by the Gross National Product (GNP) fixed weight price index published by the Department of Commerce, during the period since the last rate increase. (Also see B4.3.)

B1.2 Training exercises and simulations (including, but not limited to, firing-range training, emergency response training, fire fighter and rescue training, and spill cleanup training).

B1.3 Routine maintenance activities and custodial services for buildings, structures, infrastructures (e.g., roads), and equipment, during which operations may be suspended and resumed. Custodial services are activities to preserve facility appearance, working conditions, and sanitation, such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal. Routine maintenance activities, corrective (that is, repair), preventive, and predictive (as defined in DOE Order 4330.4, "Maintenance Management"), are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Routine maintenance may result in replacement to the extent that the replacement is in kind and is not a substantial upgrade or improvement. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

(a) Repair of facility equipment, such as lathes, mills, pumps, and presses;

(b) Door and window repair or replacement;

(c) Wall, ceiling, or floor repair;

(d) Reroofing;

(e) Plumbing, electrical utility, and telephone service repair;

(f) Routine replacement of high-efficiency particulate air filters;

(g) Inspection and/or treatment of currently installed utility poles;

(h) Repair of road embankments;

(i) Repair or replacement of fire protection sprinkler systems;

(j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing;

(k) Erosion control and soil stabilization measures (such as reseeding and revegetation);

(l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 5820.2, "Radioactive Waste Management";

(m) Repair and maintenance of transmission facilities, including replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed transmission lines, in accordance, where appropriate, with 40 CFR Part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions);

(n) Routine testing and calibration of facility components, subsystems, or portable

equipment (including but not limited to, control valves, in-core monitoring devices, transformers, capacitors); and

(o) Routine decontamination of spot or minor contamination on the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming) and removal of contaminated intact equipment (labware) and other materials (e.g., gloves and other clothing).

B1.4 Installation or modification of air conditioning systems required for temperature control for operation of existing equipment.

B1.5 Minor improvements to cooling water systems within an existing building or structure if the improvements would not: (1) Create new sources of water or involve new receiving waters; (2) adversely affect water withdrawals or the temperature of discharged water; or (3) increase introductions of or involve new introductions of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products.

B1.6 Installation or modification of retention tanks or small (normally under one acre) basins and associated piping and pumps for existing operations to control runoff or spills (such as under 40 CFR part 112). Modifications include, but are not limited to, installing liners or covers.

B1.7 Acquisition, installation, operation, and removal of communication systems, data processing equipment, and similar electronic equipment.

B1.8 Modifications to screened water intake structures that result in intake velocities and volumes that are within existing permit limits.

B1.9 Placement of airway safety markings and painting (but excluding lighting) of existing electrical transmission lines and antenna structures in accordance with Federal Aviation Administration standards.

B1.10 Routine, onsite storage at an existing facility of activated equipment and material (including lead) used at that facility, to allow reuse after decay of radioisotopes with short half-lives.

B1.11 Installation of fencing, including that for border marking, that will not adversely affect wildlife movements or surface water flow.

B1.12 Detonation or burning of explosives or propellants that failed in outdoor tests (i.e., duds) or were damaged in outdoor tests (e.g., by fracturing) in outdoor areas designated and routinely used for explosive detonation or burning under an existing permit issued by state or local authorities.

B1.13 Acquisition or minor relocation of existing access roads serving existing facilities if the traffic they are to carry will not change substantially.

B1.14 Refueling of an operating nuclear reactor, during which operations may be suspended and then resumed.

B1.15 Siting, construction, and operation of small-scale support buildings and support structures (including prefabricated buildings and trailers) and/or small-scale modifications of existing buildings or structures, within or contiguous to an already developed area (where site utilities and roads are available). Covered support buildings and structures (and/or modifications) include those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; employee health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (including security posts); fire protection; and similar support purposes, but excluding facilities for waste storage activities, except as provided in other parts of this appendix.

B1.16 Removal of asbestos-containing materials from buildings in accordance with 40 CFR part 61 (National Emission Standards for Hazardous Air Pollutants), subpart M (National Emission Standard for Asbestos); 40 CFR part 763 (Asbestos), subpart G (Asbestos Abatement Projects); 29 CFR part 1910, subpart I (Personal Protective Equipment), § 1910.134 (Respiratory Protection); subpart Z (Toxic and Hazardous Substances), § 1910.1001 (Asbestos, tremolite, anthophyllite and actinolite); and 29 CFR part 1926 (Safety and Health Regulations for Construction), subpart D (Occupational Health and Environmental Controls), § 1926.58 (Asbestos, tremolite, anthophyllite, and actinolite), other appropriate Occupational Safety and Health Administration standards in title 29, chapter XVII of the CFR, and appropriate state and local requirements, including certification of removal contractors and technicians.

B1.17 Removal of polychlorinated biphenyl (PCB)-containing items, such as transformers or capacitors, PCB-containing oils flushed from transformers, PCB-flushing solutions, and PCB-containing spill materials from buildings or other aboveground locations in accordance with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions).

B1.18 Siting, construction, and operation of additional water supply wells (or replacement wells), within an existing well field, if there would be no drawdown other than in the immediate vicinity of the pumping well, no resulting long-term decline of the water table, and no degradation of the aquifer from the new or replacement wells.

B1.19 Siting, construction, and operation of microwave and radio communication towers and associated facilities, if the towers and associated facilities would not be in an area of great visual value.

B1.20 Small-scale activities undertaken to protect, restore, or improve fish and wildlife habitat, fish passage facilities (such as fish ladders or minor diversion channels), or fisheries.

B1.21 Minor noise abatement measures, such as construction of noise barriers and installation of noise control materials.

B1.22 Relocation of buildings (including, but not limited to, trailers and prefabricated buildings) to an already developed area where site utilities and roads are available and demolition and subsequent disposal of buildings and support structures (including, but not limited to, smoke stacks and parking lot surfaces).

B2. *Categorical Exclusions Applicable to Safety and Health*

B2.1 Modifications of an existing structure to enhance workplace habitability (including, but not limited to: improvements to lighting, radiation shielding, or heating/ventilating/air conditioning and its instrumentation; and noise reduction).

B2.2 Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).

B2.3 Installation of, or improvements to, equipment for personnel safety and health, including, but not limited to, eye washes, safety showers, radiation monitoring devices, and fumehoods and associated collection and exhaust systems, provided that emissions would not increase.

B2.4 Development and implementation of Equipment Qualification Programs (under DOE Order 5480.6, "Safety of DOE-owned Nuclear Reactors") to augment information on safety-related system components or to improve systems reliability.

B2.5 Safety and environmental improvements of a facility, including replacement and upgrade of facility components, that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements may include, but are not limited to: Replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground or belowground tanks and related piping if there is no evidence of leakage, based on testing that meets performance requirements in 40 CFR part 280, subpart D (40 CFR part 280.40). This includes activities taken under RCRA, subtitle I; 40 CFR part 265, subpart J; 40 CFR part 280, subparts B, C, and D; and other applicable state, Federal and local requirements for underground storage tanks. These actions do not include rebuilding or modifying substantial portions of a facility, such as replacing a reactor vessel.

B3. *Categorical Exclusions Applicable to Site Characterization, Monitoring, and General Research*

B3.1 Site characterization and environmental monitoring, including siting, construction, operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to:

(a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, and radar), geochemical, and engineering surveys and mapping, including the establishment of survey marks;

(b) Installation and operation of field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools;

(c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells;

(d) Aquifer response testing;

(e) Installation and operation of ambient air monitoring equipment;

(f) Sampling and characterization of water, soil, rock, or contaminants;

(g) Sampling and characterization of water effluents, air emissions, or solid waste streams;

(h) Installation and operation of meteorological towers and associated activities, including assessment of potential wind energy resources;

(i) Sampling of flora or fauna; and

(j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

B3.2 Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.

B3.3 Research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources and that involve only negligible animal mortality, habitat destruction, or population reduction.

B3.4 Drop, puncture, water-immersion, thermal, and fire tests of transport packaging for radioactive or hazardous materials to certify that designs meet the requirements of 49 CFR §§ 173.411 and 173.412 and requirements of severe accident conditions as specified in 10 CFR § 71.73.

B3.5 Tank car tests under 49 CFR part 179 (including, but not limited to, tests of safety relief devices, pressure regulators, and thermal protection systems).

B3.6 Indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis) within existing laboratory facilities.

B3.7 Siting, construction, and operation of new infill exploratory and experimental (test) oil, gas, and geothermal wells, which are to be drilled in a geological formation that has existing operating wells.

B3.8 Outdoor ecological and other environmental research (including siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis) in a small area (generally less than five acres) that would not result in any permanent change to the ecosystem.

B3.9 Demonstration actions proposed under the Clean Coal Technology Demonstration Program, if the actions would not increase the quantity or rate of air emissions. These demonstration actions include, but are not limited to:

(a) Test treatment of 20 percent or less of the throughput product (solid, liquid, or gas) generated at an existing and fully operational coal combustion or coal utilization facility;

(b) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that requires only minor modification to the existing structures at an existing coal combustion or coal utilization facility for which the existing use remains unchanged; and

(c) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that involves no permanent change in the quantity or quality of coal being burned or used and involves no permanent change in the capacity factor of the coal combustion or coal utilization facility, other than for demonstration purposes of two years or less in duration.

B3.10 Small-scale research and development projects and small-scale pilot projects conducted (for generally less than two years) to verify a concept before demonstration actions, performed in an existing structure not requiring major modification.

B3.11 Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components), under controlled conditions that would not involve source, special nuclear, or byproduct materials. Covered activities may include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests.

B4. *Categorical Exclusions Applicable to Power Marketing Administrations and to all of DOE with Regard to Power Resources*

B4.1 Establishment and implementation of short-term contracts, marketing plans, policies, annual operating plans, allocation plans, or acquisition of excess power, the terms of any of which do not exceed five years and would not cause changes in the normal operating limits of generating projects, and if transmission would occur over existing transmission systems.

B4.2 Export of electricity over existing transmission lines as provided by section 202(e) of the Federal Power Act.

B4.3 Changes in rates for electric power, power transmission, and other products or services provided by a Power Marketing Administration that are based on a change in revenue requirements that does not exceed the change in the overall price level in the economy (inflation), as measured by the GNP fixed weight price index published by the Department of Commerce, during the period since the last rate adjustment for that product or service or, if the rate change does exceed the change in the GNP fixed weight price index, the rate change would have no potential for affecting the operation of power generation resources.

B4.4 Power marketing services, including storage, load shaping, seasonal exchanges, or other similar activities if the operations of generating projects would remain within normal operating limits.

B4.5 Temporary adjustments to river operations to accommodate day-to-day river fluctuations, power demand changes, fish and wildlife conservation program requirements, and other external events if the adjustments would occur within the existing operating constraints of the particular hydrosystem operation.

B4.6 Additions or modifications to transmission facilities that would not affect the environment beyond the previously developed facility area, including tower modifications, changing insulators, and replacement of poles, circuit breakers, transformers, and crossarms.

B4.7 Adding fiber optic cable to transmission structures or burying fiber optic cable in existing transmission line rights-of-way.

B4.8 New electricity transmission agreements, and modifications to existing transmission arrangements, to use a transmission facility of one system to transfer power of and for another system, if no new generation projects would be involved and no physical changes in the transmission system would be made beyond the previously developed facility area.

B4.9 Grant or denial of requests for multiple use of a transmission facility rights-of-way, such as grazing permits and crossing agreements, including electric lines, water lines, and drainage culverts.

B4.10 Dismantling and removal of transmission lines and right-of-way abandonment.

B4.11 Construction or modification of substations (including switching stations) with power delivery at 230 kV or below and/or support facilities, that would not involve the construction or relocation of more than 10 miles of transmission lines or the integration of a major new resource.

B4.12 Construction of tap lines (less than 10 miles in length) that are not for the integration of major new sources of generation into a main transmission system.

B4.13 Minor relocations of existing transmission lines (less than 10 miles in length) made to enhance existing environmental and land use conditions. Such actions include relocations to avoid right-of-way encroachments, resolve conflict with property development, accommodate road/highway construction, allow for the construction of facilities such as canals and pipelines, or reduce existing impacts to environmentally sensitive areas.

B5. *Categorical Exclusions Applicable to Conservation, Fossil, and Renewable Energy Activities*

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed

lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

B5.2 Modifications to oil, gas, and geothermal facility pump and piping configurations, manifolds, metering systems, and other instrumentation that would not change design process flow rates or affect permitted air emissions.

B5.3 Modification (but not expansion) or abandonment (including plugging), which is not part of site closure, of crude oil storage access wells, brine injection wells, or geothermal wells.

B5.4 Repair or replacement of sections of a crude oil, produced water, brine, or geothermal pipeline, if the actions are determined by the Army Corps of Engineers to be within the maintenance provisions of a DOE permit under section 404 of the Clean Water Act.

B5.5 Construction and subsequent operation of short offsite crude oil or geothermal pipeline segments between DOE facilities and existing commercial crude oil transportation, storage, or refining facilities, or geothermal transportation or storage facilities, within a single industrial complex, if the pipeline segments are within existing rights-of-way.

B5.6 Removal of oil and contaminated materials recovered in oil spill cleanup operations in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and disposed of in accordance with local contingency plans in accordance with the NCP.

B5.7 Approval of new authorization or amendment of existing authorization to import/export natural gas under section 3 of the Natural Gas Act that does not involve new construction and only requires operational changes, such as an increase in natural gas throughput, change in transportation, or change in storage operations.

B5.8 Approval of new authorization or amendment of existing authorization to import/export natural gas under section 3 of the Natural Gas Act involving a new cogeneration powerplant (as defined in the Powerplant and Industrial Fuel Use Act) within or adjacent to an existing industrial complex and requiring less than 10 miles of new gas pipeline.

B5.9 The grant or denial of any temporary exemption under the Powerplant and Industrial Fuel Use Act of 1978 for any electric powerplant or major fuel-burning installation.

B5.10 The grant or denial of any permanent exemption under the Powerplant and Industrial Fuel Use Act of 1978 of any existing electric powerplant or major fuel-burning installation, other than an exemption under (1) section 312(c) relating to cogeneration, (2) section 312(1) relating to scheduled equipment outages, (3) section 312(b) relating to certain state or local requirements, and (4) section 312(g) relating to certain intermediate load powerplants.

B5.11 The grant or denial of a permanent exemption from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978 for any new electric powerplant or major fuel-burning installation to permit the use of certain fuel mixtures containing natural gas or petroleum.

B5.12 The grant or denial of a permanent exemption from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978 for any new peak-load powerplant.

B5.13 The grant or denial of a permanent exemption from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978 for any new electric powerplant or major fuel-burning installation to permit operation for emergency purposes only.

B5.14 The grant or denial of a permanent exemption from the prohibitions of Titles II and III of the Powerplant and Industrial Fuel Use Act of 1978 for any new or existing major fuel-burning installation for purposes of meeting scheduled equipment outages not to exceed an average of 28 days per year over a three-year period.

B5.15 The grant or denial of a permanent exemption from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978 for any new major fuel-burning installation which, in petitioning for an exemption due to lack of alternate fuel supply at a cost which does not substantially exceed the cost of using imported petroleum, certifies that it will be operated less than 600 hours per year.

B5.16 The grant or denial of a permanent exemption from the prohibitions of Title II of the Powerplant and Industrial Fuel Use Act of 1978 for any new cogeneration powerplant.

B6. *Categorical Exclusions Applicable to Environmental Restoration and Waste Management Activities*

B6.1 Removal actions under CERCLA (including those taken as final response actions and those taken before remedial action) and removal-type actions similar in scope under RCRA and other authorities (including those taken as partial closure actions and those taken before corrective action), including treatment (e.g., incineration), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the removal action. These actions will meet the CERCLA regulatory cost and time limits or satisfy either of the two regulatory exemptions from those cost and time limits (National Contingency Plan, 40 CFR part 300). These actions include, but are not limited to:

(a) Excavation or consolidation of contaminated soils or materials from drainage channels, retention basins, ponds, and spill areas that are not receiving contaminated surface water or wastewater, if surface water or groundwater would not collect and if such actions would reduce the spread of, or direct contact with, the contamination;

(b) Removal of bulk containers (for example, drums, barrels) that contain or may contain hazardous substances, pollutants, contaminants, CERCLA-excluded petroleum or natural gas products, or hazardous wastes (designated in 40 CFR part 261), if such actions would reduce the likelihood of spillage, leakage, fire, explosion, or exposure to humans, animals, or the food chain;

(c) Removal of an underground storage tank including its associated piping and underlying containment systems in compliance with RCRA, subtitle I; 40 CFR part 265, subpart J; and 40 CFR part 280, subparts F and G if such action would reduce the likelihood of spillage, leakage, or the spread of, or direct contact with, contamination;

(d) Repair or replacement of leaking containers;

(e) Capping or other containment of contaminated soils or sludges if the capping or containment would not affect future groundwater remediation and if needed to reduce migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products into soil, groundwater, surface water, or air;

(f) Drainage or closing of man-made surface impoundments if needed to maintain the integrity of the structures;

(g) Confinement or perimeter protection using dikes, trenches, ditches, or diversions if needed to reduce the spread of, or direct contact with, the contamination;

(h) Stabilization, but not expansion, of berms, dikes, impoundments, or caps if needed to maintain integrity of the structures;

(i) Drainage controls (for example, run-off or run-on diversion) if needed to reduce offsite migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum or natural gas products or to prevent precipitation or run-off from other sources from entering the release area from other areas;

(j) Segregation of wastes that react with one another to result in adverse environmental impacts;

(k) Use of chemicals and other materials to neutralize the pH of wastes;

(l) Use of chemicals and other materials to retard the spread of the release or to mitigate its effects if the use of such chemicals would reduce the spread of, or direct contact with, the contamination;

(m) Installation and operation of gas ventilation systems in soil to remove methane or petroleum vapors without any toxic or radioactive co-contaminants if appropriate filtration or gas treatment is in place;

(n) Installation of fences, warning signs, or other security or site control precautions if humans or animals have access to the release; and

(o) Provision of an alternative water supply that would not create new water sources if necessary immediately to reduce exposure to contaminated household or industrial use water and continuing until such time as local authorities can satisfy the need for a permanent remedy.

B6.2 The siting, construction, and operation of temporary (generally less than 2 years) pilot-scale waste collection and

treatment facilities, and pilot-scale (generally less than one acre) waste stabilization and containment facilities (including siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis) if the action: (1) Supports remedial investigations/feasibility studies under CERCLA, or similar studies under RCRA, such as RCRA facility investigations/corrective measure studies, or other authorities, and (2) would not unduly limit the choice of reasonable remedial alternatives (by permanently altering substantial site area or by committing large amounts of funds relative to the scope of the remedial alternatives).

B6.3 Improvements to environmental monitoring and control systems of an existing building or structure (for example, changes to scrubbers in air quality control systems or ion-exchange devices and other filtration processes in water treatment systems) if during subsequent operations (1) any substance collected by the environmental control systems would be recycled, released, or disposed of within existing permitted facilities and (2) there are applicable statutory or regulatory requirements or permit conditions for disposal, release, or recycling of any hazardous substance or CERCLA-excluded petroleum natural gas products that are collected or released in increased quantity or that were not previously collected or released.

B6.4 Siting, construction (or modification or expansion), operation, and decommissioning of an onsite facility for storing packaged hazardous waste (as designated in 40 CFR part 261) for 90 days or less or for longer periods as provided in 40 CFR part 262.34 (d), (e), or (f) (e.g., accumulation or satellite areas).

B6.5 Siting, construction (or modification or expansion), operation, and decommissioning of an onsite facility for characterizing and sorting previously packaged waste or for overpacking waste, other than high-level radioactive waste or spent nuclear fuel, if operations do not involve unpacking waste. These actions do not include waste storage (covered under C16).

B6.6 Modification (excluding increases in capacity) of an existing structure used for storing, packaging, or repacking waste other than high-level radioactive waste or spent nuclear fuel, to handle the same class of waste as currently handled at that structure.

B6.7 Under the Low-Level Radioactive Waste Policy Amendments Act of 1985 (5(c)(5)), granting of a petition qualified under 10 CFR part 730.6 for allocation of commercial disposal capacity for an unusual or unexpected volume of commercial low-level radioactive waste or denying such a petition when adequate storage capacity exists at the petitioner's facility.

B6.8 Minor operational changes at an existing facility to minimize waste generation and for reuse of materials. These changes include, but are not limited to, adding filtration and recycle piping to allow reuse of machining oil, setting up a sorting area to improve process efficiency, and segregating two waste streams previously mingled and assigning new identification codes to the two resulting wastes.

B7. *Categorical Exclusions Applicable to International Activities*

B7.1 Planning and implementation of emergency measures pursuant to the International Energy Program.

B7.2 Approval of import or export of small quantities of special nuclear materials or isotopic materials in accordance with the Nuclear Non-Proliferation Act of 1978 and the "Procedures Established Pursuant to the Nuclear Non Proliferation Act of 1978" (43 FR 25326, June 9, 1978).

Appendix C to Subpart D—Classes of Actions that Normally Require EAs But Not Necessarily EISs

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C1. Major Projects
C2. Rate increases more than inflation, not power marketing
C3. Rate increases more than inflation, power marketing
C4. Upgrading (reconstructing) an existing transmission line
C5. Implementation of Power Marketing Administration systemwide vegetation management program
C6. Implementation of Power Marketing Administration systemwide erosion control program
C7. Allocation of power for five years or longer, no major new generation resource/major new loads/major changes in operation of power generation resources
C8. Protection of fish and wildlife habitat
C9. Field demonstration projects for wetlands
C10. Siting/construction/operation/decommissioning of synchrotron radiation accelerator facility
C11. Siting/construction/operation/decommissioning of particle acceleration facility
C12. Siting/construction/operation of energy system prototypes
C13. Import/export natural gas, minor new construction (other than a cogeneration powerplant)
C14. Siting/construction/operation of water treatment facilities
C15. Siting/construction/operation of research and development incinerators/nonhazardous waste incinerators
C16. Siting/construction/operation of onsite waste storage facilities (not high-level, spent nuclear fuel)

C1 Major Projects, as designated by DOE Order 4240.1, "Designation of Major System Acquisitions and Major Projects."

C2 Rate increases for products or services marketed by DOE, except for electric power, power transmission, and other products or services provided by the Power Marketing Administrations, and approval of rate increases for non-DOE entities, that exceed the change in the overall price level in the economy (inflation), as measured by the GNP fixed weight price index published by the Department of Commerce, during the period since the last rate increase for that product or service.

C3 Rate changes for electric power, power transmission, and other products or services provided by Power Marketing Administrations that are based on changes in revenue requirements that exceed the change in the overall price level in the economy (inflation), as measured by the GNP fixed weight price index published by the Department of Commerce, during the period since the last rate change for that power or service and have potential for affecting the operation of power generation resources.

C4 Upgrading (reconstructing) an existing transmission line.

C5 Implementation of a Power Marketing Administration system-wide vegetation management program.

C6 Implementation of a Power Marketing Administration system-wide erosion control program.

C7 Establishment and implementation of contracts, policies, marketing plans, or allocation plans for the allocation of power for periods of five years or longer that do not involve (1) the addition of major (greater than 50 average megawatts) new generation resources, (2) service to discrete major (10 average megawatts-or more over a 12 month period) new loads, or (3) major changes in the operating parameters of power generation resources.

C8 Protection, restoration, or improvement of fish and wildlife habitat, fish passage facilities, and fish hatcheries if the proposed action may adversely affect an environmentally sensitive resource.

C9 Field demonstration projects for wetlands mitigation, creation, and restoration.

C10 Siting, construction (or major modification), operation, and decommissioning of a synchrotron radiation (light source) accelerator facility (or other electron beam accelerators) and associated particle storage rings and colliders.

C11 Siting, construction (or major modification), operation, and decommissioning of a low- or medium-energy particle acceleration facility and associated particle storage rings and colliders.

C12 Siting, construction, and operation of energy system prototypes including, but not limited to, wind resource, hydropower, geothermal, fossil fuel, biomass, and solar energy pilot projects.

C13 Approval or disapproval of an application to import/export natural gas under section 3 of the Natural Gas Act involving minor new construction (other than a cogeneration powerplant), such as adding new connections, looping, or compression to an existing natural gas pipeline or converting an existing oil pipeline to a natural gas pipeline using the same right-of-way.

C14 Siting, construction (or expansion), and operation of water treatment facilities, including facilities for wastewater, potable water, and sewage.

C15 Siting, construction (or expansion), and operation of research and development incinerators for any type of waste and of any other incinerators that would treat nonhazardous solid waste (as designated in 40 CFR Part 261.4(b)).

C16 Siting, construction (including modification to increase capacity), operation, and decommissioning of onsite storage

facilities and/or packaging and unpacking facilities (that may include characterization operations) for all waste other than high-level waste or spent nuclear fuel (except for storage of packaged hazardous waste for 90 days or less or for longer periods as provided for in 40 CFR part 262.34 (d), (e), or (f). (Refer to B6.4; also see B6.5 and B6.6.)

Appendix D to Subpart D—Classes of Actions That Normally Require EISs

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D11. Siting/construction/expansion of waste disposal facility for transuranic waste
D12. Siting/construction/operation of incinerators (other than research and development, other than nonhazardous solid waste)

D1 Major System Acquisitions, as designated by DOE Order 4240.1, "Designation of Major System Acquisitions and Major Projects."

D2 Siting, construction, operation, and decommissioning of nuclear fuel reprocessing facilities.

D3 Siting, construction, operation, and decommissioning of uranium enrichment facilities.

D4 Siting, construction, operation, and decommissioning of power reactors, nuclear material production reactors, and test and research reactors.

D5 Main transmission system additions (that is, additions of new transmission lines) to a Power Marketing Administration's main transmission grid.

D6 Integrating transmission facilities (that is, transmission system additions for integrating major new sources of generation into a Power Marketing Administration's main grid).

D7 Establishment and implementation of contracts, policies, marketing plans, or allocation plans for periods of five years or longer that involve (1) the addition of major (greater than 50 average megawatts) new generation resources, (2) service to discrete, major (10 average megawatts or more over a 12 month period) new loads, or (3) major changes in the operating parameters of power generation resources.

D8 Approval or disapproval of an application to import/export natural gas under section 3 of the Natural Gas Act involving major new natural gas pipeline construction or related facilities, such as construction of new liquid natural gas (LNG) terminals, regasification or storage facilities, or a significant expansion of an existing pipeline or related facility or LNG terminal, regasification, or storage facility.

D9 Approval or disapproval of an application to import/export natural gas under section 3 of the Natural Gas Act involving a significant operational change, such as a major increase in the quantity of liquid natural gas imported or exported.

D10 Siting, construction, operation, and decommissioning of major treatment, storage, and/or disposal facilities for high-level waste and/or spent nuclear fuel, such as spent fuel storage facilities and geologic repositories.

D11 Siting, construction (or expansion), and operation of a disposal facility for transuranic (TRU) waste and TRU mixed waste (TRU waste also containing hazardous waste as designated in 40 CFR part 261).

D12 Siting, construction, and operation of incinerators, other than research and development incinerators or incinerators for nonhazardous solid waste (as designated in 40 CFR part 261.4(b)).

[FR Doc. 92-9245 Filed 4-23-92; 8:45 am]
BILLING CODE 6450-01-M

DEPARTMENT OF ENERGY

National Environmental Policy Act Guidelines, Revocation

AGENCY: Department of Energy.

ACTION: Notice of Revocation.

SUMMARY: The Department of Energy (DOE) revokes its National Environmental Policy Act (NEPA) Guidelines, as amended, as a technical, conforming change to take effect May 26, 1992 when new regulations codifying a modified version of the NEPA Guidelines take effect. The new regulations are published today in the "Rules" section of the Federal Register.

DATES: The revocation of the DOE NEPA Guidelines shall be effective May 26, 1992.

FOR FURTHER INFORMATION CONTACT: Carol M. Borgstrom, Director, Office of NEPA Oversight, EH–25, U.S. Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–4600 or (800) 472–2756.

SUPPLEMENTARY INFORMATION: DOE originally published its NEPA Guidelines on March 28, 1980, at 45 FR 20694. These Guidelines implemented the procedural provisions of the NEPA as required by the Council on Environmental Quality regulations, 40 CFR parts 1500–1508. The NEPA Guidelines were subsequently revised a number of times and were republished in their entirety on December 15, 1987, at 52 FR 47662. The Guidelines were further amended on March 27, 1989, at 54 FR 12474 and on September 7, 1990, at 55 FR 37174.

On November 2, 1990, DOE proposed to codify a modified version of the Guidelines as regulations, 55 FR 46444. A final rule based on that proposal is published today in the "Rules" section of this Federal Register to take effect [insert 30 days from publication]. On November 15, 1990 (55 FR 47792), DOE proposed to revoke the existing Guidelines in order to terminate their prospective legal effect as of the date that the new regulations take effect. Public comments on the proposed rulemaking and the proposed revocation of the Guidelines were invited through December 17, 1990, and a public hearing was held on December 5, 1990. No comments were received on the proposed revocation of the Guidelines.

Issued in Washington, DC, April 16, 1992.

Paul L. Ziemer,

Assistant Secretary, Environment, Safety and Health.

The DOE NEPA Guidelines, as amended, 52 FR 47662 (December 15, 1987), 54 FR 12474 (March 27, 1989), and 55 FR 37174 (September 7, 1990), are hereby revoked, effective May 26, 1992.

[FR Doc. 92–9246 Filed 4–23–92; 8:45 am]

BILLING CODE 6450–01–M

FREQUENTLY ASKED QUESTIONS
ON THE DEPARTMENT OF ENERGY'S (DOE'S)
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REGULATIONS

1. What is considered a NEPA Document?

   Answer: DOE defines a NEPA document to include a notice of intent, environmental impact statement (EIS), record of decision, environmental assessment (EA), finding of no significant impact, or any other document prepared pursuant to a requirement of NEPA or the Council on Environmental Quality Regulations [Section 1021.104(b)].[1] The purpose of this broad definition is to ensure that environmental information relative to decisionmaking is distributed and made available to the public [Section 1021.301(a)]. Note that the DOE definition of a "NEPA document" is different from the Council on Environmental Quality's definition of an "environmental document;" i.e., an EA, EIS, finding of no significant impact, and notice of intent (40 CFR 1508.10). Note also that neither the DOE definition of a NEPA document nor the Council on Environmental Quality definition of environmental document includes categorical exclusion determinations.

2. Does the EIS definition include a Supplemental EIS?

   Answer: Yes; the term EIS includes draft, final and supplemental EISs. Note that the Council on Environmental Quality Regulations [40 CFR 1502.9(c)(4)] specify that a Supplemental EIS shall be prepared, circulated, and filed "... in the same fashion (exclusive of scoping) as a draft and final statement...." See Sections 1021.104(b) and 1021.314. (Also see Question 9b, below.)

3. NEPA Review

   a. Is NEPA review required for DOE Orders?

      Answer: Yes; Section 1021.200(a) includes DOE "orders" among those "DOE proposals" for which DOE must "provide for adequate and timely NEPA review" in accordance with Section 1501.2 of the Council on Environmental Quality Regulations. However, many of the activities covered by DOE orders can be categorically excluded, under A13 especially.

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[1] In this paper, DOE's NEPA Regulations, 10 CFR Part 1021, will be cited directly to the Section. The Council on Environmental Quality's NEPA Regulations will be cited fully, e.g., 40 CFR 1506 1(a).

b. When should you begin a NEPA review for a research program?

Answer: As soon as environmental effects can be meaningfully evaluated and before reaching the level of investment or commitment likely to determine subsequent development or restrict later alternatives [Section 1021.212(b)]. This reflects the intent of Section 1502.4(c)(3) of the Council on Environmental Quality Regulations.

4. Permit Applicants

a. May the applicant for a DOE permit prepare an EA or EIS if one is required?

Answer: At DOE's option, an applicant may prepare an EA [Section 1021.215(d)]. However, according to 40 CFR 1506.5(b), DOE is required to make its own evaluation of the environmental issues and take responsibility for the scope and content of the EA. Note that DOE must independently review, evaluate and approve the EA prior to its release. See 40 CFR 1506.5(b) and Section 1021.215(d).

According to Section 1021.215(d), if an EIS is prepared, the EIS shall be prepared by DOE or by a contractor that is selected by DOE. Note that the contractor preparing the EIS must execute a disclosure statement certifying that they have no financial or other interest in the outcome of the project. However, information in support of the preparation of an EIS may be supplied by an applicant provided that DOE independently evaluates and verifies the accuracy of the information received in accordance with 40 CFR 1506.5(a).

b. If a contractor prepares the EIS for a permit applicant, may the applicant fund the preparation of the EIS?

Answer: Yes; according to Section 1021.215(d), if an EIS is prepared by DOE (or by a contractor that is selected by DOE) the EIS may be funded by the applicant. Any contractor selected by DOE to prepare the EIS is required by 40 CFR 1506.5(c) to execute a disclosure statement specifying that they have no financial or other interest in the outcome of the project.

5. Competitive Procurement

a. What environmental documentation is to be prepared before selection under a competitive procurement?

Answer: Provided the action is not categorically excluded from preparation of an EA or EIS under Subpart D, Section 1021.216 specifies that, when relevant in DOE's judgment, DOE shall require the offerors to submit environmental data and analyses as a discrete part of their proposals. Prior to making a selection

among those offerors in the "competitive range," DOE shall prepare and consider an environmental critique [Section 1021.216(d)] that evaluates the environmental data and analyses submitted by the offerors and any supplemental information developed by DOE as necessary for "a reasoned decision." The critique will focus on the pertinent environmental issues and contain the essential elements listed in Sections 1021.216(g).

b. How is the public informed of a selection under the competitive procurement process?

Answer: DOE will prepare an environmental synopsis based on the environmental critique for the purpose of documenting "... the consideration given to environmental factors and to record that the relevant environmental consequences of reasonable alternatives have been evaluated in the selection process" [Section 1021.216(h)]. After a selection has been made, the environmental synopsis is filed with the Environmental Protection Agency and made publicly available as further prescribed in Section 1021.216(h).

c. Can a contract be awarded before the NEPA process is complete?

Answer: Yes--but award shall be contingent upon compliance with and completion of the NEPA process [Section 1021.216(i)].

6. Notification and Coordination

a. Is state notification and coordination required for DOE actions not involving a "facility?"

Answer: DOE shall notify the host state and host tribe of a DOE determination to prepare an EA or EIS for a DOE proposal and shall provide them an opportunity to review and comment on any DOE EA prior to DOE's approval of the EA. While the definitions of a host state and host tribe refer to a DOE action at an existing facility or construction or operation of a new facility, DOE may also propose to undertake actions for which no facility is involved, e.g., regulatory actions or establishment of efficiency standards. Although DOE's regulations do not require notification and coordination (by definition) for states where no facility is involved, DOE may notify any other state or American Indian tribe that, in DOE's judgment, may be affected by the proposal [Section 1021.301(c)]. Accordingly, affected States and tribes may be included in notification and coordination, whether or not a facility is involved.

b. What are the new procedures for coordination with Tribes?

Answer: Tribes are given the same opportunities afforded to States; e.g., notification of EA determinations, pre-approval review of EAs. A listing of the over 500 federally recognized Tribes is available from the Office of NEPA Oversight. Specific

NEPA contacts for each tribe have not been identified. See Sections 1021.301(c) and (d).

7. Must every EIS be reviewed at least every five years to determine if a supplement is required?

   Answer: Only site-wide EISs must be evaluated at least every five years, by means of a "Supplement Analysis," to determine whether a new site-wide EIS, or a supplement, or neither is required [Section 1021.330(d)].

   However, according to the Council on Environmental Quality's "Forty Questions," as a rule of thumb, if the proposal has not yet been implemented, or if the EIS concerns an ongoing program, any EIS that is more than five years old should be reexamined to determine if a supplement is required.

8. Site-wide NEPA documents

   a. What is the purpose of a site-wide EIS?

      Answer: A site-wide EIS identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site. It has the potential of serving a number of purposes including an evaluation of the collective potential environmental effects and the mitigation of environmental problems and improvement and coordination of agency plans, functions, programs and resource utilization. A site-wide EIS also provides an overall NEPA baseline for a site and is particularly useful for tiering or as a reference when preparing project-specific NEPA documents for new proposals. See Sections 1021.104 and 1021.330. (See also the role of site-wide NEPA reviews in implementing DOE's NEPA/Comprehensive Environmental Response & Compensation Liability Act (CERCLA) integration policy; reference "Guidance On Implementation of the DOE NEPA/CERCLA Integration Policy," by memorandum from Paul L. Ziemer, Ph.D., EH-1, November 15, 1991.)

   b. Are site-wide EISs required for all DOE sites?

      Answer: No; as a matter of policy when not otherwise required, DOE shall prepare site-wide EISs for certain large, multi-facility DOE sites. DOE may prepare EISs or EAs for other sites to assess all or selected functions of those sites [Section 1021.330(c)].

   c. Do site-wide EISs require records of decision?

      Answer: Yes; a record of decision is required if DOE decides to take action on any proposal covered by an EIS, including a site-wide EIS.

d. Can there be a site-wide EA? Would a site-wide EA require a finding of no significant impact?

Answer: A site-wide EA may be prepared when it is unclear whether a site-wide EIS is warranted. If the impacts are found to be insignificant, a finding of no significant impact should be issued. Alternately, a determination could be made to prepare a site-wide EIS if there are potentially significant impacts.

A NEPA document for any action may also be prepared at any time to "further the purposes of NEPA" [Section 1021.300(b)]. This may be done for example, to analyze the consequences of ongoing activities, support DOE planning, assess the need for mitigation, fully disclose the potential environmental consequences of an action, or for any other reason. An EA prepared in order to "further the purposes of NEPA" would not necessarily require a finding of no significant impact.

9. Scoping

a. What obligation does DOE have with regard to public notification when there is a lengthy delay between when a decision is made to prepare an EIS and its actual preparation?

Answer: DOE is required to publish a notice of intent in the *Federal Register* in accordance with 40 CFR 1501.7 that contains the elements specified in 40 CFR 1508.22 as soon as practicable after a decision is made to prepare an EIS. However, Section 1021.311(a) provides that when there is "... a lengthy period of time between its decision to prepare an EIS and the time of actual preparation, DOE may defer publication of the notice of intent until a reasonable time before preparing the EIS, provided that DOE allows a reasonable opportunity for interested parties to participate in the EIS process." Also under such circumstances, DOE may publish an advance notice of intent in the *Federal Register* to provide an early opportunity to inform interested parties of the pending EIS or to solicit early public comments [Section 1021.311(b)]. An advance notice of intent does not serve as a substitute for the notice of intent that would be published later.

b. Is a public scoping process required for a DOE supplemental EIS?

Answer: A public scoping process is not required for a supplemental EIS. As explained in the Preamble to the final NEPA regulations, DOE believes that there is no need to repeat the public scoping process if the scope of the proposed action has not changed since the original EIS was prepared. Such an approach is consistent with 40 CFR 1502.9, which does not require public scoping for a supplemental EIS. However, as stated in the Preamble, when the scope of the proposed action has changed, or the importance, size, or complexity of the proposal warrant, DOE may elect to have a scoping process. This is the spirit in which

Section 1021.311(9) should be interpreted, which states that "A public scoping process is optional for DOE supplemental EISs [40 CFR 1502.9(c)(4)]."

10. Are formal revisions to an EIS implementation plan required to be made available to the public?

Answer: The EIS implementation plan and any formal revisions to the EIS implementation plan are to be made available to the public. The purpose of the implementation plan is to provide guidance for the preparation of an EIS and to record the results of the scoping process. Minor adjustments in the EIS preparation (e.g., schedule or document length) would not typically trigger the need to formally revise the implementation plan. Normally, only significant changes in the scope or content of an EIS (e.g., the addition or deletion of an alternative) would warrant a formal revision [Section 1021.312(d)].

11. Is a record of decision required for a supplemental EIS?

Answer: Yes; with the exception of scoping, which is optional (see question 9b.), a supplement to a draft or final EIS is prepared, circulated and filed in the same manner as any other draft and final EIS. See Section 1021.314 (d). This includes the preparation of a record of decision in accordance with Section 1021.315.

12. Mitigation action plans

a. If an EIS has been prepared for a proposed action, does a mitigation action plan have to be approved before a record of decision is issued? Does a mitigation action plan have to be completed before any action is taken?

Answer: A mitigation action plan does not have to be approved before the record of decision is issued, but it may often be desirable to do so. Rather, the mitigation action plan is required prior to taking any action that is the subject of a mitigation commitment. See Section 1021.331(a).

b. If an EA has been prepared for a proposed action, does a mitigation action plan have to be approved before a mitigated finding of no significant impact is issued?

Answer: Yes; if there are mitigations that are essential to render the impacts of the proposed action not significant (thus avoiding the need to prepare an EIS), a mitigation action plan addressing those mitigations is required to be prepared before the finding of no significant impact is issued and the finding of no significant impact is required to reference the mitigation action plan [Section 1021.331(b)].

13. When can DOE take action on a proposal covered by an EIS?

Answer: Section 1021.315(a) provides that no decision may be made on a proposal covered by an EIS during a 30-day "waiting period" following completion of the final EIS, except as provided at 40 CFR 1506.1 and 1506.10(b) and Section 1021.211. Such a 30-day period starts when the Environmental Protection Agency's Notice of Availability for the final EIS is published in the *Federal Register*. No action can be taken until the record of decision has been made public through the *Federal Register* or other means (Section 1021.315 and 40 CFR 1506.6), such as a press release.

14. May DOE revise records of decision and findings of no significant impact?

Answer: A record of decision may be revised at any time, provided that the revised decision is adequately supported by an existing EIS [Section 1021.315(d)]. A "revised record of decision" is subject to the same provisions as a record of decision. See Sections 1021.315(b) and (c).

A finding of no significant impact may also be revised at any time, provided that the revision is supported by an existing EA [Section 1021.322(f)].

15. Is a "no action" alternative required for DOE EAs?

Answer: Yes; EAs prepared for DOE actions are required to assess the no action alternative, even when the proposed action is specifically required by legislation or a court order [Section 1021.321(c)]. Note that the Council on Environmental Quality Regulations [40 CFR 1508.9(b)] require a brief discussion of alternatives in an EA, but do not specifically call out the no action alternative.

16. Variances

a. Is the Secretary's approval necessary for DOE to take an action without observing all provisions in the DOE NEPA Regulations or the Council on Environmental Quality Regulations in emergency situations that demand immediate action?

Answer: No; however, DOE must consult with the Council on Environmental Quality regarding alternative arrangements and publish a notice in the *Federal Register* describing the adverse impacts from the actions taken, further mitigation, and any NEPA documents required. See Section 1021.343(a).

b. Is the Secretary's approval necessary for DOE to reduce time periods established in the Council on Environmental Quality Regulations?

Answer: No; however, DOE must consult with the Environmental Protection Agency and show compelling reasons of national policy. The Environmental Protection Agency would decide whether to reduce the time period and notify the Council on Environmental Quality [see 40 CFR 1506.10(d)]. DOE may also reduce time periods established in DOE's regulations that are not required by the Council on Environmental Quality by publishing an explanatory notice in the *Federal Register* [See Section 1021.343(b)].

c. Who has the authority to approve other variances from the NEPA Regulations?

Answer: Under the DOE NEPA regulations, the Secretary must provide advanced written approval of a variance, which must be soundly based on the interests of national security or the public health, safety, or welfare, but the Secretary may not waive any requirement of the Council on Environmental Quality Regulations (except as provided for in those regulations). In addition, DOE shall publish a notice in the *Federal Register* specifying the variance granted and the reasons. See Section 1021.343(c). The Secretary, however, has delegated the authority to grant variances from provisions of DOE's NEPA regulations to the Assistant Secretary for Environment, Safety and Health. (See the Secretarial Policy Statement on NEPA issued June 13, 1994.)

17. Which documents/decisions are required to be published in the *Federal Register*?

Answer: Notice of intent [Section 1021.311(a)], advance notice of intent [1021.311(b)], record of decision [1021.315(c)], emergency actions, reduction in time periods [1021.343(b)], and other variances [1021.343(c)]. However, as provided for by Section 1507.3(c) of the Council on Environmental Quality Regulations, "[a]gency procedures may include specific criteria for providing limited exceptions to the provisions of these regulations for classified proposals" that are specifically authorized by Executive Order or statute to be kept secret in the interest of national defense or foreign policy.

18. Is it necessary to execute a categorical exclusion for routine maintenance and other continuing operations actions for projects/facilities for which there is an existing NEPA document?

Answer: Operations impacts, including maintenance, should be specifically addressed in NEPA documents, especially in site-wide documents. Any completed valid NEPA review does not have to be repeated [see Section 1021.400(b)].

19. How is the Department's NEPA/CERCLA integration policy affected by the new regulations?

Answer: The DOE NEPA regulations do not affect the NEPA/CERCLA integration policy. The regulations are silent on the integration policy and neutral with respect to the applicability of NEPA to CERCLA actions. [Note: Under the Secretarial Policy Statement on NEPA (issued June 13, 1994), DOE has changed its approach to NEPA review for CERCLA actions. DOE now will rely, as a general rule, on the CERCLA process for review of actions to be taken under CERCLA (except when DOE chooses, after consultation with stakeholders and as a matter of policy, to integrate the NEPA and CERCLA processes for specific proposed actions).]

20. What kind of NEPA review is required to shut down a facility? Can a facility be shut down and subsequently restarted based on a categorical exclusion?

Answer: Under normal circumstances, shutdown and startup of a facility (e.g., workload reductions) is considered part of a continuing operation that does not trigger NEPA review. However, the activities that take place during the shutdown, e.g., facility modification, safety improvements or repair, may require NEPA review if appropriate documentation does not already exist. See 10 CFR Part 1021, Subpart D, Appendices B2.5 and B1.14.

21. Can DOE's lease of its underutilized industrial facilities be categorically excluded from further NEPA review when the private use would also be classified as "industrial" [under 10 CFR Part 1021, Subpart D, Appendix A7 ("Transfer, lease, disposition, or acquisition of interest in property, if property use is to remain unchanged")]?

Answer: This categorical exclusion is only to be applied in cases where the proposed action is limited to a change in ownership or stewardship. It is not appropriate to apply categorical exclusion A7 if the proposed use of a DOE site or facility after lease or transfer is not the same as before the lease or transfer. The phrase "use is to remain unchanged" is to be interpreted narrowly (that is, in regard to specific uses), not broadly (that is, not in regard to categories of uses, such as "industrial use"). Otherwise, there would be uncertainty that the transfer/lease would satisfy the basic criterion for establishing a categorical

exclusion -- namely, that the environmental impacts of the action are insignificant and do not need to be further evaluated.

Transfers, leases, disposition, or acquisitions of property that are part of a broader proposed action should be reviewed for NEPA purposes in the context of the broader proposed action. There are other categorical exclusions that may be appropriate for some DOE proposed leases (for example, Appendix B categorical exclusions B3.6 and B3.10 concern research activities).

22. If a proposed DOE action requires preparation of an EA or EIS, is a categorical exclusion determination required for conceptual (Title I) design for the proposal?

Answer: No. Council on Environmental Quality regulations (40 CFR 1508.23) state that a proposal exists when an agency "has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated" (emphasis added). A proposal generally does not exist under this definition until conceptual design has been completed. If a proposal does not exist until completion of conceptual design for a project, NEPA review requirements are not triggered.

Proceeding with conceptual design also is not prohibited by 40 CFR 1506.1, which sets forth limitations on actions during the NEPA process, nor by 40 CFR 1502.2(f), which prohibits prejudicial commitment of resources. That is to say, funds can be allocated for conceptual design, if necessary, but not for other purposes that would violate one or both of these prohibitions.

Nevertheless, DOE has listed conceptual design as a categorical exclusion (10 CFR Part 1021, Subpart D, Appendix A9) to clarify that neither an EA nor an EIS is needed and to avoid any potential misunderstanding associated with the absence of such a listing.

23. What are DOE's NEPA responsibilities with respect to work to be performed by a DOE contractor for another Federal agency at the other Federal agency's facility?

Answer: The extent of DOE's NEPA responsibilities in a situation where DOE contractors perform work for another Federal agency depends on the degree of DOE involvement in the project. A DOE "action" is defined in the DOE NEPA Regulations (Section 1021.104) as "[a] project, program, plan, or policy, as discussed at 40 CFR 1508.18, that is subject to DOE's control and responsibility."

DOE normally reviews and approves contractor participation in "work for others" proposals before allowing the contractor to start the work. This review and approval process gives DOE the power to control contractor participation in "work for others"

even when no DOE funds or facilities would be used in performing the work. This degree of control and responsibility is sufficient to require that DOE conduct a NEPA review for these "work for others" proposals.

The scope of the DOE NEPA review is dependent on the degree of DOE control and responsibility for the entire project. If DOE exercises control and responsibility for the entire project (e.g., provides substantial funding or facilities), DOE would be obligated to conduct a NEPA review for the entire project. On the other hand, if DOE (or its contractor) is involved in only a discrete portion of the entire project then, depending on the specific circumstances, DOE could limit its NEPA review to that portion of the project without being obligated to conduct a NEPA review for the entire project.

If the work is being done for another Federal agency, both agencies must satisfy NEPA requirements. Once DOE is obligated to satisfy NEPA requirements for a project, it must do so under its own NEPA procedures. If the other Federal agency prepares an EA or an EIS, DOE could satisfy its NEPA obligations by adopting the EA or participating in the EIS, if those documents satisfy DOE NEPA requirements. Otherwise, DOE would have to prepare its own document (or modify the other agency's document) to meet DOE's own NEPA requirements. Categorical exclusions are based on an agency's experience that the type of action proposed would not significantly affect the quality of the human environment. Thus, it would not be appropriate for DOE to adopt another agency's categorical exclusions.

24. What should I do if I get inconsistent or contradictory guidance from different people within the Office of NEPA Oversight?

Answer: Attempt to clarify inconsistencies with staff. If unable to do so, immediately bring the apparent discrepancy to the attention of the appropriate Division Director, who will conduct any further consultations that may be necessary to provide a clear and correct response.

National
Environmental
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Act

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SECRETARIAL POLICY
on the NATIONAL ENVIRONMENTAL POLICY ACT

U.S. Department of Energy

June 1994



The Secretary of Energy
Washington. DC 20585

June 13, 1994

MEMORANDUM FOR SECRETARIAL OFFICERS AND HEADS OF FIELD ELEMENTS

FROM: HAZEL R. O'LEARY

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT POLICY STATEMENT

Full compliance with the letter and spirit of the National Environmental Policy Act (NEPA), our national charter for protection of the environment, is an essential priority for the Department of Energy, consistent with our core values. We are fully committed to pursuing excellence in all areas of environment, safety, and health, including NEPA activities. The Department's openness initiative underscores the need for public access to information and involvement in our actions. The NEPA process is a valuable planning tool and an opportunity to improve the quality of the Department's decisions and build public trust.

An internal process improvement team and further analysis by the offices of the Assistant Secretary for Environment, Safety and Health and the General Counsel have shown that we must improve our NEPA process. We must approach NEPA as a team--ensuring quality and improving efficiency and thereby making NEPA work better and cost less. Accordingly, with the attached Policy Statement, I am directing a number of actions to streamline the NEPA process, minimize the cost and time for document preparation and review, emphasize teamwork, and make the process more useful to decision makers and the public. Importantly, the Policy Statement requires continuing evaluation of the outcomes of these reforms and allows for additional changes where necessary. I look forward to full participation within the Department, including our contractors, in implementing these important new policies.

ATTACHMENT

SECRETARIAL POLICY STATEMENT

ON THE NATIONAL ENVIRONMENTAL POLICY ACT

The NEPA process is a valuable planning tool and provides an opportunity to improve the Department of Energy decisions and build public trust. Reviews of the Department's NEPA program have shown that the Department must change the way it conducts its business to avoid unnecessary delays and reap the full benefits of the NEPA process. The Department must conduct the process as a team effort to make NEPA work better and cost less. The following new policies will streamline the NEPA process, minimize the cost and time for document preparation and review, emphasize teamwork, and make the process more useful to decision makers and the public. Except where specifically indicated otherwise, these policies are immediately effective.

I. Delegations of Authority

A. To facilitate early integration of the NEPA process with project planning and decision making, reduce document review times, and foster ownership of NEPA documents, the Heads of Field Organizations listed in Attachment 1 will receive full authority for environmental assessments, findings of no significant impact, and associated floodplain and wetland action documentation requirements relating to their proposed actions. Under certain conditions, Heads of Field Organizations may redelegate these authorities to Heads of subsidiary Field Organizations. For actions not within the purview of a Field Organization, the Secretarial Officers listed in Attachment 1 will receive full authority for the preparation of such documents relating to their actions.

1. The Assistant Secretary for Environment, Safety and Health will grant this delegation upon receipt of a valid request. Heads of Field Organizations should redelegate such authorities to Heads of subsidiary Field Organizations upon receipt of a request. Requests for delegation should confirm that: (i) a NEPA Compliance Officer has been designated, (ii) internal scoping procedures and public participation and quality assurance plans have been prepared, and (iii), in the case of Field Organizations, adequate Department of Energy legal resources are available.

2. Secretarial Officers and Heads of Field Organizations should submit requests for delegation as soon as practicable; the Assistant Secretary for Environment, Safety and Health will delegate authorities within two weeks of receiving a valid request. Each Secretarial Officer and Head of a Field Organization listed in Attachment 1 is required to submit a valid request no later than December 15, 1994, so that the delegation process can be completed by December 31, 1994.

B. To reduce document review times and foster ownership of NEPA documents, Secretarial Officers will approve implementation plans for environmental impact statements for their respective proposed actions, after soliciting comments from the Office of Environment, Safety and Health, in consultation with the Office of the General Counsel. Preparers are reminded that implementation plans are intended to be brief (normally about 20 pages) and to simply establish a road map for the environmental review to follow.

C. Each Secretarial Officer and Head of a Field Organization will submit an annual NEPA planning summary to the Assistant Secretary for Environment, Safety and Health by January 31 of each year and will make the summaries available to the public.

1. The annual NEPA planning summaries will describe briefly the status of ongoing NEPA compliance activities and any environmental assessments expected to be required in the next 12 months or environmental impact statements expected to be required in the next 24 months and, if available, the schedule for completion of each NEPA review identified (see Attachment 2).

2. Every three years starting with the first year, Field Organizations will include in the annual NEPA planning summary an evaluation of whether a site-wide environmental impact statement would facilitate future NEPA compliance efforts.

3. The Office of Environment, Safety and Health will review the summaries in consultation with the Office of General Counsel and comment as appropriate.

D. To maintain the quality of NEPA reviews, the Office of Environment, Safety and Health will provide additional guidance and training to Secretarial Offices and Field Organizations on matters such as the following:

1. Preparation of adequate statements of work to effectively direct the efforts of NEPA contractors;

2. Improving public participation in the NEPA process (to be provided with the assistance of the Public Affairs Office); and

3. Application of the Office of Environment, Safety and Health's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements."

E. The Assistant Secretary for Environment, Safety and Health is authorized to direct a Secretarial Officer or Head of a Field Organization to prepare an environmental assessment or environmental impact statement.

F. Where multiple Field Organizations or Program Offices would be involved in a proposed action for which an environmental assessment is to be prepared, all involved Offices should consult regarding the assignment of

responsibility for preparing and approving the environmental assessment. The Assistant Secretary for Environment, Safety and Health will resolve NEPA issues where several Offices are unable to reach agreement.

II. Process Changes

A. The NEPA process should be a team effort. To establish team leadership and ownership of the NEPA process and thereby improve its management, the cognizant Secretarial Officer or Head of a Field Organization will designate a Department of Energy member of the team working on any project requiring NEPA review as the NEPA Document Manager, to manage the document preparation process and keep it on schedule. Among the responsibilities of the NEPA Document Manager are to:

1. Consider innovative measures to reduce NEPA process time;

2. Consider requesting variances from Department of Energy NEPA regulations (10 CFR Part 1021) as necessary to meet timing requirements or for other reasons that are permitted under section 1021.343 of the regulations; and

3. Elevate internal disputes for prompt decision.

The Project Manager or NEPA Compliance Officer may serve this function as appropriate; in any case, the NEPA Document Manager should work closely with these other individuals.

B. To expedite approval of innovative procedures, where appropriate, the Assistant Secretary for Environment, Safety and Health is delegated authority to grant variances from provisions of Department of Energy NEPA regulations, as provided in 10 CFR 1021.343.

C. The NEPA Document Manager will conduct an early internal scoping process for the environmental assessment or environmental impact statement being prepared. The scoping process should involve a team representing all necessary departmental elements. For an environmental impact statement, this internal scoping process should precede the public scoping process that begins with publication of a notice of intent.

1. The internal scoping process will include the adoption of a proposed schedule for the preparation of the NEPA document and a public participation plan tailored to the project in question.

2. For each environmental impact statement, the schedule established during the internal scoping process will, absent extraordinary circumstances, provide for completion of a final environmental impact statement within 15 months of the issuance of the Notice of Intent.

3. The NEPA Document Manager will maintain a tracking system to monitor compliance with the schedule. The annual NEPA planning summaries

will identify NEPA reviews that are behind schedule and the reasons for any delays.

D. To eliminate multiple cycles of revisions, internal reviews of draft environmental assessments and environmental impact statements will be concurrent, rather than sequential.

1. As a general matter, documents will be revised only after all reviewing offices have submitted their comments and agreement has been reached as to what changes are necessary.

2. Absent extraordinary circumstances, any subsequent reviews that may occur will be limited to addressing any new material, confirming that previous comments have been adequately addressed, and obtaining management-level concurrence.

E. To facilitate meeting the environmental objectives of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and respond to concerns of regulators, consistent with the procedures of most other Federal agencies, the Department of Energy hereafter will rely on the CERCLA process for review of actions to be taken under CERCLA and will address NEPA values and public involvement procedures as provided below.

1. NEPA reviews will be undertaken for siting, construction, and operation of treatment, storage, and disposal facilities that, in addition to supporting CERCLA actions, also serve waste management or other purposes.

2. Department of Energy CERCLA documents will incorporate NEPA values, such as analysis of cumulative, off-site, ecological, and socioeconomic impacts, to the extent practicable.

3. The Department of Energy will take steps to ensure opportunities for early public involvement in the CERCLA process and will make CERCLA documents available to the public as early as possible.

4. Notwithstanding the above, the Department of Energy may choose, after consultation with stakeholders and as a matter of policy, to integrate the NEPA and CERCLA processes for specific proposed actions.

5. For proposed corrective actions under the Resource Conservation and Recovery Act at sites that are listed on the National Priorities List under CERCLA, project managers should consult with the Environmental Management NEPA Compliance Officer, who will involve the Offices of Environment, Safety and Health and General Counsel as necessary to make determinations about how to proceed under NEPA.

III. NEPA Contract Reform

A. All future contracts for the preparation of environmental assessments and environmental impact statements will contain incentives to encourage superior performance in document quality and timeliness.

B. To improve the quality and timeliness of documents, all contractors preparing NEPA documents will be subject to performance appraisals.

1. Procurement solicitations will include an evaluation criterion for the bidder's past performance of comparable assignments. Measures will include any existing evaluations of NEPA support performance.

2. At the conclusion of the preparation of each environmental assessment and environmental impact statement, the NEPA Document Manager will evaluate the contractor's performance for timeliness, quality, cost-effectiveness, responsiveness, and application of the Office of Environment, Safety and Health's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements." The evaluations will be provided to the contractor with an opportunity for rebuttal and made available to Secretarial Offices and Field Organizations for consideration in assigning future work to a contractor.

3. Management and Operating Contractors and National Laboratories will be subject to the same NEPA evaluation process as other contractors.

C. Consistent with the contract reform effort that is underway Department-wide, a quality improvement team comprised of Headquarters and Field project, procurement, NEPA, and legal personnel will be formed to develop innovative contracting mechanisms and incentives suited particularly to NEPA document preparation contracts. The quality improvement team will develop recommendations on the most effective use of different contracting mechanisms, such as fixed price contracts, award fees, indefinite quantity/indefinite delivery contracts, and task order contracts. The team also will recommend specific methods of evaluating a potential contractor's past performance. Finally, the team should consider proposing Department of Energy organizations to participate in pilot projects to test contracting mechanisms and methods of evaluation and to monitor performance of the resulting contracts through appropriate metrics. The team will report its findings and recommendations no later than October 1, 1994.

IV. Additional Reforms for High Priority Projects

A. Department of Energy personnel rather than contractors will be used, to the maximum extent practicable, to prepare environmental assessments and environmental impact statements that have short preparation time requirements or present unusually controversial or sensitive issues.

Where resource limitations do not permit Department of Energy personnel to carry out the entire task, contractors might be used for limited analytical or drafting assignments.

B. When necessary or helpful in meeting important departmental objectives, the NEPA Document Manager may form a special team, comprised of relevant Field Organization and Secretarial Office personnel and representatives from the Offices of Environment, Safety and Health and General Counsel, to carry out the NEPA process from start to finish. This will ensure that all relevant programmatic, policy, and legal considerations are taken into account from the beginning and that the only necessary review function is obtaining senior management approval.

C. The NEPA Document Manager is encouraged to consider whether a specific project offers opportunities for innovation in the NEPA process. For example:

1. Using a toll-free number for submission of comments in order to reduce the number of public scoping meetings.

2. Providing the NEPA document on-line as an option for interested parties to provide comments.

D. The cognizant Secretarial Officer and the Assistant Secretary for Environment, Safety and Health will consult to determine whether delegation of approval authority for a specific environmental impact statement to the Secretarial Officer or the Head of a Field Organization would be appropriate to expedite the review and approval process.

V. Enhanced Public Involvement

A. NEPA Document Managers will take appropriate action to encourage and facilitate public participation throughout the NEPA process, taking into account Office of Environment, Safety and Health guidance on improving public participation.

B. Whenever possible, the Department of Energy will provide enhanced opportunities for public involvement in the environmental assessment process, which ordinarily will include at a minimum:

1. Early public notice of the Department of Energy's intent to prepare an environmental assessment (concurrent with state/tribal notification); and

2. Opportunity for interested parties, on request, to review environmental assessments (concurrent with state/tribal review) prior to Department of Energy approval.

VI. Continuing Improvement

A. One year from now a quality improvement team will be formed to measure the outcome of the NEPA initiatives put forth in this policy statement and to consider what additional reforms are necessary; this team will report its findings and recommendations within 90 days of its formation.

B. The Office of Environment, Safety and Health will solicit comments from the NEPA Document Manager, the NEPA Compliance Officer, and team members after completing each environmental impact statement and environmental assessment on lessons learned in the process and will circulate a quarterly summary to all NEPA Compliance Officers and NEPA Document Managers. The Office of Environment, Safety and Health also will revise its "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements", as appropriate, to reflect the lessons learned and will improve Department-wide NEPA policy, directives, guidance, and training accordingly.

C. The Office of Environment, Safety and Health will provide NEPA training in order to develop a more knowledgeable and experienced group of Headquarters and Field personnel capable of carrying out NEPA compliance activities.

D. The Office of Environment, Safety and Health will consider establishing a NEPA certification program to formally recognize the expertise of personnel who have achieved a specified combination of training and practical experience.

E. The Office of Environment, Safety and Health and the Office of General Counsel will monitor the progress of and advise the Secretary on the Department's NEPA compliance program. Metrics will include the cost and time required for NEPA document preparation, the influence of NEPA review on decision making, the evaluations of contractor performance, Environmental Protection Agency ratings of Department of Energy environmental impact statements, public reactions, and litigation experience. Within two years, Secretarial Offices and Field Organizations, with assistance from the Offices of Environment, Safety and Health and General Counsel, will reduce the median process time for environmental impact statements (from notice of intent to final environmental impact statement) to 15 months with no decline in quality. Meeting this objective will, of course, require adjustments to the schedules for environmental impact statements now in preparation.

F. In carrying out and improving their NEPA compliance process, Heads of Departmental Elements should make effective use of NEPA Compliance Officers for advice, assistance, training, and coordination.

* * * * * *

This policy statement establishes internal management procedures and, as such, must be followed by Department of Energy personnel. It is not intended to create rights or obligations or any cause of action on the part of any other person.

ATTACHMENT 1

SECRETARIAL OFFICERS *

Assistant Secretaries:
- Defense Programs
- Energy Efficiency and Renewable Energy
- Environmental Management
- Fossil Energy
- Field Management (Associate Deputy Secretary)

Directors:
- Civilian Radioactive Waste Management
- Energy Research
- Laboratory Management
- Nonproliferation and National Security
- Nuclear Energy

Administrators:
- Bonneville Power Administration
- Western Power Administration
- Alaska Power Administration
- Southeastern Power Administration
- Southwestern Power Administration

HEADS OF FIELD ORGANIZATIONS *

Operations Office Managers:
- Albuquerque, Chicago, Idaho, Nevada, Oakland, Oak Ridge, Richland, and Savannah River Operations Offices

Managers:
- Golden Field, Ohio Field, and Rocky Flats Offices

Directors:
- Morgantown Energy Technology Center
- Pittsburgh Energy Technology Center
- Bartlesville Project Office
- Metairie Site Office
- Naval Petroleum and Oil Shale Reserves (in Colorado, Utah, and Wyoming)
- Naval Petroleum Reserves in California
- Yucca Mountain Project Office

Project Manager of Strategic Petroleum Reserve Project Office

* For purposes of applying this policy: Secretarial Officers are heads of departmental elements that report to the Office of the Secretary. Heads of Field Organizations are heads of field departmental elements that report to a Secretarial Officer (or, in the case of Bartlesville Project Office, Metairie Site Office, Naval Petroleum and Oil Shale Reserves, Naval Petroleum Reserves, and the Strategic Petroleum Reserve Project Office, to a Deputy Assistant Secretary). The above list excludes Secretarial Officers and Heads of Field Organizations that generally do not sponsor proposed actions that are subject to NEPA review.

ATTACHMENT 2

ILLUSTRATION OF CONTENT OF ANNUAL NEPA PLANNING SUMMARY FOR
AN ENVIRONMENTAL IMPACT STATEMENT OR ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL IMPACT STATEMENTS:

Appleton Windplant and Wind Farms, Appleton County, Washington

Description: The proposed action would include placement and operation of an estimated 420 wind turbines, collection lines, transmission lines, access roads, turbines and transformer pads, and various other associated facilities. These wind energy projects are proposed for development in Stayman County (Central Washington).

Schedule:
NOI: April 1994
Public Scoping Meetings: May 1994
Implementation Plan: July 1994
Draft EIS: December 1994
Final EIS: June 1995
ROD: July 1995

ENVIRONMENTAL ASSESSMENTS:

Wastewater Flow Collection and Treatment System, Mississippi River Plant, Jackson, Mississippi

Description: To construct and operate a collection and treatment system for contaminated wastewaters and groundwaters at the Department of Energy-operated Mississippi River Plant. The system would consist of collection conduits, a flow splitter box, an equalization basin, sedimentation basins, sludge handling and storage facilities, and associated chemical storage and feed equipment.

Schedule: No schedule yet set. In preliminary stages of consideration.

Note: Schedule information should be provided to the extent available.

National Environmental Policy Act

NEPA

QUESTIONS AND ANSWERS on the SECRETARIAL POLICY STATEMENT on the NATIONAL ENVIRONMENTAL POLICY ACT

U.S. Department of Energy

July 1994

Questions and Answers on the Secretarial Policy Statement on the National Environmental Policy Act

I. Delegations of Authority

1. Will the Office of Environment, Safety and Health retain approval authority for any environmental assessments? (I.A) *

   Answer: No, not once the delegation process is completed no later than December 31, 1994.

2. Will approval authority for non-programmatic environmental impact statements be delegated? (I.A)

   Answer: At this time, there are no plans to delegate authority for non-programmatic environmental impact statements; case-by-case delegations for specific environmental impact statements may be considered. (See IV.D.)

3. What is the role of the Program Office when environmental assessments are being prepared and approved by Operations Offices or Field Organizations? (I.A)

   Answer: While the Secretary's Policy Statement provides environmental assessment approval authority to Heads of Field Organizations, it does not change the relationship of the Field Organization to the Program Office. Just as the Program Office may provide guidance to the Field Organizations under its jurisdiction for other aspects of project management, so too may the Program Office provide guidance on the preparation of an environmental assessment. The amount and nature of Program Office involvement is likely to vary among Program Offices, Field Organizations, and proposed actions, although it would be inconsistent with the Secretary's Policy to routinely require Program Office "clearance" for environmental assessments.

4. What are the "certain conditions" under which Heads of Field Organizations may redelegate environmental assessment approval and related authorities to Heads of subsidiary Field Organizations? (I.A)

*Letters in parentheses refer to sections of the Secretary's Policy Statement.

Answer: The conditions are the same as those required for delegation from the Office of Environment, Safety and Health to Heads of Field Organizations. Delegation to subsidiary Field Organizations can occur if: (i) a NEPA Compliance Officer has been designated at the subsidiary Field Organization; (ii) internal scoping procedures and public participation and quality assurance plans have been prepared at the subsidiary Field Organization; and (iii) adequate Department of Energy legal resources are available to the subsidiary Field Organization.

5. Does delegation of environmental assessment approval authority include the authority to determine whether an environmental assessment or environmental impact statement is required ? (I.A)

Answer: Delegation of environmental assessment approval authority to Heads of Field Organizations includes the authority to make the initial determination that an environmental assessment is required. The Head of a Field Organization with authority to approve an environmental assessment and to issue a finding of no significant impact must likewise consider on the basis of the environmental assessment whether the impacts may be significant and that an environmental impact statement is required before a proposed action can go forward. This conclusion, however, is not the same as a determination to proceed with the environmental impact statement process (i.e., committing resources to the preparation of the document). The authority to decide to prepare an environmental impact statement remains with the cognizant Secretarial Officer(s). Issuance of a Notice of Intent remains the responsibility of the Assistant Secretary for Environment, Safety and Health.

Except as noted above, the Policy Statement does not change the status quo under DOE Order 5440.1E with respect to environmental impact statement determinations, whereby Secretarial Officers may make determinations for categories of actions listed in 10 CFR Part 1021, Subpart D, Appendix D and the Assistant Secretary for Environment, Safety and Health makes non-Subpart D determinations. Consistent with the Order, many Secretarial Officers, but not all, have delegated their Subpart D, Appendix D determination authority to Field Officers. Authority for making environmental impact statement determinations will be reconsidered in the course of revising the DOE NEPA Order.

6. Does delegation of environmental assessment approval authority include categorical exclusion approval authority where that authority has not been previously delegated? (I.A)

Answer: Yes. Although the Policy Statement does not address categorical exclusions, it is logical that categorical exclusion authority would reside at the level of environmental assessment authority.

7. May Program Offices redelegate approval authority to their subordinates? (I.A)

   Answer: No. The purpose of delegating the Office of Environment, Safety and Health's approval authority is to place that authority in the hands of top-level management in the program or geographic areas in which actions are planned and implemented. Thus, Heads of Field Organizations may redelegate approval authority to Heads of subsidiary Field Organizations when delegation criteria are met, but such a top-level manager may not redelegate approval authority to a subordinate official within his/her Office.

8. How will the Office of Environment, Safety and Health judge whether a request for delegation is "valid"? (I.A.1)

   Answer: A request will be deemed "valid" if it contains an affirmative statement by the Head of a Field Organization or Secretarial Officer that the criteria for delegation specified in Section I.A.1 are met.

9. What elements will be required in public participation and quality assurance plans? Is there a preferred format or outline? (I.A.1)

   Answer: There are no specific requirements regarding the contents of these plans. Attachment C of the Report of the Environmental Assessment Process Improvement Team of January 1994 (the Bean Report) contains an example of a quality assurance plan.

10. What is meant by "adequate DOE legal resources," and must a DOE attorney concur in every NEPA document? (I.A.1)

    Answer: A DOE (not a contractor) attorney must be available to review and concur in the legal adequacy of every NEPA document, whether prepared and approved at headquarters or in the field. The attorney need not be located onsite; attorneys at an operations office, for example, may fulfill this responsibility for an area office with insufficient onsite legal resources. For documents prepared at headquarters, the Assistant General Counsel for Environment will provide legal support. [Note: NEPA document is defined in DOE Order 5440.1E as "A DOE notice of intent to prepare an EIS, EIS, ROD, EA, FONSI, or any other document prepared pursuant to a requirement of NEPA or the Council on Environmental Quality Regulations."]

11. Will the Office of Environment, Safety and Health be aware of all environmental assessments under preparation throughout DOE at any given time? (I.C)

    Answer: Yes. The Office of Environment, Safety and Health will ask Offices to whom approval authority has been delegated to provide to the Office of NEPA Oversight a copy of each notification of the Department's intent to prepare an environmental assessment, concurrent with public, state, and tribal notification.

12. What will happen if the Office of Environment, Safety and Health or the Office of the General Counsel disagrees with a decision by a Secretarial Officer to approve an Implementation Plan? (I.B)

Answer: Although concurrence from these Offices is not required under the Policy Statement, these Offices will notify the Secretarial Officer of any substantial disagreement with a Secretarial Officer's Implementation Plan. It is important to resolve such disagreements early because the Assistant Secretary for Environment, Safety and Health has authority to approve the environmental impact statement, with the Office of General Counsel's concurrence regarding legal adequacy.

13. When is the first annual NEPA planning summary due? Will the Office of Environment, Safety and Health provide a specific format for the annual NEPA planning summary? May this summary be submitted electronically? (I.C.1)

Answer: The first annual NEPA planning summary is due January 31, 1995. A suggested format is included in Attachment 2 to the Policy Statement. There are no special requirements for submission of the summary; it may be provided to the Office of Environment, Safety and Health electronically. However, Secretarial Offices and Field Organizations must ensure that copies are available to the public.

14. Does the annual NEPA planning summary replace the monthly report to the Secretary required by Section 6.d(5) of DOE Order 5440.1E? (I.C.1)

Answer: No. The purpose of the monthly report was to advise the Secretary of upcoming environmental assessments and environmental impact statements and to enable the Office of Environment, Safety and Health and the Secretary to determine whether an environmental assessment or environmental impact statement warranted the Secretary's approval. The Policy Statement makes clear that the Secretary wishes environmental assessments to be approved by Heads of Field Organizations and Secretarial Officers. Although the implementing delegations have not yet been accomplished, the Office of Environment, Safety and Health does not expect to recommend that the Secretary approve any environmental assessments in the interim, consistent with the spirit of the new Policy. Until further notice, therefore, the monthly report only will include environmental impact statements that are to be forwarded to the Office of the Assistant Secretary for Environment, Safety and Health for approval in the next 90 days. The need for the monthly report will be reconsidered in the course of revising the NEPA Order.

15. How does the three-year evaluation of whether a site-wide environmental impact statement would facilitate future NEPA compliance efforts correspond to the regulatory requirement to review existing site-wide NEPA documents at least every five years? (I.C.2)

Answer: DOE NEPA regulations require review of sitewide NEPA documents at least every five years. The Policy Statement is more conservative

than the regulations in that it specifies a review of the potential value of preparing a site-wide environmental impact statement every three years. The purpose of this requirement in the Policy Statement is to ensure a careful, conscious consideration of the usefulness of a site-wide NEPA review (whether or not one already exists) every three years. The Policy Statement does not require a formal supplement analysis.

16. How does the three-year review of the potential value of a site-wide environmental impact statement correspond to the Five-Year Plan required by DOE Order 4320.1B, "Site Development Planning"? (I.C.2)

    Answer: The Five-Year Plan, which is part of a site's Technical Site Information, is a useful tool that should be considered when undertaking the three-year review. The Five-Year Plan, which is updated yearly, provides a five-year outlook of the steps necessary to meet the site's missions. Review of the Five-Year Plan, as well as a site's Site Development Plan, may assist the Field Organization with evaluating the benefit of a site-wide environmental impact statement by identifying mission changes and/or new proposals to accomplish the site mission.

17. Will the Office of Environment, Safety and Health provide training and guidance for determining the appropriate level of NEPA documentation? (I.D)

    Answer: The Office of Environment, Safety and Health has provided, and will continue to provide, training and guidance concerning the appropriate level of NEPA documentation and many other aspects of NEPA review. The Office of Environment, Safety and Health also has provided resource materials to NEPA Compliance Officers to enable them to present such training to the organizations they serve. Additionally, the Office of Environment, Safety and Health encourages the judicious use of commercially available training and guidance, as necessary. Anyone who may be involved in the NEPA process or the preparation of a NEPA document, including upper- and mid-level Departmental personnel with broad management responsibilities, should have NEPA training appropriate to the functions they serve, whether provided by the Office of Environment, Safety and Health or otherwise.

18. Will the Office of Environment, Safety and Health provide guidance on how to effectively reduce the size of NEPA documents? Will there be guidance on what could be (or could have been) left out of documents? (I.D)

    Answer: Yes. The Office of Environment, Safety and Health's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" (the "Recommendations" paper) emphasizes a sliding scale approach to this issue and provides instruction on how to focus analysis on the most significant environmental issues. For specific documents, the Office of Environment, Safety and Health and other participants will provide such

guidance as part of the internal scoping process. Additionally, any lessons learned regarding this issue will be shared through the quarterly summaries to be provided to all NEPA Compliance Officers and NEPA Document Managers.

19. Will the Office of Environment, Safety and Health take over the training responsibilities of NEPA Compliance Officers? (I.D)

Answer: No. Although the Office of Environment, Safety and Health will provide additional guidance and training to Secretarial Offices and Field Organizations, it will not supplant a NEPA Compliance Officer's responsibility to provide NEPA training to the organization he/she serves, using, among other things, training materials the Office of NEPA Oversight has provided to NEPA Compliance Officers.

20. If the Program or Field Organizations disagree with direction from the Office of Environment, Safety and Health to prepare an environmental assessment or environmental impact statement, how will the conflict be resolved? (I.E and F)

Answer: The Policy Statement authorizes the Assistant Secretary for Environment, Safety and Health to direct a Secretarial Officer or Head of a Field Organization to prepare an environmental assessment or environmental impact statement. The purpose of this authority is to resolve controversies in which consensus could not be achieved. Heads of Field Organizations that disagree with a direction by the Office of Environment, Safety and Health may elevate the concern to the cognizant Secretarial Officer. If the Secretarial Officer disagrees with the direction from the Office of Environment, Safety and Health to prepare an environmental assessment or environmental impact statement, the conflict may be resolved ultimately by the Secretary.

II. Process Changes

21. May someone other than the cognizant Secretarial Officer or Head of a Field Organization designate a NEPA Document Manager? (II.A)

Answer: The purpose of designating a NEPA Document Manager is to establish leadership and ownership of the NEPA process, and thereby improve its management. The designation should normally be made by the Secretarial Officer or Head of Field Organization who is ultimately accountable for the successful completion of the NEPA process. Nevertheless, the Secretarial Officer or Head of a Field Organization may delegate authority to designate the NEPA Document Manager when he or she determines that a higher level designation is not necessary to achieve that goal.

22. May the NEPA Document Manager be a contractor? (II.A)

Answer: No. A DOE employee must serve as a NEPA Document Manager.

23. Is there a maximum size for the team? (II.A)

Answer: No. The size of the team may vary with the characteristics of the proposed action.

24. Will the Office of Environment, Safety and Health participate on all NEPA document preparation teams or only if requested by the NEPA Document Manager, or only if the Office of Environment, Safety and Health priorities permit participation? (II.A and C)

Answer: The Office of Environment, Safety and Health considers providing assistance to NEPA document preparation teams to be a core activity of the highest priority and intends to carry out that function whenever such assistance is needed to the extent resources permit. Office resources are limited, however, which will require allocation in accordance with Departmental priorities.

25. Will the Office of General Counsel participate on NEPA document teams? (II.A and C)

Answer: For high priority projects, the Office of General Counsel will normally be represented on NEPA document teams. For other projects, that office and field counsel will provide assistance as necessary. In either case, Office of Environment, Safety and Health team members would obtain legal advice from the Office of the Assistant General Counsel for Environment.

26. What are some innovative measures that have successfully reduced NEPA process time? (II.A.1)

Answer: The most important step to reduce NEPA document preparation and review time is to actively involve senior management in the NEPA process; i.e., to obtain the decision makers' commitment and attention. Other useful measures include early planning, internal scoping, aggressive contract management, and use of a team approach. The Office of Environment, Safety and Health will share any further lessons learned regarding this issue in a variety of ways. (See section VI.B of the Policy Statement.)

27. How should the NEPA Document Manager "elevate internal disputes for prompt decision," and who is ultimately responsible for resolving these disputes? (II.A.3)

Answer: NEPA disputes would be resolved as would any other type of dispute within DOE. The NEPA Document Manager should elevate disputes through the appropriate chain of command to the level necessary for resolution. A team approach facilitates resolution of disputes, because

concerned offices will already be involved in the NEPA process and informed of the issues. Ultimately, the Secretary is responsible for resolving internal disputes, although the need for resolution at that level should be rare.

28. What is meant by internal scoping? Should the process be the same for environmental assessments and environmental impact statements? (II.C)

Answer: Internal scoping refers to the agency's own discussions and preliminary plan of the scope of an environmental assessment or environmental impact statement before public scoping (when applicable) or document preparation, including alternatives, impacts, potential stakeholders, and the appropriate public participation strategy. Internal scoping should be tailored as appropriate for each proposed action. The purpose of internal scoping is to facilitate the NEPA process by early planning. Appendix B of the Report of the Environmental Assessment Process Improvement Team of January 1994 (the Bean Report) discusses an approach for internal scoping for DOE environmental assessments.

29. What sorts of circumstances constitute "extraordinary circumstances" judged appropriate for extending the schedule for an environmental impact statement? (II.C.2)

Answer: The Office of Environment, Safety and Health anticipates that these circumstances could arise from matters outside of the Department's control, such as a Congressional directive, or from the breadth of scope of the proposed action, such as a national program requiring extensive public involvement. The presence of these circumstances does not necessarily imply that the environmental impact statement process should take more than 15 months, but could justify an extension of the schedule.

30. How does the Policy Statement affect the schedule for an ongoing environmental impact statement? (II.C.2 and VI.E)

Answer: The Secretary has established a Departmental goal of reducing the median process time for environmental impact statements to 15 months with no decline in quality. As stated in the Policy, meeting this objective will require adjustments to the schedules for environmental impact statements now in preparation. Accordingly, the offices responsible for ongoing environmental impact statements should review their schedules with a view toward shortening the process. The Office of Environment, Safety and Health and the Office of General Counsel will provide assistance in this regard.

31. Will there be an opportunity to adjust document schedules after completion of public scoping? (II.C.2 and II.C.3)

Answer: Yes. The public scoping process will provide a clearer picture of the issues and the degree of controversy associated with a proposed

action, which could justify either shortening or lengthening the schedule.

32. Will the Office of Environment, Safety and Health continue to review and advise on NEPA procedures and recordkeeping requirements approved by Secretarial Officers and Heads of Field Organizations to ensure consistency in DOE's NEPA process (as required under DOE 5440.1E 6.d.4)? (II.C.3)

Answer: This Order will be revised as appropriate to be consistent with the Policy Statement. Although the future of this provision of the Order is not certain, the Office of Environment, Safety and Health will provide advice to Field Organizations and Program Offices as requested.

33. What is meant by concurrent review? (II.D)

Answer: Concurrent review involves sending a document for review simultaneously to all offices whose eventual concurrence in the document will be required or that in other ways are assisting in its preparation. Each reviewing team should adopt whatever procedures will work best for the document at issue. To most efficiently use reviewers' time and to maintain accountability, the NEPA Document Manager, with advice from the NEPA Compliance Officer, generally should determine that the document is adequate for review - and identify any remaining deficiencies - before submitting the document to reviewers. Comments from reviewers should be collated, distributed to the other reviewers, studied, resolved, and, as appropriate, incorporated into the final document. When the comments warrant, it may be most expedient for the team members to meet to negotiate comment resolutions subject to senior management approvals.

34. With regard to DOE's new policy concerning NEPA review for CERCLA actions, is it necessary to apply (and document) the categorical exclusion for CERCLA removal actions? (II.E)

Answer: No.

35. May DOE discontinue ongoing integrated NEPA/CERCLA processes? (II.E.4)

Answer: DOE may discontinue ongoing integrated CERCLA/NEPA processes, but should consider each ongoing CERCLA/NEPA review individually, taking into account stakeholder expectations, prior DOE commitments, and the time and cost savings, if any, that would result.

36. What criteria will the Office of Environmental Management (in consultation with the Offices of Environment, Safety and Health and General Counsel) use to decide how to proceed under NEPA for proposed corrective actions under the Resource Conservation and Recovery Act? (II.E.5)

Answer: The involved Offices plan to provide guidance on a case-by-case basis, focusing on the extent of public involvement and the significance of the proposed action.

III. NEPA Contract Reform

37. What types of contractor incentives would encourage superior performance? (III.A)

Answer: The contracting Quality Improvement Team has been charged to investigate this issue and make recommendations. In the interim, Field Organizations and Program Offices are encouraged to use their best judgment and lessons learned from their own experience. One example is to include financial rewards for successfully completing high quality work on time, at a cost savings to the government.

38. Will the Office of NEPA Oversight provide criteria for contractor appraisals so that reports from NEPA Document Managers could be compared? (III.B.2)

Answer: The contracting Quality Improvement Team is examining this issue in detail. At a minimum, however, the appraisals should address performance elements identified in the Policy Statement -- i.e., timeliness, quality (as in the quality and completeness of the contractor's draft NEPA document), cost-effectiveness, responsiveness to the Department's directions, and application of the "Recommendations" paper.

39. How will contractor appraisals be "made available" to Secretarial Officers and Field Organizations? (III.B.2)

Answer: The Office of Environment, Safety and Health will serve as a clearinghouse for contractor appraisals. NEPA Document Managers will provide appraisals to the Office of Environment, Safety and Health, which will distribute them to appropriate offices on a regular basis.

IV. Additional Reforms for High Priority Projects

40. How does the "special team" referred to in the discussion of high priority projects differ from a team that would be formed for non-priority projects? (IV.B)

Answer: Normally, the NEPA Document Manager would form a team to plan, review, and concur in a NEPA document, drawing together the necessary

technical and legal expertise to ensure quality and timeliness. For high priority projects, a special team may be formed to ensure that DOE resources are enhanced as necessary. Use of a special team for high priority projects would allow DOE to put forth its best effort by bringing in more senior DOE staff with the right mix of experience and special skills. Representatives from the Office of Environment, Safety and Health and the Office of General Counsel will normally be members of special teams to ensure that all relevant programmatic, policy, and legal considerations are taken into account from the beginning.

41. Who will decide whether a project is a "high priority project" and therefore a candidate for a special team, and in the case of an environmental impact statement, delegation of approval authority? (IV.B and D)

Answer: Department priorities are determined by DOE senior managers, such as Heads of Field Organizations, Secretarial Officers, and the Secretary. Regarding delegation of approval authority for specific environmental impact statements, the cognizant Secretarial Officer and the Assistant Secretary for Environment, Safety and Health will consult to determine whether delegation would be appropriate to expedite the review and approval process.

V. Enhanced Public Involvement

42. What guidance is the Office of Environment, Safety and Health planning to provide on improving public participation? (V.A)

Answer: The Office of Environment, Safety and Health has provided NEPA Compliance Officers with a compendium of the Council on Environmental Quality and DOE regulations relating to public involvement in the NEPA process. Draft guidance on effective public involvement is currently under review within the Office of Environment, Safety and Health and the Office of General Counsel.

43. Is public review required for each environmental assessment? Is a public meeting required for every environmental assessment? (V.B)

Answer: No. While the Policy Statement enhances public participation opportunities, neither the Policy Statement nor NEPA regulations promulgated by the Council on Environmental Quality and DOE require public review of a draft environmental assessment or a public meeting for an environmental assessment. However, the Council's regulations do require the public to be involved in the preparation of an environmental assessment "to the extent practicable" (40 CFR § 1501.4(b)). Depending on the circumstances, this could include seeking input on the scope of the document (including alternatives and potential impacts), meetings,

workshops, or document reviews. The Policy Statement directs that the Department ordinarily provide early public notice of its intent to prepare an environmental assessment, and an opportunity, on request, to review draft environmental assessments concurrent with state and tribal preapproval review. These minimum opportunities for public involvement should always be appropriate absent extraordinary circumstances, such as an unforeseen need to prepare an extremely urgent environmental assessment. The amount of any additional public involvement in an environmental assessment depends on the circumstances, including the potential impacts of the project, public interest in the project, and the similarity of the proposed action to others requiring preparation of an environmental impact statement.

44. What steps should be taken to make interested parties aware of opportunities for preapproval review of environmental assessments? (V.B.2)

Answer: Notices to the public of decisions to prepare environmental assessments would include information regarding how to request an opportunity for preapproval review. Additionally, Council on Environmental Quality regulations suggest ways of notifying the public of the availability of NEPA documents (40 CFR § 1506.6(b)).

VI. Continuing Improvement

45. Who will charter the NEPA quality improvement team next year? May DOE personnel volunteer to be on the team? (VI.A)

Answer: The Secretary is expected to charter the team, with assistance from the Office of Environment, Safety and Health and the Office of General Counsel. Volunteers would be welcome. However, team members would have to be selected in a manner that ensures broad perspectives and organizational balance.

46. How will the Office of Environment, Safety and Health gather information on "lessons learned?" How will the Office of Environment, Safety and Health report the "lessons learned"? (VI.B)

Answer: The Office of Environment, Safety and Health is developing approaches for gathering and reporting this information, taking into account suggestions received during a workshop at the June 23, 1994 NEPA Compliance Officers Meeting. Among the possible approaches is that the Office would develop a questionnaire on "lessons learned" that NEPA Document Managers would complete after every environmental assessment and environmental impact statement. The questionnaire would cover time, cost, conflicts, innovations, and benefits. The information obtained would be used to identify additional guidance and training needs. At

the end of each quarter, the Office would evaluate the responses and draw conclusions from the collection of questionnaires received during that quarter. The Office would provide those conclusions, along with the completed questionnaires themselves, in a quarterly report. Lessons learned also will continue to be a topic of discussion at NEPA Compliance Officers Meetings. The Office welcomes any suggestions regarding this issue.

47. What plans does the Office of Environment, Safety and Health have for revising the "Recommendations" paper (VI.B) and for NEPA training (VI.C)?

Answer: Most of the comments received to date on the "Recommendations" paper have been positive, with some suggestions for improvement. Accordingly, a major revision of the "Recommendations" paper is not contemplated at this time. However, guidance on several topics is under development, which will be issued as a supplement to the "Recommendations" paper. Future comments and "lessons learned" gleaned from the Office of Environment, Safety and Health questionnaires will be used to determine the need for revisions to the "Recommendations" paper or new guidance. Any suggestions for revisions or additional guidance topics are welcome and should be sent to the Office of NEPA Oversight.

With respect to training, the Office of Environment, Safety and Health has provided NEPA resource material for training materials to enable NEPA Compliance Officers to provide training to the organizations they serve. The Office of Environment, Safety and Health is also planning to enhance its training materials and activities.

48. What plans does the Office of Environment, Safety and Health have for establishing a NEPA certification program? Has a schedule been developed? (VI.D)

Answer: The Office of Environment, Safety and Health is seeking information from NEPA Compliance Officers as to their interest in a certification program and suggestions for criteria. With sufficient interest, the Office would set up a team to examine this concept in more detail. The Office is gathering information on existing relevant certification programs and investigating whether an external program could be used, along with a demonstrated knowledge of DOE NEPA regulations, policies, and procedures. No schedule has been developed.

49. How do the Office of Environment, Safety and Health and the Office of General Counsel plan to monitor the cost and time for NEPA document preparation, the influence of NEPA review on decision making, the evaluations of contractor performance, EPA ratings of DOE environmental impact statement, public reactions, and litigation experience? What criteria will be used in determining the influence of NEPA review on decision making, public reactions (to the NEPA process or to decisions arrived at), and the quality of environmental impact statements? (VI.E)

Answer: The Office of Environment, Safety and Health intends to develop questionnaires and/or reporting systems to obtain information pertaining to lessons learned, contractor appraisals, and public reaction, taking into account suggestions received during a workshop at the June 23, 1994 NEPA Compliance Officers Meeting. The Office of Environment, Safety and Health welcomes any suggestions in this regard. (Also see Question 46, above.)

50. Are any changes expected in 10 CFR Part 1021 (NEPA Implementing Procedures) and Part 1022 (Procedures for Floodplain/Wetlands Environmental Review) as a result of the Policy Statement?

Answer: No changes to these regulations are necessary because of the Policy Statement, but a consolidation is being considered to streamline the procedures.

U.S. Department of Energy

Washington, D.C.

[under revision as of September 1994]

ORDER

DOE 5440.1E

11-10-92

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM

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1. PURPOSE. To establish Department of Energy (DOE) responsibilities and procedures to implement the National Environmental Policy Act of 1969 (NEPA).

2. CANCELLATION. DOE 5440.1D, NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM, of 2-22-91.

3. REFERENCES.

   a. National Environmental Policy Act (42 U.S.C. 4321 et seq.), of 1-1-70, which establishes broad national environmental policy.

   b. Executive Order 12114, of 1-4-79, which establishes procedural and other actions to be taken by Federal agencies to further the purpose of NEPA with respect to the environment outside the United States, its territories and possessions.

   c. Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508, as amended 7-1-86), which establish requirements for implementing the procedural provisions of NEPA.

   d. Department of Energy Organization Act (42 U.S.C. 7112), of 8-4-77, which has among its purposes ensuring incorporation of national environmental protection goals in the formulation and implementation of energy programs; and advancing the goals of restoring, protecting, and enhancing environmental quality and ensuring public health and safety.

   e. Freedom of Information Act (FOIA) (5 U.S.C. 552), which provides that any person has a right of access to agency records unless the information contained in the records is protected from disclosure by one of the exemptions enumerated in the Act.

   f. DOE National Environmental Policy Act Implementing Procedures (DOE NEPA Regulations), 10 CFR Part 1021, which establish Departmental procedures for implementing the procedural provisions of NEPA pursuant to the CEQ Regulations. These regulations were published on 4-24-92 (57 Federal Register (FR) 15122) and became effective on May 26, 1992.

   g. DOE Regulations for Compliance with Floodplains/Wetlands Environmental Review Requirements, 10 CFR Part 1022, which implement the procedural provisions of Executive Order 11988, Floodplain Management, of 5-24-77, and Executive Order 11990, Protection of Wetlands, of 2-10-78.

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Office of Environment, Safety and Health

h. SEN-15-90, NATIONAL ENVIRONMENTAL POLICY ACT, of 2-5-90, which expresses certain Secretarial policies and goals, and commits DOE to full compliance with NEPA.

i. DOE 1700.1, FREEDOM OF INFORMATION PROGRAM, of 11-19-79, which establishes guidelines and procedures for DOE compliance with the Freedom of Information Act.

j. DOE 4700.1, PROJECT MANAGEMENT SYSTEM, of 3-6-87, which establishes the DOE project management system and provides implementing instructions, formats, and procedures for DOE outlay program acquisitions.

k. DOE 5100.3, FIELD BUDGET PROCESS, of 8-23-84, which establishes requirements and procedures for the preparation of field budget material, including data sheets, required for the DOE budget.

l. DOE 5400.1, GENERAL ENVIRONMENTAL PROTECTION PROGRAM, of 11-9-88, which establishes the environmental protection program for DOE operations.

m. DOE 5400.2A, ENVIRONMENTAL COMPLIANCE ISSUE COORDINATION, of 1-31-89, which establishes requirements for coordination of significant environmental compliance issues.

n. DOE 5400.3, HAZARDOUS AND RADIOACTIVE MIXED WASTE PROGRAM, of 2-22-89, which establishes policies and requirements for hazardous and mixed waste and implementation of the Resource Conservation and Recovery Act.

o. DOE 5400.4, COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT REQUIREMENTS, of 10-6-89, which establishes requirements for hazardous substance cleanup, for notification, and for implementation of the Comprehensive Environmental Response, Compensation, and Liability Act.

4. DEFINITIONS. This Order adopts the definitions in the CEQ Regulations (see 40 CFR Part 1508) and the DOE NEPA Regulations (see 10 CFR 1021.103). Some of those definitions are repeated here for the convenience of the reader. Additional terms are defined here for clarity.

a. Action Description Memorandum (ADM). An internal DOE document (normally, not more than 5 pages) containing a concise description of a proposed action and discussion of relevant potential environmental issues to assist DOE in determining the appropriate level of a NEPA document for a proposed action.

b. Environmental Impact Statement (EIS) Implementation Plan (IP). A brief document that explains and supports the scope, target schedule, and approach DOE will use to prepare an EIS.

c. Field Officer (FO). For the purposes of this Order, a person responsible for managing a DOE Field Office or similar field organization, who reports directly to a Secretarial Officer. For the purposes of this

Order, Field Officers include but may not be limited to: the Managers of the Albuquerque, Chicago, Fernald, Idaho, Nevada, Oak Ridge, Richland, San Francisco, and Savannah River Field Offices; the Manager of the Rocky Flats Office; the Administrators of the Alaska, Southeastern, and Southwestern Power Administrations; and the Directors of the Morgantown and Pittsburgh Energy Technology Centers and the National Renewable Energy Laboratory Area Office.

d. Host State. A state within whose boundaries DOE proposes an action at an existing facility or construction or operation of a new facility.

e. Host Tribe. An American Indian tribe within whose tribal lands DOE proposes an action at an existing facility or construction or operation of a new facility. For purposes of this definition, "tribal lands" means the area of "Indian country," as defined in 18 U.S.C. 1151, that is under the tribe's jurisdiction.

f. Interim Action. An action concerning a proposal that is the subject of an ongoing EIS and that DOE proposes to take before the record of decision (ROD) is issued, and that is permissible under 40 CFR 1506.1, "Limitations on Actions During the NEPA Process."

g. Mitigation Action Plan. A document that describes the plan for implementing commitments made in a DOE EIS and its associated ROD or, when appropriate, an environmental assessment (EA) or finding of no significant impact (FONSI), to mitigate adverse environmental impacts associated with an action.

h. Monthly NEPA Report. A document submitted monthly to the Secretary that identifies EAs and EISs that Secretarial Officers expect to forward to the Assistant Secretary for Environment, Safety and Health (EH) for approval during the subsequent 3 months.

i. NEPA Compliance Guide. A collection of written guidance and reference material prepared by EH and updated periodically to assist DOE staff in both planning for and achieving compliance with NEPA and various related environmental statutes. The NEPA Compliance Guide provides guidance on the DOE NEPA process, the content of NEPA documents, the substantive and timing relationships between NEPA reviews and review requirements of other environmental statutes, and the timing of the start and end of the NEPA process relative to elements of the decisionmaking process for DOE proposed actions.

j. NEPA Compliance Officer (NCO). A DOE employee designated by a Secretarial Officer or a Field Officer to coordinate, assist, and oversee generally the NEPA compliance activities in that office. Subsidiary Departmental Elements may designate a NEPA Contact to assist the Program or Field Office NCO.

k. NEPA Document. A DOE notice of intent (NOI) to prepare an EIS, EIS, ROD, EA, FONSI, or any other document prepared pursuant to a requirement of NEPA or the CEQ Regulations.

l. NEPA Status Report. A report on the status of existing or planned NEPA compliance activities, which is included in internal budget review documents (i.e., project data sheets or activity data sheets) prepared pursuant to DOE 5100.3.

m. Program Office. A DOE organization headed by a Secretarial Officer and responsible for an action requiring a NEPA review.

n. Programmatic NEPA Document. A broad-scope EIS or EA that identifies and assesses the environmental impacts of a DOE program; it may also refer to an associated NEPA document such as an NOI, record of decision, or FONSI.

o. Secretarial Officers. For purposes of this Order, Secretarial Officers are Assistant Secretaries; the Directors of the Offices of Administration and Management, Civilian Radioactive Waste Management, Energy Research, Emergency Planning and Operations, New Production Reactors, Nuclear Safety, Intelligence; and the Administrators of the Western Area Power Administration and the Bonneville Power Administration.

p. Site-wide NEPA Document. A broad-scope EIS or EA that is programmatic in nature and identifies and assesses the individual and cumulative impacts of ongoing and reasonably foreseeable future actions at a DOE site; it may also refer to an associated NEPA document such as an NOI, ROD or FONSI.

q. State/tribal Coordination. The process by which a host state or host tribe and, as appropriate, states or tribes that may be affected by a proposed action are provided the opportunity to review and comment on an EA for the proposed action before DOE approval of the EA. Provisions for state/tribal coordination shall not apply to power marketing actions, such as rate-setting, in which a state or tribe is a customer, or to any other circumstances where DOE determines that such advance information could create a conflict of interest.

r. State/tribal Notification. The process by which a host state or tribe and, as appropriate, states or tribes that may be affected by a proposed action are informed of an initial DOE determination to prepare an EA or EIS for the proposed action. Provisions for state/tribal notification shall not apply to power marketing actions, such as rate-setting, in which a state or tribe is a customer, or to any other circumstances where DOE determines that such advance information could create a conflict of interest.

s. Supplement Analysis (SA). A DOE document used to determine whether a supplemental EIS should be prepared pursuant to 40 CFR 1502.9(c), or to support a decision to prepare a new EIS.

t. Supplemental EIS. An EIS prepared to supplement a prior EIS, as provided at 40 CFR 1502.9(c).

5. POLICY. NEPA establishes a national policy to ensure that consideration is given to environmental values and factors in Federal planning and decisionmaking. The Department of Energy's policy is to comply fully with the letter and spirit of NEPA. To ensure that environmental factors are considered in the decisionmaking process and to promote environmentally responsible decisions, DOE will incorporate NEPA requirements early in the planning process for proposed actions. DOE also will coordinate its NEPA activities with the states and tribes that host DOE actions. The Department is committed to complete assessment and full disclosure of the environmental consequences of its proposed actions.

6. RESPONSIBILITIES AND AUTHORITIES.

   a. Secretarial Officers are responsible for the consideration of environmental factors in decisionmaking and the timely preparation of documents required by this Order for actions under their authority. Specifically, each Secretarial Officer shall, for matters under his/her authority:

      (1) Ensure that appropriate NEPA review is undertaken early in project and program planning, including planning for actions under new legislative authorities and for proposed legislation, regulations, and procurements, to provide adequate consideration of environmental factors along with other program considerations, and compliance with the CEQ Regulations and the DOE NEPA Regulations in the decisionmaking process.

      (2) Approve procedures and recordkeeping requirements within his/her program, in consultation with the Assistant Secretary for Environment, Safety and Health (EH-1) to ensure consistency in the agencywide application of NEPA, and review those of field organizations. (See page 10, paragraph 6b(6) and page 11, paragraphs 6c(3) and 6d(4).)

      (3) Ensure that the environmental information gathering, analysis, and evaluation requirements of the DOE NEPA Regulations (see 10 CFR 1021.216) are carried out when conducting a procurement, awarding financial assistance, or entering into a joint venture. Incorporate, where appropriate, environmental criteria and conditions into a solicitation, and into a resulting contract or financial assistance instrument issued under his/her authority.

      (4) Ensure that applicants for financial assistance, permits, licenses, exemptions, allocations, or similar actions submit the information necessary for DOE NEPA compliance, and that they otherwise comply with the requirements of the DOE NEPA Regulations (see 10 CFR 1021.215).

      (5) Ensure that NEPA milestones (categorical exclusion (CX); EA, FONSI; or NOI, draft EIS, final EIS, ROD) have been incorporated into project planning documents, including those prepared under the

project management system administered by the Office of Procurement, Assistance and Program Management (PR) through DOE 4700.1. Ensure that a NEPA Status Report on existing or planned NEPA compliance activities is included in internal budget review documents (i.e., project data sheets or activity data sheets) prepared pursuant to DOE 5100.3.

(6) Designate a NEPA Compliance Officer for the Program Office and maintain this position to ensure that the requisite functions are carried out (see page 10, paragraph 6c); inform the Office of NEPA Oversight (EH-25) of the designation.

(7) Ensure that the program office and each DOE Field Office under its authority augment, as appropriate, and maintain its environmental compliance staff so that a sufficient variety of environmental disciplines is represented to ensure that properly supervised and technically accurate and complete NEPA documents are prepared.

(8) Establish procedures and act to ensure that NCOs and cognizant EH-25 staff (as assigned on page 14, paragraph 6e(3)) are fully informed in a timely manner of all program considerations, new information, and changes that would bear on the accuracy and objectivity of NEPA documents.

(9) Determine which organizational entity under his/her authority should have responsibility for drafting NEPA documents, based on criteria established by EH-1. (See page 10, paragraph 6b(5) and page 12, paragraph 6d(12).)

(10) Optionally, delegate to Field Officers the authority to make decisions regarding the appropriate level of NEPA review for those categories of actions specifically listed in subpart D of the DOE NEPA Regulations. This authority may not be redelegated. The Secretarial Officer shall notify EH-25 of the delegation of this authority.

(11) If there has been no delegation under paragraph 6a(10), determine the appropriate level of NEPA review for those categories of actions specifically listed in subpart D of the DOE NEPA Regulations. Within 2 weeks of the determination, provide a copy of such determinations to EH-25, except for the CXs for which documentation is not required (see page 12, paragraph 6d(13)).

(12) If there has been a delegation under paragraph 6a(10), monitor the exercise of the delegated authority by the Field Officers to determine whether it is being properly executed.

(13) For actions not listed in subpart D of the DOE NEPA Regulations, or those listed in subpart D but for which the appropriate level of NEPA review is unclear, prepare an ADM sufficiently early to allow timely completion of the required NEPA document. Based on the ADM,

provide a recommendation to and request a determination by EH-1 of the level of NEPA review required.

(14) For a proposed interim action that is not clearly allowable under applicable requirements in 40 CFR 1506.1 and 10 CFR 1021.211, prepare a description that provides sufficient information to determine whether the interim action may proceed; transmit the description to EH-1 and request a determination.

(15) Conduct state/tribal notification, either directly or through the Secretarial Officer's NCO, except for those actions for which the NEPA determination authority has been delegated under paragraph 6a(10).

(16) When it is unclear whether a supplemental EIS is required, prepare a supplement analysis that describes any changes in a proposed action that are relevant to environmental concerns, or any significant new circumstances and information relevant to environmental concerns and bearing on the proposed action or its impacts. Submit the supplement analysis to EH-1 with a recommendation for appropriate action. Upon approval by EH-1, notify the state(s), tribe(s), and the public of the availability of a supplement analysis and of the determination whether to prepare a supplemental EIS or other appropriate NEPA document. Public comments on the supplement analysis may be requested at the Secretarial Officer's discretion.

(17) Ensure that necessary or appropriate public meetings, hearings, or other forms of public participation are conducted concerning NEPA-related aspects of a proposed action.

(18) After ensuring its accuracy and adequacy, forward an EIS or an EA to EH-1 to initiate the approval process. A proposed draft FONSI may accompany a request for approval of an EA. A request for approval of an EA will be accompanied by a request for state/tribal coordination, a recommended length of review--considering any state and/or tribal request--and a proposed transmittal letter to the state(s) and tribe(s) drafted for the Secretarial Officer's signature, except for actions that are exempt from state/tribal coordination requirements (see page 4, paragraph 4q).

(19) After receiving authorization from EH-25, conduct state/tribal coordination regarding pre-approval review of an EA; ensure that EH-25 receives any comments from the state(s) or tribe(s), along with the program office's proposed resolution. (Also see page 11, paragraph 6c(7).)

(20) Ensure that NEPA documents are revised, as appropriate, in response to EH, state, tribe, and other review comments.

(21) For an EIS, prepare an implementation plan (IP) and transmit it to EH-1 for approval; ensure that the IP is approved before issuance of the draft EIS; ensure that the approved IP is made publicly available for information purposes.

(22) Mitigation Action Plan.

(a) Upon notification by EH-1 that a FONSI would require a commitment to mitigation that is essential to render the impacts of a proposed action not significant, prepare a mitigation action plan for any such commitment; submit the mitigation action plan to EH-1 for review before issuance of the FONSI. (See 10 CFR 1021.322(b) and 1021.331(b).)

(b) Prepare a mitigation action plan for implementation of any commitments made in an EIS/ROD for mitigation of environmental impacts associated with an action; if practicable, submit the mitigation action plan to EH-1 for review before issuance of the ROD and, in any case, before taking any action covered by the ROD that is the subject of a mitigation commitment.

(23) Track and report annually (on the anniversary of the original plan) to EH-1 the progress made in implementing, and the effectiveness of any mitigation action plan described in paragraph 6a(22) until mitigation is completed. Alternatively, a single combined annual mitigation report may be submitted for all actions under the Secretarial Officer's authority. The annual report should modify the original plan to reflect new information or changed circumstances.

(24) Ensure the prompt distribution (normally, within 2 weeks of approval) of an EA, FONSI, EIS, or ROD and prompt public availability of the approved NEPA document in accordance with the CEQ Regulations, the DOE NEPA Regulations, and procedures established under paragraph 6d(18), page 13; provide further distribution as may be appropriate based on guidance provided in the NEPA Compliance Guide, unless such document is, or contains information that is, classified, proprietary, or otherwise exempt from mandatory disclosure under the Freedom of Information Act (5 U.S.C. 552); provide the NEPA document to the appropriate Freedom of Information Officer(s) to make it available in the Headquarters Freedom of Information Reading Room and, if appropriate, Regional and Field Freedom of Information Reading Rooms as described in DOE 1700.1.

(25) Submit to EH-1 written information on those EAs and EISs that Secretarial Officers expect to forward to EH-1 for approval during the subsequent 3 months, to enable EH-1 to prepare a Monthly NEPA Report to the Secretary (see page 11, paragraph 6d(5)).

(26) Lead or Cooperating Agency.

(a) When DOE and one or more additional Federal agencies propose or are involved in the same action or are involved in a group of actions directly related to each other because of their functional interdependence or geographical proximity, submit to EH-1 a recommendation whether DOE should be the lead agency in preparing an EIS and, if so, which agencies DOE should request to be cooperating agencies. (See 40 CFR 1501.5 and page 12, paragraph 6d(11).)

(b) When another Federal agency has the lead and DOE may have jurisdiction by law or special expertise with respect to any environmental issue, submit to EH-1 a recommendation whether DOE should be a cooperating agency in preparing an EIS. (See sections 1501.5 and 1501.6 of the CEQ Regulations.) (See page 12, paragraph 6d(11).)

(27) Consult with EH-25 for guidance and assistance regarding NEPA compliance matters, as needed.

(28) Respond to requests by EH or other program offices for technical assistance in preparation or review of NEPA documents.

b. Field Officers. Each Field Officer (as defined for the purposes of this Order) shall, for matters under his/her authority:

(1) Determine the appropriate level of NEPA review for those categories of actions specifically listed in subpart D of the DOE NEPA Regulations, if the authority to make such decisions has been delegated from the Secretarial Officer under paragraph 6a(10), page 6. This authority may not be redelegated. If more than one Program Office is responsible for an action, the Field Officer must have received a delegation from all responsible Secretarial Officers in order to make a determination for that action. Within 2 weeks, provide a copy of such a determination to EH-25 and the responsible Secretarial Officer, except for the CXs for which documentation is not required (see page 12, paragraph 6d(13)).

(2) Designate a NEPA Compliance Officer (NCO) for the field organization and maintain this position to ensure that the requisite functions are carried out (see page 10, paragraph 6c); inform EH-25 of the designation.

(3) Maintain an environmental compliance staff so that a sufficient variety of environmental disciplines is represented to ensure that properly supervised and technically accurate and complete NEPA documents are prepared.

(4) Conduct state/tribal notification, either directly or through the Field Officer's NCO, for those actions for which the NEPA

determination authority has been delegated under paragraph 6a(10), page 6.

(5) Prepare NEPA documents at the direction and under the supervision of the responsible Secretarial Officer(s), when so designated under paragraph 6a(9), page 6.

(6) Approve procedures and recordkeeping requirements, in consultation with all relevant Secretarial Officers (see page 5, paragraph 6a(2)), and in consultation with EH-1 to ensure consistency in the agencywide application of NEPA.

(7) Ensure that the environmental information gathering, analysis, and evaluation requirements of the DOE NEPA Regulations (see 10 CFR 1021.216) are carried out when conducting a procurement, awarding financial assistance, or entering into a joint venture. Incorporate, where appropriate, environmental criteria and conditions into a solicitation, and into a resulting contract or financial assistance instrument issued under his/her authority.

(8) Ensure that applicants for financial assistance, permits, licenses, exemptions, allocations, or similar actions submit the information necessary for DOE NEPA compliance, and that they otherwise comply with the requirements of the DOE NEPA Regulations (see 10 CFR 1021.215).

(9) Incorporate NEPA milestones (CX; EA, FONSI; or NOI, draft EIS, final EIS, ROD) into project planning documents within the project management system administered by the Office of Procurement, Assistance and Program Management (PR) through DOE 4700.1. Incorporate a NEPA Status Report on existing or planned NEPA compliance activities into internal budget review documents (i.e., project data sheets or activity data sheets) prepared pursuant to DOE 5100.3.

(10) Establish procedures and act to ensure that NCOs and cognizant EH-25 staff (as assigned under paragraph 6e(3), page 14) are fully informed in a timely manner of all program considerations, new information, and changes that would bear on the accuracy and objectivity of NEPA documents.

c. The NEPA Compliance Officer (NCO) shall, for matters under the authority of his/her program office or field organization (the Office):

(1) Provide advice regarding NEPA-related matters, including the provisions of the CEQ Regulations, the DOE NEPA Regulations, the DOE NEPA Compliance Guide, this Order, and any other related guidance and requirements; provide assistance regarding procedures and document preparation; provide NEPA training and disseminate NEPA guidance materials and related information.

(2) Participate in periodic NEPA training, meetings, and workshops conducted by the Office of NEPA Oversight (EH-25).

(3) Recommend, for his/her Secretarial Officer or Field Officer approval (see page 5, paragraph 6a(2) and page 10, paragraph 6b(6)), office NEPA procedures and recordkeeping requirements, and document the office's compliance with those procedures and requirements.

(4) Recommend to his/her Secretarial Officer or Field Officer for each proposed action the appropriate level of NEPA review, and recommend schedules designed to ensure the early preparation of NEPA documents.

(5) Review NEPA documents and other related documents for compliance with the CEQ Regulations, the DOE NEPA Regulations, and other DOE NEPA-related procedures and guidance.

(6) Conduct state/tribal notification, if directed to do so by his/her Secretarial Officer or Field Officer (see page 7, paragraph 6a(15), and page 9, paragraph 6b(4)).

(7) Serve as a liaison in the conduct of state/tribal coordination, and provide EH-25 with comments from the state(s) or tribe(s) and the Program Office's proposed resolutions, unless the Secretarial Officer directs another official to carry out this function.

d. Assistant Secretary for Environment, Safety and Health (EH-1) shall:

(1) Provide Departmental oversight and guidance on NEPA-related matters to ensure consistency in the agencywide application of NEPA.

(2) Review appropriate management reports, new legislative authorities, proposed regulations, and emerging and ongoing policies, plans, programs, procurement activities, and other proposals to identify Departmental actions that may require environmental review under NEPA.

(3) Provide NEPA technical assistance and policy guidance to other Departmental Elements in their preparation of NEPA documents.

(4) Review and advise on NEPA-related procedures and recordkeeping requirements to be approved by Secretarial Officers under paragraph 6a(2), page 5 and by Field Officers under paragraph 6b(6), page 10, to ensure consistency in the agencywide application of NEPA.

(5) Report monthly to the Secretary regarding EAs and EISs that Secretarial Officers expect to forward to EH-1 for approval during the subsequent 3 months, based on information received from Secretarial Officers (see page 8, paragraph 6a(25)); identify EAs or EISs that warrant Secretarial approval.

(6) Monitor project planning documents, within the project management system administered by PR through DOE 4700.1, to ensure that project schedules include NEPA milestones.

(7) Review NEPA Status Reports included in DOE internal budget review documents to ensure that projects include appropriate NEPA compliance planning.

(8) Determine, after consulting with the Office of General Counsel (GC-11), the level of NEPA review required for proposed DOE actions not listed in subpart D of the DOE NEPA Regulations or those listed in subpart D but for which the appropriate level of NEPA review is unclear (except as provided in paragraph 6d(9)), based on review of an ADM and the recommendation of the responsible Secretarial Officer.

(9) Forward significant or controversial proposals to the Secretary for a determination whether to proceed initially with an EA or an EIS.

(10) Determine, upon request by a Secretarial Officer and after consulting with GC-11, whether a proposed interim action may proceed.

(11) Determine whether DOE should be a lead or cooperating agency in preparing an EIS, taking account of any recommendation of a Secretarial Officer (see page 9, paragraph 6a(26)).

(12) Establish criteria by which a Secretarial Officer may determine which organizational entity shall prepare NEPA documents; where no program office has clear lead responsibility for the implementation of the proposed action, after consultation with the affected offices, determine the responsible office(s) to prepare the required NEPA documents.

(13) Determine which CXs do not require documentation and notify the Secretarial Officers and Field Officers of the determination.

(14) Within 2 weeks of receiving notice of a determination under paragraph 6a(11), page 6 or paragraph 6b(1), page 9, notify, in writing, the appropriate Field Officer and/or Secretarial Officer of any objection, as identified by EH-25 (see page 15, paragraph 6e(8)) to the application of a category listed in subpart D of the DOE NEPA Regulations.

(15) Following review of an EA and the recommendation, if any, of the Secretarial Officer, determine, after consulting with GC-11, whether a proposed action requires an EIS; if an EIS is not required, issue a FONSI; if a mitigation action plan is necessary to issue a FONSI, notify the cognizant Secretarial Officer accordingly (see page 8, paragraph 6a(22)).

(16) Approve, after consulting with GC-11, an EIS implementation plan for the preparation of a DOE EIS.

(17) Following review of a supplement analysis and after consulting with GC-11, determine whether DOE shall prepare a supplemental EIS or a new EIS for a proposed action, or whether no further documentation is required (see page 7, paragraph 6a(16)).

(18) Establish procedures for the review, approval, publication, and dissemination of NEPA documents.

(19) Evaluate proposed and alternative actions, including alternative mitigating measures, described in a Departmental EIS, supplement, or EA, and make any appropriate environmental recommendations to the responsible Secretarial Officer.

(20) Advise the responsible Secretarial Officer and, if appropriate, the Secretary, of a proposed action believed not to conform with Departmental policies or, after consulting with GC-11, applicable environmental laws and regulations.

(21) Review, exercise quality control over, evaluate, and, after consulting with GC-11, approve or disapprove NEPA documents, except as otherwise provided in this Order, based on their content and conformity to the CEQ Regulations, the DOE NEPA Regulations, Executive Order 12114, and this Order.

(22) Notify, in writing, the responsible Secretarial Officer and the Secretary if deficiencies prevent approval of a NEPA document that the Secretarial Officer has forwarded for approval.

(23) Review and, after consulting with GC-11, approve (for environmental content only) a ROD that complies with NEPA, the CEQ Regulations, and the DOE NEPA Regulations.

(24) Review a mitigation action plan for implementation of mitigation commitments made in an EIS/ROD or, when appropriate, EA/FONSI; review related annual progress reports to track the implementation of actions identified in the plan.

(25) Advise the Secretarial Officers whether public participation is appropriate for NEPA-related issues not otherwise requiring public meetings, hearings, or comment periods.

(26) Coordinate DOE assistance to other Federal agencies throughout their NEPA processes, including the review of documents and submission of DOE comments.

(27) Conduct periodic NEPA compliance audits of DOE facilities and programs.

(28) Perform all the functions under paragraph 6e through the Office of NEPA Oversight.

e. Director of NEPA Oversight (EH-25) shall:

(1) Be responsible for quality control and general oversight of efforts directed toward fulfilling Departmental responsibilities under NEPA.

(2) Provide to Secretarial Officers and Field Officers, assistance upon request and guidance when appropriate regarding NEPA compliance issues, including:

(a) Reviews and comments on preliminary, draft, and final NEPA documents;

(b) Coordination of the EH review process for NEPA documents;

(c) Assistance in preparing outlines and target schedules for EIS preparation;

(d) Assistance in public meetings and hearings regarding NEPA matters;

(e) Assistance in responding to external comments on draft EISs and other NEPA documents;

(f) Assistance in preparing procurement solicitations with respect to NEPA requirements;

(g) Assistance in developing environmental criteria and evaluating proposals against such criteria, for procurements with potential environmental significance.

(3) Assign staff to work closely with the designated NCO throughout all phases of EA or EIS preparation.

(4) Review, exercise quality control over, evaluate and, after consulting with GC-11, recommend to EH-1 approval or disapproval of, or concurrence in NEPA documents.

(5) Recommend to EH-1, after consulting with GC-11, whether:

(a) A proposed Departmental action requires an EA or EIS;

(b) An EA or EIS is adequate and should be approved. For an EA, approval should occur after state/tribal coordination authorized by EH-25 is completed. (See page 15, paragraph 6e(15).)

(c) A supplement analysis is adequate and whether a supplemental EIS, a new EIS, or no further documentation is required.

(d) A proposed interim action may proceed.

(6) Evaluate proposed and alternative Departmental actions as analyzed in an EIS or an EA and make any appropriate environmental recommendations to EH-1.

(7) Advise EH-1 of any Departmental action believed not to conform with Departmental policies, or after consulting with GC-11, applicable environmental laws and regulations.

(8) Within 2 weeks of receiving notice of a determination under paragraph 6a(11), page 6 or 6b(1), page 9, advise EH-1 of any objection to the application of a category listed in subpart D of the DOE NEPA Regulations.

(9) Review an EIS implementation plan for the preparation of a DOE EIS and, after consulting with GC-11, recommend approval or disapproval of the IP to EH-1.

(10) Track environmental impacts and issues relating to actions subject to NEPA review, and ensure that NEPA documents describe reasonable mitigating measures.

(11) Recommend to EH-1 whether public participation is appropriate for NEPA-related issues not otherwise requiring public meetings, hearings, or comment.

(12) Coordinate DOE assistance to other Federal agencies throughout their NEPA processes.

(13) Coordinate all consultation with the CEQ and the U.S. Environmental Protection Agency (EPA) on matters relating to NEPA.

(14) File approved draft, final, and supplemental EISs with EPA, in accordance with 40 CFR 1506.9 and EPA's procedural requirements.

(15) Authorize a Secretarial Officer to transmit an EA for state/tribal coordination, and determine the minimum length of the review period (14 to 30 days).

(16) Review, revise, and augment as needed subpart D of the DOE NEPA Regulations.

(17) Review, revise, and augment as needed the NEPA Compliance Guide.

(18) Prepare the Monthly NEPA Report for EH-1 to forward to the Secretary regarding EAs and EISs that Secretarial Officers expect to forward to EH-1 for approval during the subsequent 3 months.

(19) Develop and implement training programs and related materials to provide DOE personnel with information on NEPA, the CEQ Regulations, the DOE NEPA Regulations, and their responsibilities in the NEPA process.

f. General Counsel (GC-1, GC-11, or Other Appropriate Official) shall:

(1) Provide EH with legal advice regarding the level of NEPA review required for a proposed action, the permissibility of a proposed interim action, the need for a mitigation action plan for a proposed action, and the conformance of a proposed action with applicable environmental laws and regulations.

(2) Advise the Secretary, EH, and Departmental organizations regarding the legal adequacy of NEPA documents.

(3) Provide legal assistance to all Departmental organizations in the preparation of NEPA documents and the conduct of NEPA-related hearings.

(4) Provide legal assistance to EH and all Departmental organizations in preparing NEPA-related guidance.

(5) In those cases where GC may propose an action subject to NEPA, exercise the responsibilities and authorities in paragraph 6a.

g. Director of Procurement, Assistance and Program Management (PR-1) shall:

(1) Ensure integration of NEPA milestones in the project management system administered under DOE 4700.1, and provide Project Plans to EH-1 for review; ensure inclusion of a NEPA Status Report in internal budget review documents (i.e., project or activity data sheets) prepared under DOE 5100.3, and provide these documents to EH-1 for review.

(2) Ensure inclusion of NEPA compliance requirements in project management training.

h. Director of Naval Nuclear Propulsion Program (NE-60). Executive Order 12344, statutorily affirmed by Public Law No. 98-525 (42 U.S.C. 7158 note), establishes the responsibilities and authority of the Director, Naval Nuclear Propulsion Program (who is also the Deputy Assistant Secretary for Naval Reactors within the Department), over all facilities and activities which comprise the Program, a joint Navy-DOE effort. The objective of this executive and legislative action is cited in part in the Executive Order as ". . . preserving the basic structure, policies, and practices developed for this program in the past . . . ." Essential to this objective is preserving the Director's authority to establish and maintain common practices and standards across the Navy and DOE activities of this uniquely integrated Program. Accordingly, the Director is responsible for carrying out the provisions of this Order

including, but not limited to, making determinations on the level of NEPA review required for Program actions, and approving and issuing NEPA documents for Program actions.

i. The Secretary (S-1) shall:

(1) Upon referral from EH-1, determine whether an EA or an EIS should be prepared for significant or controversial proposals.

(2) Approve all programmatic and site-wide EISs and any other EAs or EISs identified by EH-1 in the Monthly NEPA Report as warranting Secretarial approval.

(3) Resolve disputes that arise regarding issues related to the NEPA process that cannot be resolved at lower levels of management.

(4) Approve any variances from the DOE NEPA Regulations.

BY ORDER OF THE SECRETARY OF ENERGY:

DOLORES L. ROZZI
Director of Administration
and Management

RECOMMENDATIONS FOR THE PREPARATION OF ENVIRONMENTAL ASSESSMENTS AND ENVIRONMENTAL IMPACT STATEMENTS

U.S. DEPARTMENT OF ENERGY
OFFICE OF NEPA OVERSIGHT
MAY 1993

Note: This publication, also referred to as the "Green Book," is available separately as a bound document.

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Preface

This paper provides guidance for the Department of Energy's preparation of environmental assessments and environmental impact statements under the National Environmental Policy Act of 1969 (NEPA). The paper was prepared by the Office of NEPA Oversight, in consultation with the Office of the Assistant General Counsel for Environment. These recommendations should materially aid those responsible for preparing and reviewing NEPA documents in focusing on significant environmental issues, adequately analyzing environmental impacts, and effectively presenting the analysis to decisionmakers and the public. These recommendations are not all-encompassing, however; preparers must apply independent judgment to determine the appropriate scope and analytical requirements of NEPA for each proposed action.

The Office of NEPA Oversight plans to revise this guidance from time to time to address additional issues and, as necessary, to reflect any new policies, regulations, and judicial determinations. The Office welcomes suggestions for improvement.

RECOMMENDATIONS FOR THE PREPARATION OF ENVIRONMENTAL ASSESSMENTS AND ENVIRONMENTAL IMPACT STATEMENTS

1. HOW TO USE THIS PAPER

Introduction

The purpose of this paper is to improve the quality of environmental assessments (EAs) and environmental impact statements (EISs) that the U.S. Department of Energy (DOE) prepares under the National Environmental Policy Act of 1969 (NEPA) and to expedite their review and approval. This paper provides many recommendations for document preparation and, for some topics, background information on issues.

Sections 2 through 8 generally follow the list of topics provided in the Council on Environmental Quality's (CEQ's) regulations as a recommended format for EISs (40 CFR 1502.10). The discussions in this paper, however, are intended as general guidance in preparing EAs as well as EISs. Where there are distinctions to be drawn between EAs and EISs, such distinctions will be highlighted. Section 9 covers general principles that will improve the readability of any NEPA document.

Because each DOE proposed project or program presents a unique set of circumstances and potential impacts, the preparation of EAs or EISs does not reduce to a simple formula or cookbook. Therefore, the recommendations in this paper should be adapted to the particular circumstances presented by each proposed action, often by using a "sliding scale" approach.

Sliding Scale

The sliding scale approach to NEPA analysis recognizes that agency proposals can be characterized as falling somewhere on a continuum with respect to environmental impacts. This approach embodies instruction that CEQ has provided (40 CFR 1502.1 and 1502.2, for example) with respect to preparation of EISs, but which also makes good sense for EAs. Key elements of this instruction are to focus effort on significant environmental issues and alternatives and to discuss impacts in proportion to their significance.

The term "scale" refers to the spectrum of significance of environmental impact. Generally, those proposals with greater potential for significant environmental impact require more analysis than those proposals with very small environmental impacts. (Note that under CEQ's regulations and judicial rulings, heightened technical controversy is a factor in determining

significance.) Thus, as a general rule, where a proposal falls on the sliding scale of significance will determine the extent of analysis required.

In other words, in using the sliding scale approach to NEPA analysis, the preparer should analyze issues and impacts with the amount of detail that is commensurate with their importance. Thus, those proposals with clearly small environmental impacts usually will require less depth and breadth of analysis, either in identifying alternatives or analyzing their impacts. Conversely, as proposals fall increasingly closer to the other end of the scale, the depth and breadth of analysis will increase.

The sliding scale approach clearly recognizes that some EAs need to be more complex than others. The sliding scale approach, however, should not be used to attempt to address potentially significant impacts in a complex EA, rather than preparing an EIS. Further, the concept of the sliding scale, when applied to a proposed action of low potential for significant impacts, does not justify preparing an EA that does not conform to the recommendations set forth in this paper.

Recommendations

- Apply the advice in this document thoughtfully and sensibly in light of the specific circumstances each proposed action presents.

- Use this paper as one tool among many. This paper does not provide comprehensive guidance on the preparation of EAs or EISs, or a comprehensive checklist, or a replacement for good judgment.

- Focus EAs and EISs on impacts and issues with potential for significant environmental impacts. Identify trivial issues and impacts as such without inordinate consideration. Include only enough discussion to show why more study is not warranted.

- Provide information that a concerned citizen might want.

- Where substantial deviation from this general guidance appears necessary, arrange discussions, through the NEPA Compliance Officers, among cognizant program and field offices and the Office of NEPA Oversight, and General Counsel, as appropriate, on the approach to the EAs or EISs.

2. DOCUMENT SUMMARY

Background

A document summary facilitates the review of an EA or EIS. CEQ's regulations (40 CFR 1502.12) require a summary for an EIS. Although not required, a brief summary may be included in an EA.

Recommendations

To present an effective summary:

- Describe the content of the document.
- Describe the underlying purpose and need for agency action.
- Describe the proposed action.
- Describe each alternative addressed in the document.
- Identify the preferred alternative (if different from the proposed action).
- Describe the principal environmental issues analyzed and the results.

To avoid commonly encountered problems with summaries:

- Make data and discussions consistent with information in the document.
- Highlight key differences among alternatives.
- Address the entire EA or EIS (that is, do not focus only on one part).

3. PURPOSE AND NEED FOR ACTION

Background

An EIS must briefly specify the underlying purpose and need to which the agency is responding in considering the alternatives, including the proposed action (40 CFR 1502.13). An EA must include a brief discussion of the need (40 CFR 1508.9). (CEQ's regulations do not distinguish between "purpose" and "need," and CEQ uses the terms together and separately.)

The statement of purpose and need should define the need for DOE action, not for the proposed action (or preferred alternative). The statement of purpose and need is not a justification of what DOE proposes to do, but instead is a description of the underlying purpose and need to which the agency is responding (that is, an explanation of why agency action is needed). In general, the statement of purpose and need should reflect the goals to be achieved by the statutory authority under which DOE is proposing to act.

The statement of the agency's underlying purpose and need is critical to identifying the range of reasonable alternatives. If the purpose and need are defined too broadly, the number of alternatives that might require analysis would be virtually limitless. It is inappropriate in most situations, however, to define purpose and need so narrowly that only the proposed action would meet the need. The proposed action is generally only one means of meeting the agency's purpose and need for action.

Recommendations

- Relate the statement of purpose and need to the broad requirement or desire for agency action, not to the need for a specific proposal.

  Explanation: A statement of purpose and need for agency action could be that a site needs to perform laboratory analysis within 24 hours of water sampling to be in accordance with quality assurance procedures. An inappropriate statement of purpose and need would be that the agency needs to construct a new on-site laboratory; a new on-site laboratory, however, could be the proposed action.

- Write the statement of purpose and need to identify the problem or opportunity to which the agency is responding.

  Explanation: If the purpose and need for agency action is a requirement to perform laboratory analysis within 24 hours of sampling to be in accordance with quality assurance procedures, the range of reasonable alternatives could be limited to on-site laboratory construction, and expansion or use of nearby off-site laboratories.

  However, if the purpose and need for agency action is a need for increased laboratory analysis capability (i.e., without a 24-hour turnaround restriction), the range of reasonable alternatives would likely also include using DOE and commercial laboratories nationwide.

- Describe the purpose and need in a way that does not inappropriately narrow the range of reasonable alternatives. Do not include conceptual design specifications in the purpose and need statement if these will unreasonably narrow the range of alternatives.

  Explanation: Even if the purpose and need for agency (i.e., DOE) action is to conduct a specific research and development project or to apply a specific new technology, there may be reasonable location alternatives (e.g., within a DOE installation; at another DOE installation, or at a non-DOE site).

4. DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Background

In defining the scope of an EIS or EA, it is important to clearly describe the proposed action and identify the range of reasonable alternatives to the proposed action. In general, the range of reasonable alternatives is broader and the number of alternatives appropriately subjected to an impacts analysis ("analyzed alternatives") is greater in an EIS than in an EA. (In this paper, "analyzed alternative" means an alternative, including no action, whose environmental impacts are assessed.) The following subsections address how to describe the proposed action and determine the range of reasonable alternatives, and how to avoid improper segmentation. The depth of analysis required for assessing potential impacts of the alternatives and comparing alternatives (once they are described) is addressed in Section 6.

CEQ's regulations direct all agencies to use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment (40 CFR 1500.2(e)). In formulating (and analyzing the impacts of) the proposed action and alternatives, also comply with DOE's Policy on Waste Minimization and Pollution Prevention (August 20, 1992), which expresses a DOE commitment to "the inclusion of cost-effective waste minimization and pollution prevention in all of its activities, including consideration of these concepts and approaches in DOE's program planning and major assessment processes, where appropriate, such as NEPA. . . ."

CEQ's regulations require that EISs identify those alternatives that have been eliminated from detailed study (i.e., impacts analysis) because they are unreasonable and briefly discuss why they have been eliminated (40 CFR 1502.14(a)). Although not required by CEQ's regulations, a comparable practice should be followed for EAs, particularly when parties who are questioning the action have suggested alternatives that DOE believes do not address the purpose and need, or are unreasonable in other respects, such as impractical cost. If all or nearly all prospective alternatives are found to be unreasonable, it should be a warning that the purpose and need may be too narrowly identified. (See Section 3.)

4.1 THE PROPOSED ACTION

Recommendations

- Describe the proposed action in sufficient detail so that its potential impacts can be identified.

  Explanation: As appropriate, include the following elements in the description of the proposed action --

  (1) *general project progression* - information on construction milestones, projected operating cycle, and any aspects of the proposed action that could result in impacts that vary over time (for example, with time of day or season of the year);

  (2) *pre-operational activities* - information on construction, including pre-construction site surveys, site clearing, access road construction, and other activities that would be necessary to support construction;

  (3) *operational activities* - description of project and related support operations or facilities on-site and off-site, including identification of roads, parking lots, utility hook-ups, borrow sites, and maintenance and transportation activities. Identify waste streams in general (including emissions) and state how they would be treated and/or disposed of; and

  (4) *post-operational requirements* - description of reasonably foreseeable future requirements including site close-out and site restoration. Frequently only limited discussion of decontamination and decommissioning or other such distant future post-operational activities is possible. In such cases, include a statement that a separate NEPA review may need to be undertaken before such future activities occur.

- When identifying releases, include rate and duration. Provide an explanation when it is not possible to quantify releases that may result in significant impact.

  Explanation: Rather than stating that the discharge rate would be "1.0 mg/hr," say that the rate would be "1.0 mg/hr for 8 hours per day, 5 days per week." The impact of the latter may be more readily determined.

- Do not make the project description so detailed and specific, however, that it would not encompass future modifications.

  Explanation: Rather than specifying the expected volume of chemical to be used in a process per unit time or over the entire length of the project, describe a realistic maximum for both quantities.

- Do not include in the description of the proposed action elements that are more appropriate to the statement of purpose and need.

- In defining the proposed action, consider what mitigation measures are available to reduce environmental impacts. Include routine mitigation measures (e.g., standard construction practices and DOE-required procedures) in the description of the proposed action. Describe other mitigation measures as part of the proposed action if the action is unlikely to proceed without the mitigation (such as scheduling construction or operation not to occur during a migratory endangered species residence on-site) or as alternatives (or subalternatives) if the mitigation is optional (such as constructing noise abatement walls to lower noise levels even further below standards that could be met without the walls).

- Describe private and other Federal agency proposed actions that would be "enabled" by DOE in terms of the DOE action to be taken (such as issuing grants and contracts, participating in cooperative agreements, and performing "work for others").

  Explanation: An EA or EIS should not misrepresent a private action that has been federalized by DOE funding as a DOE action. For example, the EA or EIS should state that "the proposed action is a DOE grant to State University for construction and operation of a new undergraduate chemistry laboratory," rather than stating that DOE proposes to construct and operate a chemistry laboratory at the University. Note that actions by DOE's contractors at DOE's direction are not "private" actions.

4.2 RANGE OF REASONABLE ALTERNATIVES

Background

General

The failure to consider alternatives that seem reasonable affects the credibility of an otherwise adequate NEPA review. As stated above, generally the range of reasonable alternatives is broader and the number of alternatives whose impacts are appropriately analyzed is greater in an EIS than in an EA.

Environmental Impact Statements

CEQ's regulations state that the comparative analysis of alternatives, including the proposed action, is the heart of an EIS (40 CFR 1502.14) and require a rigorous exploration and objective evaluation of reasonable alternatives, including the no action alternative (discussed separately in subsection 4.3).

In "Forty Most Asked Questions Concerning CEQ's NEPA Regulations" (46 FR 18026, March 23, 1981, as amended, 51 FR 15618, April 25, 1986), CEQ states that for EISs, reasonable alternatives include those that are practical or feasible from a common sense, technical, and economic standpoint. This CEQ guidance also states that for an EIS the number of reasonable alternatives considered in detail should represent the full spectrum of alternatives for meeting the agency's purpose and need, but an EIS need not discuss every unique alternative when an unmanageably large number is involved.

Environmental Assessments

CEQ's regulations also require that an EA include a brief discussion of alternatives to a proposed action that involves unresolved conflicts concerning alternative uses of available resources (40 CFR 1508.9(b)). In addition, DOE's NEPA regulations (but not CEQ's regulations) require that the no action alternative be included in EAs (10 CFR 1021.321(c)). Although CEQ's requirement to address alternatives (which stems from section 102(2)(E) of NEPA) has had varying interpretations, courts are increasingly requiring discussion of alternatives in EAs. Thus, the purpose of an EA is not always regarded as simply a basis for determining whether to prepare an EIS.

Unlike EISs, where generally the depth of quantitative analysis is approximately the same for each alternative analyzed in the range of reasonable alternatives, EAs often can focus the quantitative analysis on the proposed action; that is, discussions of alternatives in EAs generally can be qualitative. However, certain EAs may need to identify and analyze more alternatives in the range of reasonable alternatives and provide more in-depth

analysis than usual (e.g., greater quantitative analysis). These EAs generally deal with proposals where there is heightened technical controversy surrounding potential impacts from the proposed action or where there is otherwise greater potential for significant environmental impacts from the proposed action. (See Section 6.)

In other words, where a proposed action falls on the sliding scale will affect the alternatives analysis. All EAs, however, must satisfy minimum requirements as reflected in 40 CFR 1508.9 and 10 CFR 1021.321.

Recommendations

- Identify the range of reasonable alternatives that satisfies the agency's purpose and need.
- If certain alternatives appear obvious or have been identified by the public, but are not reasonable, explain why they are not reasonable.
- Address reasonable alternatives that are outside DOE's jurisdiction, even if they conflict with lawfully established requirements.
- Do not overlook reasonable technology, transportation, or siting alternatives, including off-site alternatives.
- Note that infeasible alternatives are certainly unreasonable, but feasible alternatives may also be unreasonable.
- As a general guide for EAs, use the sliding scale approach described above when determining how many alternatives to identify and analyze in an EA and the depth of analysis to provide for each alternative.

4.3 THE NO ACTION ALTERNATIVE

Background

As discussed in subsection 4.2, the no action alternative must be considered in all DOE EAs and EISs. The no action alternative may or may not be a reasonable alternative.

The reason for considering the no action alternative is often misunderstood. The no action alternative provides an environmental baseline against which impacts of the proposed action (and alternatives) can be compared.

The no action alternative has environmental impacts. Generally, but not always, these would include the environmental impacts of not satisfying the underlying purpose and need for agency action. For proposed new projects, "no action" means that the proposed activity would not take place. For proposed changes to an ongoing activity, "no action" can mean continuing with the present course of action with no changes. It can also mean discontinuing the present course of action by phasing-out operations in the near term.

Recommendations

- Describe the no action alternative in sufficient detail so that its scope is clear and its potential impacts can be identified. Do not simply state that one alternative to the proposed action is no action.

- No action taken by DOE may constitute the only reasonable alternative to the proposed action.

  Explanation: For example, DOE may be involved with a private applicant and faced with a decision that is binary in nature (e.g., fund or not fund, approve or not approve). In such a case, the no action alternative may include several subalternatives consisting of those reasonably foreseeable courses of action that would be available to the applicant if DOE denies its application. DOE should note such apparent subalternatives, and should analyze their impacts to the extent they are reasonably foreseeable by DOE.

- Consider the no action alternative even if DOE is under a court order or legislative command to act (10 CFR 1021.321(c)). (Note that if DOE clearly has no discretion regarding its action, then the action is not subject to NEPA review. See 40 CFR 1508.18 and 10 CFR 1021.104(b).) Include discussion of the legal ramifications of no action, if appropriate.

- Do not use a description of the affected environment as a description of the no action alternative.

4.4 AVOIDING IMPROPER SEGMENTATION

Background

With regard to EISs, CEQ's regulations (40 CFR 1508.25(a)) state that an agency should analyze "connected actions" and "cumulative actions" in one EIS. An agency should also analyze "similar actions" in one EIS when that is the best way to assess adequately the combined impacts of the similar actions or reasonable alternatives.

"Connected actions" are those that automatically trigger other actions that may require EISs, cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification. "Cumulative actions" are those that when viewed with other actions proposed by the agency have cumulatively significant impacts and therefore should be discussed in the same EIS. "Similar actions" are those that when viewed with other reasonably foreseeable or proposed agency actions have similarities that provide a basis for evaluating their environmental impacts together, such as common timing or geography. (See 40 CFR 1508.25(a).)

CEQ's regulations are directed at avoiding improper segmentation, wherein the significance of the environmental impacts of an action as a whole would not be evident if the action were to be broken into component parts and the impact of those parts analyzed separately. Although CEQ's regulations do not specifically direct agencies to consider connected actions, cumulative actions, and similar actions in defining the scope of an EA, the impacts from such actions should be considered together in a single EA. (Also see discussion in Section 6.1 on cumulative impacts.)

Recommendations

- Take account of relationships between a proposed action and other actions the agency proposes to take that may affect the same environmental area.
- Include transportation activities as part of the proposed action when the transportation activities would be necessary to make the action happen.

- Think of a proposed action expansively, at least initially, and aim to include rather than exclude activities from the scope of a proposed action.

  Explanation: If a proposed action involves the generation of waste and could not be implemented without construction of a waste storage facility that otherwise would not be needed, the proposed action must include the storage facility. If, however, the storage facility represents a future need that is not yet ripe for proposal, the storage facility may be treated as a connected action with indirect effects (see subsection 6.1). (That is to say, the cumulative impacts of the proposed action and the connected action must be described, but consideration of alternatives for the connected action may be deferred until the connected action is ripe for proposal.)

- Arrange consultations, through the NEPA Compliance Officers, among cognizant program and field offices and the Office of NEPA Oversight, and General Counsel, as appropriate, when there is a substantive question about the scope of a proposed action.

5. THE AFFECTED ENVIRONMENT

Background

CEQ's regulations require a succinct description of the affected environment in a discrete section of an EIS unless an agency has a compelling reason to format an EIS differently (40 CFR 1502.10 and 1502.15). An EA should provide a brief description of the environment to be affected by a proposed action (and by any other analyzed alternative), but there is no prescribed format.

The extent of the "affected environment" may not be the same for all potentially affected environmental components. For example, traffic may increase within four kilometers of a site from which waste would be removed to a nearby landfill (the extent of the affected environment with respect to transportation impacts). In contrast, groundwater extending two kilometers from the site may be affected (the extent of the affected environment with respect to groundwater impacts).

Recommendations

- In describing the affected environment, lay the foundation for evaluating the potential environmental impacts of the proposed action and analyzed alternatives.

  Explanation: Limit the description of the existing environment to information that directly relates to the scope of the proposed action and alternatives whose impacts are to be analyzed; i.e., provide the information that is necessary to assess or understand the impacts. Do not provide information, for example, on hydrogeology or water resources unless the proposed action would consume water or could result in discharges to surface or groundwaters. Where appropriate, incorporate by reference more detailed descriptions of the affected environment.

- Provide sufficient detail concerning environmental parameters (such as air quality) that may be affected by the proposed action and analyzed alternatives to adequately support the impact analysis, including cumulative impact analysis.

- Describe environmentally sensitive resources that are present in the area and that may be affected by the proposed action or analyzed alternatives (such as floodplains and wetlands, threatened and endangered species, prime and unique agricultural lands, and property of historic, archeological, or architectural significance). If such resources are present, be sure to satisfy requirements for environmental review under applicable laws, regulations, and Executive Orders and, to the extent possible, integrate such review with the NEPA review for the proposed action. When appropriate, state that environmentally sensitive resources are not present. Append consultation letters, as appropriate.

6. ENVIRONMENTAL IMPACTS (EFFECTS)

Background

The discussion below largely concerns approaches for the analysis of impacts (beneficial and adverse). In general, impacts will be more thoroughly analyzed in EISs than in EAs because EISs deal with proposed actions that admittedly may have significant impacts. An EIS must devote substantial and comparable treatment to all alternatives analyzed in the range of reasonable alternatives.

In contrast, an EA may focus the impacts analysis on the proposed action in order to provide the basis for a significance determination. The CEQ regulations (40 CFR 1508.9(b)), however, require EAs to include brief discussions of the impacts of alternatives (as well as the proposed action) for proposed actions that involve unresolved conflicts concerning alternative uses of available resources. As with the choice of alternatives (subsection 4.2), the impacts of the proposed action and alternatives should be more comparably analyzed in EAs where there is heightened technical controversy surrounding potential impacts or where there is otherwise greater potential for significant impacts. That is, the sliding scale approach applies to impacts analysis in much the same way as it applies to the choice of alternatives.

CEQ's "Forty Questions" (referenced in subsection 4.2) distinguishes between the "environmental consequences section" of an EIS, which should be devoted largely to a scientific analysis of the impacts of the proposed action and analyzed alternatives, and the "alternatives section," which should present a concise comparison of alternatives (based on and summarizing information developed in the "environmental consequences section"). Subsection 6.7 provides some general approaches to alternatives comparisons in both EISs and EAs.

Recommendations

- Address environmental impacts in proportion to their potential significance. That is, focus the impacts analysis and discussion on project attributes that have significant impacts or potential for significant impacts.

- Do not address clearly insignificant impacts in detail, but indicate that all relevant environmental attributes were considered and provide enough information to show why greater consideration is not needed.

6.1 IMPACT IDENTIFICATION AND QUANTIFICATION

Background

CEQ's regulations (40 CFR 1508.8) distinguish between direct and indirect effects. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are reasonably foreseeable effects caused by the action that occur later in time or farther in distance.

CEQ's regulations (40 CFR 1508.7) define cumulative impacts as those that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts analysis captures the effects that result from the proposed action and the effects of other actions taken during the proposed action's duration in the same geographic area.

CEQ's regulations (40 CFR 1502.16) also direct that irreversible and irretrievable commitments of resources be addressed in EISs. These impacts include resource loss (such as the burning of fossil fuel) and forgone resources (i.e., resources that would remain but would be inaccessible or could not be used, such as land and ecosystems inundated by dam construction).

Recommendations: Identifying impact categories for further consideration

- Identify potentially nontrivial impacts.

  Explanation: One problem in documents concerning environmental restoration activities, for example, is the failure to address adverse impacts related to the implementation of a project. To illustrate, if the proposed action is a pump-and-treat groundwater restoration project, the EA or EIS should assess any adverse environmental effects of well installation and effluent discharge on terrestrial and aquatic biota, in addition to the more obvious beneficial effects from groundwater treatment.

- Identify possible indirect and cumulative impacts, and indicate the degree to which these impacts are uncertain.

  Explanation: The classic example of an indirect impact is growth and development that follows the construction of a road or the extension of utility lines. Another example is the installation of a flood control or hydroelectric power dam that might directly interrupt salmon spawning; over time, bald eagles (which feed on salmon) might indirectly suffer from a loss of food supply.

  A graphic example of the importance of considering cumulative effects is the markedly different effects of adding a small amount of liquid to a full glass or a nearly empty one. Similarly, the cumulative effect of taking an action that would increase traffic by a few trucks per day at an already overcrowded intersection is different from the effects of adding the same traffic to a little-used rural crossing. Also, a small loss of habitat from one proposed action, combined with losses from other projects, may produce an overall significant loss of habitat and materially affect the regional biodiversity.

- Address both the total impact from all activities encompassed within a proposed action and the incremental impact of the proposed action when added to other actions (i.e., cumulative impact).

Recommendations: Impact quantification

- Quantify impacts to the extent practicable, consistent with the sliding scale approach.

- Do not attempt to quantify impacts on environmental resources when it is clear from the context that any impacts would be virtually absent. As appropriate, provide a brief negative declaration, such as "The project would not affect threatened or endangered species or their habitats," and provide appropriate references or consultation letters. As this example suggests, not every resource requires a negative declaration, only those sensitive resources at a site.

- Do not just identify pollutants that would be released and wastes that would be produced but, wherever possible, identify potential effects from these substances (e.g., human diseases, and effects on plant and animal populations and ecosystem functions).

  Explanation: Providing a quantified release rate should not be the endpoint in effects analysis. For example, releases into fresh water streams may affect humans who drink the water, alter aquatic invertebrate populations, or accumulate in sediment and ultimately have adverse impacts on benthic invertebrates.

- Provide sufficient data and references to allow review of the validity of analysis methods and results.

- Use available data for an EA. If data needed to quantify impacts are not available, prepare a qualitative description of the most relevant impacts. Be aware that inability to satisfactorily characterize an important impact in an EA likely will render it inadequate to support a finding of no significant impact.

- When confronted with incomplete or unavailable information for an EIS, refer to the requirements of 40 CFR 1502.22.

- Do not use regional, national, or global comparisons to trivialize the significance of a local impact.

  Explanation: Local comparisons may sometimes appropriately provide a context for assessing impact (e.g., withdrawing 10 hectares of agricultural land from use in a county with 10,000 hectares in production of the same crop). However, it would be inappropriate to say "five traffic fatalities would be expected as a result of the project campaign, but this is small compared to the approximately 200,000 traffic fatalities that would be expected to occur nationally during the same period."

- Differentiate among information used to represent baseline conditions (impacts of no action), data that may be used to assess potential cumulative impacts, and information presented merely to provide perspective.

- Recognize that relative comparisons do not provide absolute impact information.

  Explanation: The statement "routine emissions would increase by 0.05 percent" is not a statement describing an impact (although it is a valuable part of the description of the proposed action). The statement provides neither the absolute value of emissions nor the basis for determining their environmental impacts. Further, relative comparisons, particularly those given without a baseline of absolute magnitude, may be misleading (e.g., "99.9% pure water" could describe raw sewage).

- Avoid presenting a description of impacts that are severe without also describing the likelihood of such impacts occurring.

6.2 HUMAN HEALTH EFFECTS

Background

The principal potential human health effect from exposure to low doses of radiation is cancer. Human health effects from exposure to chemicals may be both toxic effects (such as nervous system disorders) and cancer. Exposure and dose are neither health effects nor environmental impacts. A common problem in estimating effects from human exposure to chemicals or radiation is the failure (or inability in some cases) to carry the analysis to completion; that is, to identify, and quantify when appropriate, potentially significant health effects (e.g., number of deaths).

It is appropriate, but not at all sufficient for purposes of analysis, to state that DOE facilities and operators would have to comply with all applicable standards, that exposure to workers and the public would be minimized by using appropriate and approved safeguards and procedures, or that exposure to workers and the public would be maintained as low as reasonably achievable below standards. Where standards are directly relevant to limiting environmental impacts, identify the standards and briefly state their requirements.

Recommendations: Human health effects generally

- Apply the sliding scale approach when characterizing human health effects.

- Do not just identify pollutants that would be released and wastes that would be produced but, wherever possible, identify potential effects from these substances (e.g., human diseases, and effects on plant and animal populations and ecosystem functions).

  Explanation: Providing a quantified release rate should not be the endpoint in effects analysis. For example, releases into fresh water streams may affect humans who drink the water, alter aquatic invertebrate populations, or accumulate in sediment and ultimately have adverse impacts on benthic invertebrates.

- Provide sufficient data and references to allow review of the validity of analysis methods and results.

- Use available data for an EA. If data needed to quantify impacts are not available, prepare a qualitative description of the most relevant impacts. Be aware that inability to satisfactorily characterize an important impact in an EA likely will render it inadequate to support a finding of no significant impact.

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It is appropriate, but not at all sufficient for purposes of analysis, to state that DOE facilities and operators would have to comply with all applicable standards, that exposure to workers and the public would be minimized by using appropriate and approved safeguards and procedures, or that exposure to workers and the public would be maintained as low as reasonably achievable below standards. Where standards are directly relevant to limiting environmental impacts, identify the standards and briefly state their requirements.

Recommendations: Human health effects generally

- Apply the sliding scale approach when characterizing human health effects.

- Determine the period of estimated exposure by how long a project would expose workers or the general public. Typically use 30 years for workers and the public unless a project is clearly expected to be shorter or longer in duration or would expose the public for a full lifetime. Full lifetime exposures could occur, for example, from radioactive material with long half-lives or other long-lived contaminants that are permanently at a site (such as from waste disposal or residual radioactivity or contaminants that persist in soils or groundwater). In cases of potential full lifetime exposure for the public, use 70 years for the period of estimated exposure.

  Analyses generally should be based on realistic exposure conditions. Where conservative assumptions (i.e., those that tend to overstate the risk) are made, describe the degree of conservatism, and characterize the "average" or "probable" exposure conditions if possible.

- Consider all potential routes of exposure, not just the most obvious route.

  Explanation: Where the proposed activities might result in the air suspension of contaminated soils, consider the downwind exposure of the public to suspended particles.

- Aim to provide estimates of potential health effects from chemical or radiological exposure for three subsets of populations and maximally exposed individuals in those populations: (1) workers that would be involved in the proposed action, (2) noninvolved workers (workers that would be on the site of the proposed action but not involved in the action), and (3) members of the general public. Do so for both routine operations and accident scenarios (accidents discussed in subsection 6.4).

- Provide the basis for health effects calculations, as it may be misleading to present only the resulting estimates. As appropriate, present the dose, dose-to-"risk" (health effects) conversion factor, potential health effects calculated for a maximum year and for the total period of estimated exposure, and any other germane information (further discussion below).

Recommendations: Carcinogenic effects from radiation exposure

- When providing quantitative estimates of carcinogenic effects of radiation exposure, express population (or collective) effects as an estimated number of fatal cancers, and express maximum individual effects as the estimated maximum probability of the death of an individual. Evaluate effects for involved workers, noninvolved workers, and the general public under both routine operations and accident scenarios.

- When providing quantitative estimates of impacts, always use current dose-to-risk conversion factors that have been adopted by cognizant health and environmental protection agencies, such as the Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA), and identify the conversion factors being used. Note that conversion factors are occasionally revised to incorporate new experimental and epidemiological information.

  Explanation: As of May 1993, the dose-to-risk conversion factors that should be used for estimating cancer deaths from exposure to low dose rates of ionizing radiation are 500 cancer deaths (latent cancer fatalities) per million person-rem effective dose equivalent (5×10^{-4} deaths per person-rem) for the general population and 400 cancer deaths per million person-rem (4×10^{-4} deaths per person-rem) for workers (NRC, Preamble to Standards for Protection Against Radiation, 56 FR 23363, May 21, 1991). The difference is attributable to the presence of children in the general population.

- Use statements about background or natural sources of radiation judiciously, to help explain the impacts but not to suggest that the impacts are acceptable. Do not assert that the average annual effective dose equivalent caused by a project translates to an insignificant increase in risk simply because it constitutes only a small increase above background. Present information in relation to standards and allow readers to make their own judgments.

  Explanation: The average annual effective dose equivalent individuals receive from naturally occurring radiation, or some other point of reference (e.g., airplane travel), might provide readers perspective on doses estimated for the proposed action. Impacts from the proposed actions would occur independently of impacts from natural background radiation, however, and the text should not imply that background radiation provides a basis for judging the significance of the impacts of the proposed action.

- Always define "risk" when using the term and provide the context for its use. If "risk" or "probability" is used in describing potential effects, be certain to state the effect the probability describes, e.g., the probability of cancer death, probability of high dose rate, or probability of a particular accident scenario.

  Explanation: "Risk" is used in discussions of health effects with wide variation in meaning. Although "risk" sometimes indicates a general statement of concern or hazard or danger, the term also is used to denote uncertainty or chance or probability, or even effects themselves, often with a numerical (or algebraic) presentation.

- Based on the sliding scale approach, the assessment of health effects from occupational radiation exposures in EAs usually need not be as extensive as the assessment in EISs. The fact that such exposures are subject to limits and must be maintained as low as reasonably achievable (under DOE Orders) does not itself demonstrate that the effects on workers' health (from the project or cumulatively with other exposures) are insignificant. DOE's experience indicates, however, that many EA-level proposed actions pose worker health issues that do not warrant thorough examination in the NEPA context. For *small-scale* projects (in terms of worker exposure to radiation), the following discussion may serve as a model description of the health effects from occupational radiation exposure from normal operations.

  Worker exposures to radiation under normal operations would be controlled under established procedures that require doses to be kept as low as reasonably achievable and that limit any individual's dose to less than 5 rem per year. Based on relevant experience with other projects, DOE expects the average dose from this proposed project to be maintained below _____. [Give an appropriate dose that is substantially below 1 rem if this model is to be used; e.g., 0.1 rem.] The cumulative worker dose would not exceed _____ person-rem. [Obtain the result by multiplying: average annual dose (rem, from the previous sentence) times the average number of workers being exposed at one time times the operational life of the project (years). Use this model only if the result is well below 1,000 person-rem.] Based on an occupational risk factor of 4 x 10^{-4} fatal cancers per person-rem, workers engaged in this proposed project would not be expected to incur any harmful health effects from radiation exposures they receive during normal operations.

Explanation: This discussion is based on an occupational risk factor of 4×10^{-4} fatal cancers per person-rem, or 1 fatal cancer per 2,500 person-rem. Assuming a project lifetime of about 30 years, this implies that a project that would deliver approximately 100 person-rem per year would be expected to produce approximately one fatal cancer induced by occupational radiation exposure over the duration of the proposed project. (A project involving 100 workers that receive an average individual dose of 1 rem per year would produce 100 person-rem per year.)

The foregoing discussion does not imply and should not be inferred to constitute a position regarding the "significance" (in the NEPA sense) of any exposure level or number of health effects. Rather, it suggests general circumstances under which occupational radiation exposure may not warrant *thorough* examination in an EA.

The model description suggested above may be used when exposures are confidently projected to be below the levels indicated -- the farther below, the more appropriate the simple approach becomes -- and when there are no substantial counterindications to its use. The following are examples of such counterindications: (1) the exposure estimates are unusually uncertain, such as when workers would be operating under conditions for which there is little relevant experience; or (2) there is a high level of interest regarding the proposed action in which occupational radiation risk might be an issue.

- For EISs, or for EAs for which the counterindications discussed above exist, include more complete statements of health effects, such as in the following example for involved workers.

  Example: Based on a dose-to-risk conversion factor of 4×10^{-4} latent cancer fatalities per person-rem, the maximally exposed worker (dose rate of 1 rem per year) would have an estimated annual probability of a fatal cancer induced by the radiation of 4×10^{-4}. The estimated probability of the worker dying from cancer induced by such radiation doses over the worker's projected exposure period (30 years) is approximately 1×10^{-2} (or 1 chance in 100).

  The group of 200 workers are estimated to be exposed at an average dose rate of 50 mrem/year. Assuming the group is exposed at this rate for 30 years, the estimated number of fatal cancers induced among the workers would be 0.1. It is most likely there would be no fatal cancers attributable to this exposure.

Recommendations: Effects from chemical exposure

- As appropriate, and as discussed generally above, evaluate toxic and carcinogenic health effects from exposure to hazardous chemicals for involved and noninvolved workers and the general public. For toxic effects, compare dose estimates with appropriate reference doses. For carcinogenic effects, calculate values for potential carcinogenic effects from dose estimates using appropriate dose-effect relationships.

- As appropriate data permit, evaluate acute toxicity, chronic health effects, cancer, and occurrence of inheritable mutations; and address cumulative or synergistic health effects from exposure to multiple chemicals.

- If reference doses or dose-effect relationships are not available, use reference concentrations, Occupational Safety and Health Administration permissible exposure limits, or other criteria that may be available in such sources as EPA's Integrated Risk Information System database or the National Library of Medicine's MEDLAR database.

6.3 TRANSPORTATION IMPACTS

Background

When transport of waste or materials of a hazardous or radioactive nature is a necessary part of a proposed action or analyzed alternative, or, more generally, when transport is in any respect a major factor (e.g., transportation of construction materials for a proposed major dam), the environmental impacts of such transport should be analyzed, even when DOE is not responsible for the transportation. Transportation impacts include those from transport to a site, on-site, and from a site, when such activities are reasonably construed as part of the proposed action or analyzed alternative. If not otherwise analyzed, include any necessary loading or unloading activities in the transportation impact analysis.

As with the choice of alternatives, apply a sliding scale approach to the transportation analysis. The nature of the proposed action and analyzed alternatives determines whether to describe the transportation impacts qualitatively or to analyze them quantitatively, and what types of potential transportation accidents to consider (see subsection 6.4).

Recommendations

- Analyze all transportation links that are reasonably foreseeable parts of the proposed action or analyzed alternative, such as overland transport, port transfer, and marine transport. If the action contains links that traverse the global commons (e.g., the oceans or outer space), then impacts from such transport should be included in the NEPA analysis; state that the global commons analysis is provided pursuant to Executive Order 12114.

- Do not rely exclusively on statements that transportation would be conducted in accordance with all applicable regulations or requirements of the U.S. Department of Transportation, the Environmental Protection Agency, the Nuclear Regulatory Commission, or State authorities.

- Evaluate both routine (i.e., incident-free) transport and accidents. (Accidents are discussed in subsection 6.4.) Give special emphasis to public or worker health impacts from exposure to chemicals or radiation.

- Be sure to use defensible estimation methods for assessing the radiological impacts of transportation (such as the most current version of RADTRAN).

- Estimate the annual and total impact of all DOE and non-DOE transportation associated with the use of specific routes (if known) over the term of the proposed action or analyzed alternative, including, for chemical and radiological exposure, the impact on a maximally exposed individual. The impacts of the proposed action related to transportation must be totaled over the duration of the project (e.g., 48 trips per year for 5 years). (Note: This total is not the cumulative impact of transportation impacts from the proposed action and other transportation activities over the same time period in the same area.)

- In determining the cumulative impact from transportation activities, use available data to estimate, for example, the number of radioactive materials packages that were shipped over a given transportation system over a given period of time.

6.4 ACCIDENT ANALYSIS

Background

This section deals with environmental impacts that will not necessarily occur under a proposed action, but which are reasonably foreseeable. The term "reasonably foreseeable" has no precise definition. Its interpretation should be guided by *two primary purposes* of NEPA review: (1) to determine whether a proposed action has the potential for significant impacts (EA), and (2) to inform an agency (and the public) in making reasonable choices among alternatives (EA and EIS).

For both purposes above, "reasonably foreseeable" includes impacts that may have very large or catastrophic consequences, even if their probability of occurrence is low, provided that the impact analysis is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason. Note, however, that a high-consequence event would not necessarily have "significant impacts" (in the sense of NEPA) if its probability of occurrence is very low. (The probability referred to in these discussions is the probability of the consequences of the accident or failure scenario occurring, not the probability of the initiating event occurring.)

EAs normally deal with proposed actions and analyzed alternatives that would not have potential for significant adverse impacts even under accident conditions. In contrast, EISs normally deal with larger scale projects that may have such potential. As with the choice of alternatives and the analysis of environmental impacts, use a sliding scale approach in considering impacts from potential accidents (or abnormal events). The nature of the proposed action or analyzed alternatives determines what types of potential accidents to consider, whether to describe impacts from accidents qualitatively or to analyze them quantitatively, and to what extent to consider very low probability events. Analyze impacts from reasonably foreseeable accidents to about the same extent as other impacts from the proposed action or analyzed alternatives, or even to a greater extent where impacts from accidents are the dominant concern.

Recommendations: Steps for determining which accident scenarios to analyze

- Identify the spectrum of potential accident scenarios (e.g., fire, impact or puncture events, HEPA filter failure) that could occur during construction, operations, and transportation activities encompassed by the proposed action and analyzed alternatives. Also identify failure scenarios from natural events (e.g., tornados, earthquakes) and human error (e.g., forklift accidents).

For a proposed action that involves a facility or component with a set of design basis criteria (DOE 6430.1A), consider the following two major categories of accidents.

Within design basis: First focus on accident, failure, or error scenarios within the design basis and determine the type of event that is likely to cause the greatest consequences, supporting that determination with rough estimates of or qualitative judgments about the magnitude of the consequences. Typically, these events will have probabilities of greater than 10^{-6} per year, especially for natural phenomenon events.

Beyond design basis: Look beyond design basis to see if there may be events of such large consequences that they need to be considered in order to satisfy the primary purposes of NEPA review as stated in the first paragraph in this section. Generally, examine the probability range 10^{-6} to 10^{-7} per year to the degree that events within this range bear on satisfying the two primary purposes of NEPA review cited above. As a practical matter (including litigation history), events with probabilities less than 10^{-7} per year will rarely need to be examined.

- Describe events that have very small consequences only qualitatively in the NEPA review, regardless of the probabilities.

- For events whose consequences are relatively low and numerical probability estimates are unavailable or difficult to obtain, qualitative descriptions such as "very infrequent" or "highly unlikely" may be used, provided that the basis for such a conclusion is described.

- Analyze events that have large consequences in terms of both their probabilities and consequences. If it is not possible to determine the probability with much certainty, use a range of probabilities.

- The term "consequence" refers to the results of an accident without consideration of the probability of the accident. Often, the product of probability and consequence, referred to as "risk," is provided as a measure of impact, but this product is not as informative as a presentation of its separate factors and is not the only definition of "risk."

Recommendations: Factors to consider in accident impact analysis

- Consider impacts on the public and on workers.
- Consider synergistic effects with nearby facilities, chemical as well as radiological.
- Consider common mode failures, including external initiators (such as earthquakes).
- Reference Safety Assessments and Safety Analysis Reports, if available.

6.5 COMPLIANCE WITH OTHER REGULATIONS

Background

As a practical matter, all proposed actions must comply with applicable requirements, yet some actions nevertheless would have very large and significant environmental impacts (e.g., major construction projects). A statement that the proposed action or analyzed alternatives would be in compliance with applicable environmental regulations, DOE Orders, or licenses does not substitute for a presentation of impacts.

Recommendations

- Rather than just stating that "all wastes would be disposed of in accordance with applicable regulatory requirements and DOE Orders," demonstrate (e.g., document by reference) that the existing disposal site has adequate capacity and is permitted to receive the waste type. If impacts from proposed disposal of waste at an existing site would threaten to violate a standard (i.e., have potential for significant impact), take the analysis further and estimate impacts. A judgment of significance of impacts includes a consideration of "threats" to standards (40 CFR 1508.27(b)(10)).

- Do not rely on compliance with environmental discharge permits (such as National Pollutant Discharge and Elimination System or air emissions permits) as the only evidence that a proposed action or analyzed alternative does not have potential for significant impact. Evaluate incremental inputs cumulatively with other discharges to the receiving environment (e.g., air, soil, groundwater, surface water).

  Also, consider the quality of the receiving environment. A proposed action that would change a relatively pristine area to one where pollutant levels were near limits (e.g., an action that could cause "significant deterioration") would be an action with potential for significant impacts.

  > Explanation: A potential violation of laws, regulations, and standards may indicate a potential for significant impacts, but compliance does not establish insignificance.

6.6 CONCLUSIONS

Recommendations

- Make sure that conclusions follow from the analysis presented in the EA or EIS. Do not state bald or unsubstantiated conclusions.

- Provide sufficient information to support a technical review of the analysis and conclusions. This can often be accomplished by citing appropriate references or providing detailed technical information in an appendix.

- Explain the cause-and-effect relationship between an action and its impacts; do not simply provide the end result.

  > Example: The loss of bald eagle food supply may be an indirect impact of dam construction, but without an explanation of the relationship of the dam to salmon spawning, the reason why dam construction might affect the bald eagle may not be clear to a nonspecialist.

6.7 COMPARISON OF IMPACTS IN ENVIRONMENTAL IMPACT STATEMENTS

Recommendations

- Present the impacts of alternatives in comparative form to sharply define the issues and provide a clear basis for choice (40 CFR 1502.14). Use tables when appropriate.

- Conduct analysis to discriminate among alternatives. Do not present bounding impact estimates that obscure differences among alternatives.

- Present enough information to allow readers to evaluate the differences among alternatives. Avoid bias for or against alternatives. Do not simply restate impacts presented in the environmental impacts section.

7. LIST OF PREPARERS AND LIST OF AGENCIES AND PERSONS CONSULTED

Background

An EIS (but not an EA) is required to list the names and qualifications (expertise, experience, and professional disciplines) of persons who were primarily responsible for preparing the EIS or significant background papers (40 CFR 1502.17). An EA must contain a list of outside agencies and persons consulted (i.e., those outside DOE and its contractors) during preparation of the document (40 CFR 1508.9(b)). Conflict-of-interest considerations (40 CFR 1506.5(c)) apply to preparation of an EIS but not to preparation of an EA.

Recommendations

- Do not list DOE or contractor personnel who prepare an EA or who are consulted during its preparation in the list of outside agencies and persons consulted.
- Indicate DOE (not a contractor) as the preparer on the title page of an EA or EIS.

8. APPENDICES

Background

CEQ's regulations discuss the use of an appendix in an EIS (40 CFR 1502.18). In general, there will be less need for and use of appendices in EAs than in EISs because DOE generally prepares EAs for actions that appear at the onset to be without potential for significant impact. CEQ defines an EA to be a "concise" rather than a "detailed" assessment.

Recommendations

- Use appendices to support the content and conclusions contained in the main body of an EIS, or EA when necessary.

- Provide supporting information that reviewers may want to examine, such as details of the modeling methodology, in an appendix. As a general rule, however, do not put raw data in an appendix, unless the data are critical for analytical validation.

- Make information in an appendix consistent with information in the main body of the EIS or EA. Similarly, limit appendices to information that supports discussions in the main body.

- Provide analyses prepared under related environmental review requirements (e.g., a biological assessment prepared for endangered species) in an appendix (and include a brief summary in the impacts section of the EA or EIS). Also include official communications related to environmentally sensitive resources in appendices.

9. GENERAL DOCUMENT QUALITY/READER FRIENDLINESS

Background

A key challenge in preparing readable NEPA documents is to present technical material in language that a lay person can understand. CEQ's regulations require that EISs be written in plain language and suggest appropriate graphics so that decisionmakers and the public can readily understand them (40 CFR 1502.8). The same editorial principles should also be applied to EAs.

Recommendations

- Write documents to inform, not intimidate, the interested public.
- When necessary, achieve a balance between using plain language and accurately portraying the technical complexity of issues.

9.1 GRAPHICS AND DATA TREATMENT (UNITS, STATISTICS)

Recommendations: Graphics and tables

- Use easy-to-follow graphics and tables to summarize data, show correlations, and facilitate readers' access to information. Take care that graphics and tables inform and do not confuse the reader.
- Select axes for graphs to avoid misleading representations.

  Explanation: Do not use an enlarged scale to minimize the visual impact of a parameter value. The default graphing scale of various computer graphics software packages often result in inappropriate choices.

- Plot graphs that may be compared to one another on the same axes and scales whenever possible.
- Avoid data graphs with axes that begin at a value other than zero, or construct such graphs carefully so as to avoid misleading the reader.
- Use maps and drawings to depict all features that are needed to understand the project and its impacts; provide directional arrows and scale indicators.

- Do not include extraneous information, such as irrelevant contour lines.

- Make maps and other figures consistent with the text.

Recommendations: Units

- Use consistent, relevant, and conventional units in tables, graphics, and text.

- Use the metric system to the extent possible. See DOE N 5900.3 and DOE 5900.2A concerning use of the metric system. When the metric system is used, also include conventional (English) units to ensure public understanding.

- Use authoritative sources for conversion factors, such as a recent edition of the Chemical Rubber Company *Handbook of Chemistry and Physics.*

- Avoid misplaced decimal points.

- Use units that facilitate comparisons and understanding.

  Examples: In comparing emissions to standards, display both emissions and standards in the same units. Use 5 parts per billion, not 0.000005 parts per thousand.

- If scientific notation is used, provide an explanation.

- Use appropriate significant figures.

  Examples: "Three feet" is more correctly converted to "about one meter" than to "0.914 meters." Use 0.5 person-rem rather than 0.478 person-rem when the dose is really known or estimated to only one significant figure, which is usually the case in NEPA assessments.

- Use consistent units throughout a document and appendices whenever possible.

Recommendations: Statistics

- Avoid misleading use of statistics, mixing cause and effect, and implying causation from correlation.

  Example: It was suggested recently that low-level radiation exposure limits should be lowered because a study of workers at Oak Ridge National Laboratory found a statistical correlation between long-term low-level exposure to ionizing radiation and risk of death from all types of cancer. However, no biological cause and effect was demonstrated nor was there control for other potential risk factors. Thus, although a correlation has been shown, cause and effect has not been demonstrated.

- Avoid use of an inappropriate statistic.

  Explanation: In some cases, using a range of values, the maximum or minimum value, or even all the data (e.g., presented graphically) may be more meaningful than using the arithmetic mean. For example, if a contaminant concentration has been measured twice with values of 10 and 1,000, the arithmetic mean value does not adequately characterize the situation, and it would be better to report both measurements. For some data (such as aquifer permeability, atmospheric pollutant concentration, coliform bacteria counts, or other data that span orders of magnitude), geometric means are more representative than arithmetic means.

9.2 WRITING QUALITY

Recommendations

- Use technical writers and editors to help identify unclear passages, undefined terms, and unsupported conclusions, and generally improve the presentation of material.

- Write precisely and concisely. Use plain language. Avoid jargon.

- Define technical terms that may be unfamiliar to a lay person. Provide a glossary when many specialized terms are used. Define terms such as "risk" (which may have a different meaning in a technical sense than in a colloquial sense) in the context of the document.

- Use regulatory terms consistent with their regulatory definitions.

  Explanation: Terms involving "toxic" and "hazardous" (such as hazardous material, hazardous substance, extremely hazardous substance, hazardous chemical, hazardous waste, and toxic waste) are frequently misused.

- Provide scientific names for biota, including the subspecies or variety name if appropriate (particularly for endangered, threatened, or protected species), in addition to common names, to avoid confusion and ambiguity.

- Do not rely solely on the "spell check" function of word processing programs to check for spelling errors. Correctly spelled words are often used incorrectly.

- When in doubt about the proper use of a word, grammar, or spelling, use the *Government Printing Office Style Manual*, which also provides guidance on document format, organization, and references.

9.3 REFERENCES

Recommendations

- As discussed in Section 6, always provide sufficient information to support a technical review of assumptions, methodologies, and conclusions, and in doing so, cite references that are publicly available.

- If an analysis is not available for review, present sufficient information in the EIS or EA to verify the conclusions of the analysis and place supporting analyses in an appendix. (If the supporting analyses are classified, place them in a classified appendix.)

- Cite personal communications or "unpublished file data" only as sources of information, not as support for conclusions regarding the significance of impacts.

  Explanation: A personal communication with a local official may be cited as the source of information for traffic volume on a particular highway but could not be cited for an analysis of increased fatalities expected per increased volume of traffic.

- Cite draft documents only if the documents have attained relatively high review or approval within the issuing organization.

9.4 OBJECTIVITY

Recommendations

- Remember that while EAs and EISs support decisions, they are pre-decisional documents and should not indicate that a decision has been made.

  Example: Use conditional wording and verb tense, such as "would" rather than "will," in action descriptions.

- Use language that is objective and descriptive, not judgmental, particularly with regard to the significance of impacts.

  Example: Do not characterize impacts as "acceptable." Present impact data and any applicable or relevant standards for the reader to form judgments. Use quantitative comparisons or words such as "very small" or "substantial," if necessary, to describe impacts.

- In EAs, do not use the word "significant" or "insignificant" in conclusory statements. Conclusions of overall insignificance or significance will be made in a finding of no significant impact or a determination to prepare an EIS.

- Avoid tone and nuance that are not objective.

  Explanation: Do not subtly play down alternatives that DOE does not prefer when responding to public comments and in discussing responsible opposing views. Provide professional, authoritative, and dispassionate responses, not casual or flip responses.

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: May 27, 1993

REPLY TO ATTN OF: EH-25

SUBJECT: Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements

TO: Secretarial Officers and Field Office Managers

I am pleased to provide for your use the attached paper, "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" (hereafter "Recommendations"), that is designed to facilitate DOE's compliance with the National Environmental Policy Act (NEPA). The Recommendations should materially aid those responsible for preparing and reviewing these NEPA documents to focus on significant environmental issues, adequately analyze environmental impacts, and effectively present results to decisionmakers and the public. Because each DOE proposed action presents a unique set of circumstances and potential impacts, the paper emphasizes the need for thoughtful case-by-case application of the guidance and discourages a cookbook approach to NEPA compliance. Please note the endorsement (attached) this paper has received from the General Counsel of the Council on Environmental Quality.

Development of the Recommendations

The Recommendations were prepared by my Office of NEPA Oversight in consultation with the Office of the Assistant General Counsel for Environment. The Department's NEPA Compliance Officers (NCOs) also played a significant role. In large measure, this paper responds to guidance needs that NCOs have identified to us. NCOs provided helpful comments at several opportunities while the paper was under development and support use of such guidance throughout DOE. As suggested by the NCOs, we intend to update and supplement the paper periodically.

Implementation

Implementing these Recommendations should provide immediate benefits. Because DOE's requirements will be clearer, adequate NEPA analyses should be prepared, reviewed, and approved more quickly. It is important, therefore, that you disseminate this guidance to appropriate staff and contractors as soon as possible.

You should also task your NCO to provide training to apply these Recommendations effectively, as required by DOE 5440.1E, and my Office of NEPA Oversight has been working with NCOs to help assure that they have the requisite knowledge. We are developing additional training tools, but I urge you to begin your own program immediately. We will shortly provide your NCOs with sufficient copies of the Recommendations for an initial distribution.

Please direct any questions and suggestions regarding Recommendations to Stanley Lichtman, Director, Waste Activities Division, Office of NEPA Oversight at (202) 586-4610.

Peter N. Brush
Acting Assistant Secretary
Environment, Safety and Health

Attachments

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

April 6, 1993

Mr. Raymond P. Berube
Deputy Assistant Secretary for Environment
Department of Energy
1000 Independence Avenue, S.W.
Room 7A-075
Washington, D.C. 20585

Dear Ray:

Lucy Swartz and I recently had the opportunity to review the draft final version of the "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" which was developed in the Office of NEPA Oversight. We provided comments to that office which I understand will be considered along with comments received from internal Department of Energy reviewers.

While, as noted, we did have some suggestions, Lucy and I were both very impressed with the document and think that its authors should be commended. The manual is informative, well-written, and demonstrates a strong commitment to the letter and the spirit of the National Environmental Policy Act. This is indeed a fine effort which I hope other federal agencies will emulate.

Sincerely,

Dinah Bear
General Counsel

cc: Carol Borgstrom
Director, Office of NEPA Oversight

Recycled Paper

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: August 16, 1994

REPLY TO ATTN OF: Office of NEPA Oversight:EH-25:Lichtman:586-4610

SUBJECT: Environmental Assessment Checklist

TO: Secretarial Officers and Heads of Field Offices

This memorandum transmits a new Department of Energy (DOE) Environmental Assessment Checklist, prepared by the Office of Environment, Safety and Health to assist DOE components in carrying out their responsibilities under the National Environmental Policy Act (NEPA). A draft of this checklist was distributed for review and comment at the NEPA Compliance Officers meeting in February 1994.

Although there is no requirement to use this checklist, we believe it is a useful tool in the preparation and review of DOE environmental assessments. Nevertheless, a checklist approach has certain inherent limitations, as discussed on page 1. Some NEPA practitioners may find this checklist has limited utility for the highly variable, analytical process of environmental impact assessment. Other NEPA practitioners may find an environmental assessment checklist useful because it serves to remind them, in a consistent format, of various requirements and recommendations. When this checklist is used, it should be only one tool among many.

Practitioners may modify this checklist as they desire to suit particular needs. Accordingly, the Office of NEPA Oversight will shortly provide copies of this checklist in electronic format to DOE NEPA Compliance Officers, who may distribute copies further as they see fit. In any modified versions, however, the discussion on page 1 should be retained as an integral part of the checklist. We ask further that those who modify the checklist identify themselves on the checklist to establish ownership and accountability.

Comments on this checklist may be directed to Stan Lichtman, Director, Waste Activities Division, Office of NEPA Oversight (202) 586-4610.

for Tara O'Toole, M.D., M.P.H.
Assistant Secretary
Environment, Safety and Health

Attachment

cc: Distribution

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ENVIRONMENTAL ASSESSMENT CHECKLIST

U.S. DEPARTMENT OF ENERGY
OFFICE OF NEPA OVERSIGHT
AUGUST 1994

DOE ENVIRONMENTAL ASSESSMENT CHECKLIST

PREFACE

The attached checklist, developed by the Department of Energy (DOE) Office of NEPA Oversight, is intended to aid in preparing and reviewing DOE Environmental Assessments (EAs), prepared pursuant to the National Environmental Policy Act (NEPA). Checklist questions are based on NEPA, the Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR Parts 1500-1508), DOE NEPA Regulations (10 CFR Part 1021), the DOE Office of Environment, Safety and Health's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" ("Recommendations"), other Council and DOE guidance, and related federal environmental, safety, and health laws and regulations.

The checklist consists of two parts: List 1 -- General, and List 2 -- Supplemental Topics. Abbreviations/acronyms and references can be found at the end of List 2. Generally, the questions in List 1 are applicable to all EAs; the questions in List 2 may be used as applicable, depending on the specific proposal. Both lists provide columns for "yes", "no", and not applicable ("N/A") responses. If desired, notes on document adequacy and other comments can also be entered. The questions are phrased so that a "yes" answer is preferable to a "no" answer. Not all questions will apply to all EAs; the checklist should be adapted according to the particular circumstances. Consider also the use of the "sliding scale" approach (see "Recommendations").

Modification of this checklist is encouraged to suit the needs of a particular office or program. In particular, users may wish to revise or add to the topical questions in List 2. In all modified versions, however, the title page discussion (page 1) should be retained as an integral part of the checklist. Further, those who modify the checklist should identify themselves on the checklist to establish ownership and accountability.

DOE Environmental Assessment Checklist

Document Title:	**Reviewed By:**
Document Number:	**Office/Phone:**
Document Date:	**Date:**

Attached is a checklist to aid in preparing and reviewing DOE Environmental Assessments (EAs), prepared pursuant to the National Environmental Policy Act (NEPA). Like any checklist, it has both value and limits.

On one hand, a checklist may help EA preparers and reviewers to:

- avoid overlooking required or recommended items;
- identify needed analyses and discussions;
- provide a record of an internal review.

On the other hand, NEPA analysis does not reduce to a single formula or checklist. Each DOE proposal presents unique circumstances and potential impacts. This checklist should be applied carefully because:

- no checklist can be universally comprehensive or complete;
- it does not substitute for the original laws, regulations, and guidance;
- it alone cannot ensure that the EA will be adequate under, and in full compliance with, NEPA and associated federal laws and regulations;
- addressing generic items on a checklist alone may not lead to a sufficiently rigorous analysis of potential impacts of a proposed action;
- checklist items are not always of equal importance or weight (e.g., if threatened and endangered species are not addressed, an EA is generally inadequate; however, omitting beneficial impacts usually is not critical).

In short, a checklist should not be relied upon as the only way to build quality into a DOE EA. It does not replace good judgment.

Finally, this EA checklist is not intended to promote the rote generation of standardized documentation. It is not meant to encourage an ethic of minimal compliance with environmental, safety, and health standards. It cannot measure whether resources are appropriately allocated, or the extent to which DOE decisionmakers use NEPA information in decisions and whether those decisions improve protection of environmental quality. In the long run, the focus should be on the ultimate "product" of the NEPA process: high quality decisions and sound environmental stewardship.

Office of NEPA Oversight, U.S. Department of Energy August 1994

DOE ENVIRONMENTAL ASSESSMENT CHECKLIST*

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.1.0 SUMMARY (Optional in DOE EAs)					
1.1.1 Does the summary address the entire EA [Recommendations, p.3]?†					
1.1.2 Is the summary consistent with information in the document [Recommendations, p.3]?					
1.1.3 Does the summary highlight key differences among the alternatives [Recommendations, p.3]?					
1.1.4 Does the summary describe:					
the underlying purpose and need for agency action?					
the proposed action?					
each of the alternatives?					
the principal environmental issues and results [Recommendations, p.3]?					
1.2.0 PURPOSE AND NEED FOR ACTION					
1.2.1 Does the statement of purpose and need define the need for DOE action [40 CFR ...]?					
1.2.2 Does the statement of purpose and need relate to the broad requirement or desire for agency action, and not to the need for one specific proposal [Recommendations, p.4]?					
1.2.3 Is the statement of purpose and need written so that it does not inappropriately narrow the range of reasonable alternatives [Recommendations, p.5]?					
1.2.4 Does the statement of purpose and need identify the problem or opportunity to which the agency is responding [Recommendations, p.5]?					

* See list of Abbrevations/Acronyms, p. 17.
See list of References, pp. 18-20.

† ["Recommendations"] refers to guidance entitled "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" (issued by the Assistant Secretary for Environment, Safety and Health, May 1993)

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.3.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES					
1.3.1 Is the proposed action described in sufficient detail so that potential impacts can be identified? Are all phases described (e.g., construction, operation, maintenance and decommissioning) [Recommendations, p.7]?					
1.3.2 Are environmental releases associated with the proposed action quantified, including both the rates and durations [Recommendations, p.7]?					
1.3.3 As appropriate, are mitigation measures included in the description of the proposed action [Recommendations, p.8]?					
1.3.4 Is the project description written broadly enough to encompass future modifications [Recommendations, p.8]?					
1.3.5 Does the proposed action exclude elements that are more appropriate to the statement of purpose and need [Recommendations, p.8]?					
1.3.6 Is the proposed action described in terms of the DOE action to be taken (even a private action that has been federalized) [Recommendations, p.8]?					
1.3.7 Does the EA address a range of reasonable alternatives that satisfy the agency's purpose and need, including reasonable alternatives outside DOE's jurisdiction [Recommendations, p.9]?					
1.3.8 If there are alternatives that appear obvious or have been identified by the public, but are not analyzed, does the EA explain why they were excluded [Recommendations, p.9]?					
1.3.9 Does the EA include the no action alternative [10 CFR 1021.321(c)]?					
1.3.10 Is the no action alternative described in sufficient detail so that its scope is clear and potential impacts can be identified [Recommendations, p.11]?					
1.3.11 Does the no action alternative include a discussion of the legal ramifications of no action, if appropriate [Recommendations, p.11]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.3.12 Does the EA take into account relationships between the proposed action and other actions to be taken by the agency in order to avoid improper segmentation [Recommendations, p.12]?					
1.3.13 Does the proposed action comply with CEQ regulations for interim actions [40 CFR 1506.1]?					
1.4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT					
1.4.1 Does the EA identify either the presence or absence of the following within the area potentially affected by the proposed action and alternatives:					
floodplains [EO 11988; 10 CFR 1022]?					
wetlands [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]?					
threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species [16 USC 1531; 40 CFR 1508.27(b)(3)]?					
prime or unique farmland [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]?					
state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance?					
wild and scenic rivers [16 USC 1271; 40 CFR 1508.27(b)(3)]?					
natural resources (e.g., timber, range, soils, minerals, fish, wildlife, water bodies, aquifers)?					
property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks) [16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3)]?					
Native Americans' concerns [16 USC 470; 42 USC 1996]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
minority and low-income populations (including a description of their use and consumption of environmental resources) [EO 12898]?					
1.4.2 Does the description of the affected environment provide the necessary information to support the impact analysis, including cumulative impact analysis [Recommendations, p.14]?					
1.4.3 Does the EA appropriately use incorporation by reference? Is/are the incorporated document(s) up-to-date?					
1.4.4 If this EA adopts, in whole or in part, a NEPA document prepared by another federal agency, has DOE independently evaluated the information?					
1.5.0 ENVIRONMENTAL EFFECTS					
1.5.1 Does the EA identify the potential effects (including cumulative effects) to the following, as identified in question 1.4.1:					
floodplains [EO 11988; 10 CFR 1022]?					
wetlands [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]?					
threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species [16 USC 1531; 40 CFR 1508.27(b)(3)]?					
prime or unique farmland [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]?					
state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance?					
wild and scenic rivers [16 USC 1271; 40 CFR 1508.27(b)(3)]?					
natural resources (e.g., timber, range, soils, minerals, fish, wildlife, water bodies, aquifers)?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks) [16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3)]?					
Native Americans' concerns [16 USC 470; 42 USC 1996]?					
minority and low-income populations [EO 12898]?					
1.5.2 Does the EA analyze the proposed action:					
for both short-term and long-term effects [40 CFR 1508.27(a)]?					
for both beneficial and adverse impacts [40 CFR 1508.27(b)(1)]?					
for effects on public health and safety [40 CFR 1508.27(b)(2)]?					
for disportionately high and adverse human health or environmental effects on minority and low-income communities [EO 12898]?					
1.5.3 Do the discussions of environmental impacts include (as appropriate) human health effects, effects of accidents, and transportation effects [Recommendations, p.18]?					
1.5.4 As appropriate, does the EA address the degree to which the possible effects on the human environment may be highly uncertain or involve unique or unknown risks [40 CFR 1508.27(b)(5)]?					
1.5.5 Do the discussions of environmental impacts identify possible indirect and cumulative impacts [Recommendations, Sec. 6.1]?					
1.5.6 Does the EA quantify environmental impacts where possible [Recommendations, p.18]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.5.7 Are all potentially non-trivial impacts identified? Are impacts analyzed using a graded approach -- i.e., proportional to their potential significance [Recommendations, p.16 and 17]?					
1.5.8 Does the EA identify all reasonably foreseeable impacts [40 CFR 1508.8]?					
1.5.9 If information related to potential impacts is incomplete or unavailable, does the EA indicate that such information is lacking [40 CFR 1502.22]?					
1.5.10 Are sufficient data and references presented to allow review of the validity of analysis methods and results [Recommendations, p.19]?					
1.6.0 OVERALL CONSIDERATIONS/INCORPORATION OF NEPA VALUES					
1.6.1 Because conclusions of overall significance will be made in a FONSI or determination to prepare an EIS, are the words "significant" and "insignificant" absent from conclusory statements in the EA [Recommendations, p.38]?					
1.6.2 Do the conclusions regarding potential impacts follow from the information and analyses presented in the EA [Recommendations, p.30]?					
1.6.3 Does the EA avoid the implication that compliance with regulatory requirements demonstrates the absence of significant environmental effects [Recommendations, p.20]?					
1.6.4 Are mitigation measures appropriate to the potential impacts identified in the EA [40 CFR 1500.2(f)]?					
1.6.5 Does the EA show that the agency "has taken a 'hard look' at environmental consequences" [Kleppe v. Sierra Club, 427 US 390, 410 (1976)]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.7.0 PROCEDURAL CONSIDERATIONS					
1.7.1 Were host states and tribes and, when applicable, the public notified of DOE's determination to prepare the EA [10 CFR 1021.301; Policy Statement, Sec. V]?** Does the EA address issues known to be of concern to the states, tribes, and public ?					
1.7.2 Has the EA been made available to the agencies, states, tribes, and the public [10 CFR 1021.301]?					
1.7.3 Have stakeholders including the public been involved to the extent practicable during the preparation of the EA [CEQ (46 FR 18037); 40 CFR 1506.6; 40 CFR 1501.4(b); 10 CFR 1021.301]? Has DOE proactively sought the involvement of minority and low-income communities in the review and preparation process [EO 12898]?					
1.7.4 Have comments from host states and tribes and, when applicable, the public been addressed [10 CFR 1021.301; Policy Statement, Sec. V]?					
1.7.5 Is a Floodplain/Wetlands Assessment required and if so, has one been completed? If required, has a Public Notice been published in the Federal Register [10 CFR 1022.14(b)]?					
1.7.6 Does the EA demonstrate adequate consultation with appropriate agencies to ensure compliance with sensitive resource laws and regulations? Are letters of consultation (e.g., SHPO, USFWS) appended [16 USC 1531; 36 CFR 800; Recommendations, p.15]?					
1.7.7 Does the EA include a listing of agencies and persons consulted [40 CFR 1508.9(b)]?					
1.8.0 FORMAT, GENERAL DOCUMENT QUALITY, USER-FRIENDLINESS					
1.8.1 Is the EA written precisely and concisely, using plain language, and without jargon [10 CFR 1021.301(b); Recommendations, p.36]?					

** ["Policy Statement"] refers to the "Secretarial Policy Statement on the National Environmental Policy Act" (issued by the Secretary of Energy, June 13, 1994)

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.8.2 Is DOE listed as the preparer on the title page of the EA [Recommendations, p.32]?					
1.8.3 Is the metric system of units used (with English units in parentheses) to the extent possible [Recommendations, p.35]?					
1.8.4 If scientific notation is used, is an explanation provided [Recommendations, p.35]?					
1.8.5 Are technical terms defined where necessary [10 CFR 1021.301(b); Recommendations, p.36]?					
1.8.6 Are the units consistent throughout the document [Recommendations, p.35]?					
1.8.7 If regulatory terms are used, are they consistent with their regulatory definitions [Recommendations, p.37]?					
1.8.8 Are visual aids used whenever possible to simplify the EA?					
1.8.9 Are abbreviations and acronyms defined the first time they are used?					
1.8.10 Is the use of abbreviations minimized to the extent practical?					
1.8.11 Do the appendices support the content and conclusions contained in the main body of the EA? Is information in the appendix consistent with information in the main body of the EA [Recommendations, p.33]?					
1.8.12 Is information in tables and figures consistent with information in the text and appendices [Recommendations, p.33]?					
1.9.0 KEY TO SUPPLEMENTAL TOPICAL QUESTIONS					
1.9.1 Does the proposed action present potential for impacts on water resources or water quality?			If yes, complete questions in Section 2.1.0.		
1.9.2 Does the proposed action present potential for impacts related to geology or soils?			If yes, complete questions in Section 2.2.0.		
1.9.3 Does the proposed action present potential for impacts on air quality?			If yes, complete questions in Section 2.3.0.		

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.9.4 Does the proposed action present potential for impacts on wildlife or habitat?			If yes, complete questions in Section 2.4.0.		
1.9.5 Does the proposed action present potential for effects on human health?			If yes, complete questions in Section 2.5.0.		
1.9.6 Does the proposed action involve transportation?			If yes, complete questions in Section 2.6.0.		
1.9.7 Does the proposed action involve waste management?			If yes, complete questions in Section 2.7.0.		
1.9.8 Does the proposed action present potential for impacts on socioeconomic conditions?			If yes, complete questions in Section 2.8.0.		
1.9.9 Does the proposed action present potential for impacts to historic, archaeological, or other cultural sites or properties?			If yes, complete questions in Section 2.9.0.		

List 2: Supplemental Topics	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.1.0 WATER RESOURCES AND WATER QUALITY					
2.1.1 Does the EA identify potential effects of the proposed action and alternatives on surface water quantity and quality under both normal operations and accident conditions?					
2.1.2 Does the EA evaluate whether the proposed action or alternatives would be subject to:					
water quality or effluent standards?					
National Interim Primary Drinking Water Regulations?					
National Secondary Drinking Water Regulations?					
2.1.3 Does the EA state whether the proposed action or alternatives:					
would include work in, under, over, or having an effect on navigable water of the United States?					
would include the discharge of dredged or fill material into waters of the United States?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
would include the deposit of fill material or an excavation that alters or modifies the course, location, condition, or capacity of any navigable waters of the United States?					
would require a Rivers and Harbors Act Section 10 permit or a Clean Water Act (Section 402 or Section 404) permit?					
2.1.4 Does the EA identify potential effects of the proposed action and alternatives on groundwater quantity and quality (including aquifers) under both normal operations and accident conditions?					
2.1.5 Does the EA consider whether the proposed action or alternatives may affect any municipal or private drinking water supplies?					
2.2.0 GEOLOGY AND SOILS					
2.2.1 Does the EA describe and quantify the land area proposed to be altered, excavated, or otherwise disturbed? Is this description consistent with other sections (e.g., land use, habitat area)?					
2.2.2 Are issues related to seismicity sufficiently characterized, quantified, and analyzed?					
2.2.3 If the action involves disturbance of surface soils, are erosion control measures addressed?					
2.3.0 AIR QUALITY					
2.3.1 Does the EA identify potential effects of the proposed action on ambient air quality under both normal and accident conditions?					
2.3.2 Are potential emissions quantified to the extent practicable (amount and rate of release)?					
2.3.3 Does the EA evaluate potential effects to human health and the environment from exposure to radiation and hazardous chemicals in emissions?					
2.3.4 Does the EA evaluate whether the proposed action and alternatives would:					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
be in compliance with the National Ambient Air Quality Standards?					
be in compliance with the State Implementation Plan?					
potentially affect any area designated as Class I under the Clean Air Act?					
be subject to New Source Performance Standards?					
be subject to National Emissions Standards for Hazardous Air Pollutants?					
be subject to emissions limitations in an Air Quality Control Region?					
2.4.0 WILDLIFE AND HABITAT					
2.4.1 If the EA identifies potential effects of the proposed action and alternatives on threatened or endangered species and/or critical habitat, has consultation with the USFWS or NMFS been concluded? Does the EA address candidate species?					
2.4.2 Are state-listed species identified, and if so, are results of state consultation documented?					
2.4.3 Are potential effects (including cumulative effects) analyzed for fish and wildlife other than threatened and endangered species and for habitats other than critical habitat?					
2.4.4 Does the EA analyze the impacts of the proposed action on the biodiversity of the affected ecosystem, including genetic diversity and species diversity?					
2.4.5 Are habitat types identified and estimates provided by type for the amount of habitat lost or adversely affected?					
2.5.0 HUMAN HEALTH EFFECTS					
2.5.1 Have the susceptible populations been identified -- i.e., involved workers, noninvolved workers, and the public (including minority and low-income communities, as appropriate) [Recommendations, p.21]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.5.2 Does the EA establish the period of exposure (e.g., 30 years or 70 years) for exposed workers and the public [Recommendations, p.21]?					
2.5.3 Does the EA identify all potential routes of exposure [Recommendations, p.21]?					
2.5.4 When providing quantitative estimates of impacts, does the EA use current dose-to-risk conversion factors that have been adopted by cognizant health and environmental agencies [Recommendations, p.22]?					
2.5.5 When providing quantitative estimates of health effects due to radiation exposure, are collective effects expressed in estimated numbers of fatal cancers, and are maximum individual effects expressed as the estimated maximum probability of death of an individual [Recommendations, p.22]?					
2.5.6 Does the EA describe assumptions used in the health effects analysis and the basis for health effects calculations [Recommendations, p.22]?					
2.5.7 As appropriate, does the EA analyze radiological impacts under <u>normal operating conditions</u> for:					
Involved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Uninvolved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Public Collective dose?					
Maximum individual?					
Latent cancer fatalities?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.5.8 Does the EA identify a spectrum of potential accident scenarios that could occur over the life of the proposed action [Recommendations, p.27]?					
2.5.9 As appropriate, does the EA analyze radiological impacts under accident conditions for:					
Involved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Uninvolved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Public Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
2.5.10 Are non-radiological impacts (e.g., chemical exposures) addressed for both routine and accident conditions [Recommendations, p.25]?					
2.6.0 TRANSPORTATION					
2.6.1 If transport of hazardous or radioactive waste or materials is part of the proposed action, or if transport is a major factor, are the potential effects analyzed (including to a site, on-site, and from a site) [Recommendations, p.25]?					
2.6.2 Does the EA analyze all reasonably foreseeable transportation links (e.g., overland transport, port transfer, marine transport, global commons) [Recommendations, p.26; EO 12114]?					
2.6.3 Does the EA avoid relying exclusively on statements that transportation will be in accordance with all applicable state and federal regulations and requirements [Recommendations, p.26]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.6.4 Does the EA address both routine transportation as well as reasonably foreseeable accidents [Recommendations, p.26]?					
2.6.5 Are the estimation methods used for assessing radiological impacts of transportation defensible [Recommendations, p.26]?					
2.6.6 Does the EA address the annual, total, and cumulative impacts of all DOE and non-DOE transportation on specific routes associated with the proposed action [Recommendations, p.26]?					
2.7.0 WASTE MANAGEMENT AND WASTE MINIMIZATION					
2.7.1 Are pollution prevention and waste minimization practices applied in the proposed action and alternatives (e.g., is pollution prevented or reduced at the source when feasible; would waste products be recycled when feasible; are by-products that cannot be prevented or recycled treated in an environmentally safe manner when feasible; is disposal only used as a last resort)?					
2.7.2 If waste would be generated, does the EA examine the human health effects and environmental impacts of managing that waste, including waste generated during decontaminating and decommissioning?					
2.7.3 Are waste materials characterized by type and estimated quantity, where possible?					
2.7.4 Does the EA identify RCRA/CERCLA issues related to the proposed action and alternatives?					
2.7.5 Does the EA establish whether the proposed action and alternatives would be in compliance with federal or state laws and guidelines affecting the generation, transportation, treatment, storage, or disposal of hazardous and other waste?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.8.0 SOCIOECONOMIC CONSIDERATIONS					
2.8.1 Does the EA consider potential effects on land use patterns, consistency with applicable land use plans, and compatibility of nearby uses?					
2.8.2 Does the EA consider possible changes in the local population due to the proposed action?					
2.8.3 Does the EA consider potential economic impacts, such as effects on jobs and housing, particularly in regard to disproportionate adverse effects on minority and low-income communities?					
2.8.4 Does the EA consider potential effects on public water and wastewater services, stormwater management, community services, and utilities?					
2.8.5 Does the EA evaluate potential noise effects of the proposed action and the application of community noise level standards?					
2.9.0 CULTURAL RESOURCES					
2.9.1 Was the SHPO consulted?					
2.9.2 Was an archaeological survey conducted?					
2.9.3 Does the EA include a provision for mitigation in the event unanticipated archaeological materials are encountered?					

ABBREVIATIONS/ACRONYMS

CEQ	President's Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	United States Code of Federal Regulations
DOE	U.S. Department of Energy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FONSI	Finding of No Significant Impact
FR	Federal Register
N/A	not applicable
NEPA	National Environmental Policy Act
NMFS	United States National Marine Fisheries Service
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer
US	United States
USC	United States Code
USFWS	United States Fish and Wildlife Service

REFERENCES

Legislation

Archeological and Historic Preservation Act (16 USC § 469 et seq.).

American Indian Religious Freedom Act (42 USC § 1996 et seq.).

Clean Air Act (42 USC § 7401 et seq.).

Clean Water Act (Federal Water Pollution Control Act) (33 USC § 1251 et seq.).

Comprehensive Environmental Response, Compensation, and Liability Act (42 USC § 9601 et seq.).

Endangered Species Act (16 USC § 1531 et seq.).

Farmland Protection Policy Act (7 USC § 4201 et seq.).

National Environmental Policy Act (42 USC § 4341 et seq.).

National Historic Preservation Act (16 USC § 470 et seq.).

Noise Control Act (42 USC § 4901 et seq.).

Resources Conservation and Recovery Act (42 USC § 6901 et seq.).

Rivers and Harbors Act (33 USC § 401 et seq.).

Safe Drinking Water Act (42 USC § 300 et seq.).

Toxic Substances Control Act (15 USC § 2601 et seq.).

Wild and Scenic Rivers Act (16 USC § 1271 et seq.).

Regulations

Advisory Council on Historic Properties, Protection of Historic and Cultural Properties (36 CFR Part 800 et seq.).

Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508).

U.S. Department of Agriculture, Regulations for Implementing the Farmland Protection Policy Act (7 CFR 658).

U.S. Department of Energy, National Environmental Policy Act Implementing Procedures (DOE NEPA Regulations) (10 CFR Part 1021).

U.S. Department of Energy, Regulations for Compliance with Floodplain/Wetlands Environmental Review Requirements (10 CFR Part 1022).

U.S. Environmental Protection Agency, Clean Air Act Implementing Regulations (40 CFR Part 50 et seq.).

U.S. Environmental Protection Agency, Criteria and Standards for the National Pollutant Discharge Elimination System (40 CFR Part 125).

U.S. Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

U.S. Environmental Protection Agency, National Interim Primary Drinking Water Regulations (Safe Drinking Water Act) (40 CFR Part 141).

U.S. Environmental Protection Agency, National Secondary Drinking Water Regulations (Safe Drinking Water Act) (40 CFR Part 143).

U.S. Environmental Protection Agency, Prevention of Significant Deterioration for Particulate Matter (40 CFR Parts 51 and 52).

U.S. Nuclear Regulatory Commission, Standards for Protection Against Radiation (10 CFR Part 20).

Executive Orders

Executive Order 11988, Floodplain Management (May 24, 1978).

Executive Order 11990, Protection of Wetlands (May 24, 1978).

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions (January, 4, 1979).

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994).

Department of Energy Orders

DOE 5400.1, General Environmental Protection Program (November 9, 1988).

DOE 5400.3, Hazardous and Radioactive Mixed Waste Program (February 22, 1989).

DOE 5400.4, Comprehensive Environmental Response, Compensation, and Liability Act Program (October 6, 1989).

DOE 5400.5, Radiation Protection of the Public and the Environment (February 8, 1990).

DOE 5440.1E, National Environmental Policy Act Compliance Program (November 10, 1992).

DOE 5480.11, Radiation Protection for Occupational Workers (December 21, 1988).

DOE 5820.2A, Radioactive Waste Management (September 26, 1988).

Council on Environmental Quality Guidance

Council on Environmental Quality, Forty Most-Asked Questions Concerning the Council on Environmental Quality's National Environmental Policy Act Regulations (46 FR 18026, March 23, 1981; amended 51 FR 15618, April 25, 1986).

Department of Energy Guidance

Guidance Related to Analysis of Impacts to Workers in National Environmental Policy Act Documentation (Memorandum from the Assistant Secretary for Office of Environment, Safety and Health, June 10, 1988).

Recommendations on Alternative Actions for Analysis in Site-Wide NEPA Documents (Memorandum from the Assistant Secretary for Environment, Safety and Health, May 26, 1992).

Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements (Issued by the Assistant Secretary for Environment, Safety and Health, May 1993).

Secretarial Policy Statement on the National Environmental Policy Act (Issued by the Secretary of Energy, June 13, 1994).

Federal Register

WEDNESDAY, MARCH 7, 1979

PART IV



DEPARTMENT OF ENERGY

■

COMPLIANCE WITH FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS

[6450-01-M]

Title 10—Energy

CHAPTER X—DEPARTMENT OF ENERGY (GENERAL PROVISIONS)

PART 1022—COMPLIANCE WITH FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS

AGENCY: Department of Energy.

ACTION: Final rulemaking.

SUMMARY: The Department of Energy (DOE) hereby establishes Part 1022 of Chapter X of title 10 of the Code of Federal Regulations, providing for compliance with Executive Order (E.O.) 11988—Floodplain Management, and E.O. 11990—Protection of Wetlands.

The regulations are applicable to all organizational units of DOE, except the Federal Energy Regulatory Commission (FERC), and are designed to be coordinated with the environmental review requirements established pursuant to the National Environmental Policy Act (NEPA). The final regulations published herein contain certain revisions to the proposed regulations, published in the FEDERAL REGISTER on July 19, 1978 (43 FR 31108), based on DOE's consideration of comments received.

EFFECTIVE DATE: March 7, 1979.

FOR FURTHER INFORMATION CONTACT:

Dr. Robert J. Stern, Acting Director, NEPA Affairs Division, Office of the Assistant Secretary for Environment, Room 6229, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545, 202-376-5998.

Mr. Stephen H. Greenleigh, Acting Assistant General Counsel for Environment, Room 8217, 20 Massachusetts Avenue, N.W., Washington, D.C. 20545, 202-376-4266.

SUPPLEMENTARY INFORMATION:

I. Background
II. Comments Received
III. DOE Response
IV. Effective Date

I. BACKGROUND

On July 19, 1978, DOE published in the FEDERAL REGISTER (43 FR 31108) a notice of proposed rulemaking to establish 10 CFR Part 1022, DOE regulations for compliance with floodplain/wetlands environmental review requirements. The proposed regulations were drafted in response to Executive Orders 11988 and 11990 regarding floodplain management and wetlands protection, respectively, which were issued on May 24, 1977. The regulations were proposed to be applicable to all organizational units of DOE, except the FERC.

A public hearing was scheduled to be held on August 17, 1978, but only one request to speak was received. The hearing was cancelled by subsequent notice in the FEDERAL REGISTER, and the requesting party, the Sierra Club, met informally with DOE representatives to discuss its views on the proposed regulations. The formal comment period closed on August 28, 1978; DOE has, however, considered late comments in the preparation of these final regulations.

II. COMMENTS RECEIVED

Written comments were received from 12 organizations and agencies, including the Department of the Interior (DOI), Army Corps of Engineers, Environmental Protection Agency (EPA), Water Resources Council (WRC), Federal Insurance Administration (FIA), Council on Environmental Quality (CEQ), Sierra Club, Natural Resources Defense Council, Environmental Defense Fund, Georgia State Department of Planning and Budget, State of Vermont Agency of Environmental Conservation, and Marathon Oil Company.

DOE has carefully considered all comments received, and has modified the proposed regulations, as appropriate, to assure that the final regulations represent sound policy and procedures for floodplain management and wetlands protection. DOE's analysis and treatment of the major substantive comments are summarized below.

III. DOE RESPONSE

A. RELATIONSHIP TO DOE NEPA PROCEDURES AND CEQ NEPA REGULATIONS

In accordance with the intent of both Executive orders that Federal agencies implement the floodplain/wetlands requirements through existing procedures, such as those established to implement NEPA, DOE designed its proposed floodplain/wetlands regulations to be implemented in conjuction with its proposed regulations for compliance with NEPA, originally intended to be codified at 10 CFR Part 1021 (FEDERAL REGISTER, February 21, 1978). Several commenters questioned the relationship of the floodplain/wetlands regulations to the NEPA regulations, given the fact that the DOE NEPA regulations had not been promulgated.

DOE had intended to finalize 10 CFR Part 1021 prior to the promulgation of floodplain/wetlands regulations. However, due to the recent publication of final CEQ NEPA regulations (FEDERAL REGISTER, November 29, 1978), DOE no longer intends to finalize the rules which were proposed in February. Instead, DOE is preparing implementing procedures as required by the CEQ NEPA regulations. The basic approach of coordinating the floodplain/wetlands review procedures with existing (and future) DOE NEPA procedures remains intact. However, specific references to 10 CFR Part 1021 have been deleted. In addition, DOE has modified certain floodplain/wetlands requirements and definitions of NEPA documentation used herein to be consistent with the CEQ NEPA regulations and the anticipated DOE NEPA procedures.

A related comment pertained to the administrative framework for assuring DOE compliance with its floodplain/wetlands responsibilities. DOE intends to utilize the internal framework established with respect to NEPA compliance to fulfill its floodplain/wetlands responsibilities. Such internal authorities and responsibilities are embodied in internal DOE Orders and memoranda and are not included in these regulations, in order to maintain necessary flexibility. To address this concern, however, a new provision (§ 1022.18) has been added to identify the Assistant Secretary for Environment as the central point of contact for inquiries concerning DOE's floodplain/wetlands activities.

B. DETAILED STANDARDS AND PROCEDURES

In combined comments, WRC, CEQ, and FIA suggested that the final regulations establish "specific standards" for key substantive and procedural requirements of the floodplains Order. For example, it was suggested that specific standards be provided with respect to what constitutes a "practicable alternative" to siting in a floodplain. DOI also commented that the "spirit and intent" of the two Orders requires "considerably more details" in agency procedures "to provide a higher level of consideration to the natural and beneficial values of floodplains and wetlands."

While DOE is sympathetic to the goals expressed in these comments, it believes that the evaluation of floodplain/wetlands impacts is inherently site-specific in nature, and that the determination of what constitutes a "practicable alternative" can only be made after balancing relevant factors on a case-by-case basis. DOE believes that these regulations adequately provide the framework within which this process can take place, and that these regulations, as revised, fully satisfy the requirements of both Executive orders. Additional detailed guidance will be provided, as appropriate, through internal DOE Orders, guidelines and memoranda.

C. DEFINITIONS

Several comments were received regarding DOE's definitions of terms (§ 1022.4), which differed somewhat from the definitions set forth in WRC's Floodplain Management Guidelines (40 FR 6030, February 10, 1978). Two commenters objected to the definition of "action" as "any DOE activity," and suggested that DOE adopt WRC's definition, which specifies the kinds of activities covered by the term "action." DOE had included such language in the applicability section [§ 1022.5(d)] of the proposed regulations. Moreover, it was felt that the DOE definition of action assured broad application of the floodplain/wetlands review requirements. Nevertheless, to alleviate this concern, DOE has restructured the regulations so as to include the WRC language in the definition of "action."

Several commenters objected to DOE's definition of "minimize" as "to reduce to the smallest degree practicable," again suggesting that DOE use the WRC definition, i.e., "to reduce to the smallest degree." DOE believes that its definition is justified, and notes that the WRC Guidelines explain that:

> while minimize means to reduce to the smallest amount or degree, there is an implicit acceptance of practical limitations. Agencies are required to use all *practicable* (WRC's emphasis) means and measures to minimize harm. The Order does not expect agencies to employ unworkable means to meet this goal.

In light of the WRC qualification and to avoid possible confusion concerning the intended meaning of "minimize," DOE believes it is appropriate to reaffirm the practicable nature of the term "minimize" in its definition.

Another commenter objected to DOE's addition of implementation time to WRC's definition of "practicable." The WRC Guidelines listed cost, environment and technology as pertinent factors in judging practicability. In DOE's view, implementation time is an appropriate consideration in determining practicability since it may bear directly on the achievement of program objectives. Accordingly, implementation time has been retained in the definition of "practicable."

WRC expressed particular concern over the variance in DOE's definition of "floodplain." In response to this and similar comments, DOE has modified its definitions of "floodplain," "structure," and "flood or flooding" to conform with WRC's definitions.

In order to be consistent with the terminology established in the CEQ NEPA regulations, DOE has eliminated the term "Negative Determination" (a public notice that no environmental impact statement (EIS) will be prepared) from these regulations and substituted the term "Finding of No Significant Impact" (FONSI), which is used in 40 CFR Part 1500. Until the effective date of the CEQ regulations, a Negative Determination prepared pursuant to currently applicable DOE NEPA regulations will be considered synonymous with the FONSI used herein. Similarly, the definition of an environmental assessment (EA) for purposes of these regulations, has been modified to conform with the CEQ definition.

D. APPLICABILITY

Several commenters questioned the exclusion of FERC from the applicability of these regulations [§ 1022.4(a)]. In this regard, it should be noted that FERC is an independent regulatory commission within DOE and is not "subject to the supervision or direction of any officer, employee, or agent of any other part of the Department" (DOE Organization Act, 42 USC 7171). FERC has indicated its intention to incorporate floodplain/wetlands considerations into its NEPA compliance process, which is also administered independently from that of DOE.

Other commenters questioned DOE's application of the regulations to floodplain/wetlands actions "where practicable modifications of/or alternatives to the proposed action are still available" [§ 1022.5(b)]. The reviewers could not envision a situation in which alternatives had been foreclosed and in which it was no longer possible to *modify* an activity. DOE agrees that there may be circumstances in which it is still practicable to modify a proposed activity even after implementation has begun. DOE has therefore made a change in §1022.5(b) to specify that where the review of alternatives is no longer practicable or where DOE determines to take action in a floodplain, DOE shall design or modify the selected alternative to reduce adverse effects and mitigate flood hazard. This should also eliminate the confusion some reviewers experienced concerning the meanings of "modifications" and "alternatives."

Three commenters objected to the exemptions provided in § 1022.5(e) for floodproofing and flood protection of existing DOE structures or facilities, and maintenance activities. The commenters felt that such activities may indeed have long- and short-term adverse impacts on floodplains and wetlands. In response to these comments, DOE has eliminated the exemption of floodproofing and flood protection activities, and has modified the exemption of maintenance activities to include only routine maintenance [§ 1022.5(g)]. DOE has retained language which enables consideration of the need for a floodplain/wetlands assessment for routine maintenance involving unusual circumstances.

E. PUBLIC NOTIFICATION PROCEDURES

Several commenters felt that reliance on the publication of a notice in the FEDERAL REGISTER (§ 1022.14) with respect to a proposed floodplain/wetlands action does not satisfy the requirements for early public review and and does not encourage public participation in the floodplain/wetlands decisionmaking process. It is DOE's intent to incorporate floodplain/wetlands notification requirements into the current (and future) applicable NEPA procedures and documentation. DOE believes that these public notification requirements, including the enhanced notification and scoping requirements specified in the CEQ NEPA regulations, will assure an adequate public notification process for those DOE actions, requiring an EIS. Pending the effective date of the CEQ NEPA regulations and DOE implementing procedures, DOE shall, to the extent practicable, issue a Notice of Intent (NOI) to prepare an EIS for proposed floodplain/wetlands actions, where appropriate, and shall circulate the NOI to persons and agencies known to be interested in or affected by the proposed action. New language has been added to § 1022.14 to assure that similar policies and procedures apply to floodplain/wetlands actions, for which no EIS is prepared.

DOE has retained the proposed comment periods following publication of the early public notice and the statement of findings rather than expand these periods as suggested by several commenters. It is believed that the periods allotted in the proposed regulations will permit adequate public participation without unduly delaying agency decisionmaking.

F. OMISSIONS

Four commenters cited omissions in the proposed regulations concerning certain specific requirements of the Executive orders, including policies and procedures with respect to:

1. Consideration of flood hazards for actions involving licenses, permits, loans, grants, or other forms of financial assistance;
2. Delineation of past and probable flood height on DOE property;
3. Lease, easement, right-of-way, or disposal of property to non-Federal entities;
4. Leadership to reduce the risk of flood loss and to minimize the impact of floods on human safety, health and welfare; and
5. Periodic review and update of these regulations.

DOE notes that these items were inadvertently omitted and has, therefore, included provisions in § 1022.3 to

address items 1, 2, and 4 above; § 1022.5 to assess items 1 and 3; and § 1022.21 to address item 5.

G. MISCELLANEOUS

Four commenters cited the proposed regulations failure to identify compliance with National Flood Insurance Program (NFIP) standards as a *minimum* requirement, as stated in E.O. 11988. In response, § 1022.3(b) has been modified.

Two commenters were concerned with the procedures for making a wetlands determination in areas where the U.S. Fish and Wildlife Service National Wetlands Inventory maps are not yet available. Several possible alternate sources of information were recommended; these have been added to § 1022.11(c).

The WRC objected to the use of the final EIS as the vehicle to transmit the statement of findings because the final EIS is a pre-decisional document. WRC believes that E.O. 11988 requires the statement of findings to be issued *after* a decision is made. However, section 2(a)(2) of E.O. 11988 requires only that the statement of findings be prepared and circulated for brief public review *prior to taking action.* The final EIS is also issued for review prior to taking action. DOE believes it is useful to incorporate the statement of findings in a final EIS, where possible. Moreover, EPA in its comments, suggested it would be beneficial to issue a draft statement of findings in a draft EIS. Since E.O. 11988 provides for a period of public comment on the statement of findings, DOE feels that this document is most meaningful if it precedes the Agency's final decision.

Several commenters suggested that DOE delete the proposed requirement to review mitigation measures in the floodplain/wetlands assessment because of the Executive orders prohibition against actions in the floodplain/wetlands unless no practicable alternative is available. While DOE is aware of that requirement, it believes that the decisionmaking process as well as public participation in the decisionmaking process will be best served by a review of all relevant considerations in one document. Thus, DOE has continued the requirement that mitigation measures be reviewed along with practicable alternatives in the floodplain/wetlands assessment.

IV. EFFECTIVE DATE

Executive Order 11988 required agencies to issue or amend existing regulations and procedures within one year of its issuance to comply with the Order. DOE has exceeded the time allotted for promulgation of regulations and consequently believes that the goals of the Order will be best served by waiving the normal 30-day transition period prior to effectiveness of the regulations. Accordingly, these regulations will become effective March 7, 1979.

NOTE.—DOE has determined that because this document does not constitute a significant regulation within the meaning of E.O. 12044, preparation of a regulatory analysis is not required.

In consideration of the foregoing, Chapter X of Title 10 of the Code of Federal Regulations is amended as set forth below, effective upon publication.

Issued in Washington, D.C. February 28, 1979.

RUTH C. CLUSEN,
Assistant Secretary for Environment.

Part 1022 is added to Title 10, Chapter X, of the Code of Federal Regulations to read as follows:

PART 1022—COMPLIANCE WITH FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS

Subpart A—General

Sec.
1022.1 Background.
1022.2 Purpose and scope.
1022.3 Policy.
1022.4 Definitions.
1022.5 Applicability.

Subpart B—Procedures for Floodplain/Wetlands Review

1022.11 Floodplain/wetlands determination.
1022.12 Floodplain/wetlands assessment.
1022.13 Applicant responsibilities.
1022.14 Public review.
1022.15 Notification of decision.
1022.16 Requests for authorizations and appropriations.
1022.17 Follow-up.
1022.18 Timing of floodplain/wetlands actions.
1022.19 Selection of lead agency and consultation among participating agencies.
1022.20 Public inquiries.
1022.21 Updating regulations.

AUTHORITY: E.O. 11988 (May 24, 1977); and E.O. 11990 (May 24, 1977).

Subpart A—General

§ 1022.1 Background.

Executive Order (E.O.) 11988—Floodplain Management (May 24, 1977), requires each Federal agency to issue or amend existing regulations and procedures to ensure that the potential effects of any action it may take in a floodplain are evaluated and that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. Guidance for implementation of the Order is provided in the Floodplain Management Guidelines of the U.S. Water Resources Council (40 FR 6030, February 10, 1978). Executive Order 11990—Protection of Wetlands (May 24, 1977), requires all Federal agencies to issue or amend existing procedures to ensure consideration of wetlands protection in decisionmaking. It is the intent of both Executive orders that Federal agencies implement the floodplain/wetlands requirements through existing procedures such as those established to implement the National Environmental Policy Act (NEPA) of 1969. In those instances where the impacts of actions in floodplains and/or wetlands are not significant enough to require the preparation of an environmental impact statement (EIS) under section 102(2)(C) of NEPA, alternative floodplain/wetlands evaluation procedures are to be established.

§ 1022.2 Purpose and scope.

(a) This part establishes policy and procedures for discharging the Department of Energy's (DOE's) responsibilities with respect to compliance with E.O. 11988 and E.O. 11990, including:

(1) DOE policy regarding the consideration of floodplain/wetlands factors in DOE planning and decisionmaking; and

(2) DOE procedures for identifying proposed actions located in floodplain/wetlands, providing opportunity for early public review of such proposed actions, preparing floodplain/wetlands assessments, and issuing statements of findings for actions in a floodplain.

(b) To the extent possible, DOE will accommodate the requirements of E.O. 11988 and E.O. 11990 through applicable DOE NEPA procedures.

§ 1022.3 Policy.

DOE shall exercise leadership and take action to:

(a) Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction of wetlands and the occupancy and modification of floodplains and wetlands, and avoid direct and indirect support of floodplain and wetlands development wherever there is a practicable alternative.

(b) Incorporate floodplain management goals and wetlands protection considerations into its planning, regulatory, and decisionmaking processes, and shall to the extent practicable:

(1) Reduce the hazard and risk of flood loss;

(2) Minimize the impact of floods on human safety, health, and welfare;

(3) Restore and preserve natural and beneficial values served by floodplains;

(4) Require the construction of DOE structures and facilities to be, at a minimum, in accordance with the standards and criteria set forth in, and consistent with the intent of, the regulations promulgated by the Federal In-

surance Administration pursuant to the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 *et seq.*;

(5) Minimize the destruction, loss, or degradation of wetlands;

(6) Preserve and enhance the natural and beneficial values of wetlands;

(7) Promote public awareness of flood hazards by providing conspicuous delineations of past and probable flood heights on DOE property which has suffered flood damage or is in an identified flood hazard area and which is used by the general public; and

(8) Prior to the completion of any financial transaction related to an area located in a floodplain, which is guaranteed, approved, regulated or insured by DOE, inform any private participating parties of the flood-related hazards involved.

(c) Undertake a careful evaluation of the potential effects of any DOE action taken in a floodplain and any new construction undertaken by DOE in wetlands not located in a floodplain.

(d) Identify, evaluate, and, as appropriate implement alternative actions which may avoid or mitigate adverse floodplain/wetlands impacts; and

(e) Provide opportunity for early public review of any plans or proposals for actions in floodplains and new construction in wetlands.

§ 1022.4 Definitions.

For purposes of this part:

(a) "Action" means any DOE activity, including, but not limited to:

(1) Acquiring, managing, and disposing of Federal lands and facilities;

(2) DOE-undertaken, financed, or assisted construction and improvements; and

(3) The conduct of DOE activities and programs affecting land use, including but not limited to water and related land resources planning, regulating and licensing activities.

(b) "Base Flood" means that flood which has a 1 percent chance of occurrence in any given year (also known as a 100-year flood).

(c) "Critical Action" means any activity for which even a slight chance of flooding would be too great. Such actions may include the storage of highly volatile, toxic, or water reactive materials.

(d) "Environmental Assessment" (EA) means a document for which DOE is responsible that serves to: (1) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact, (2) aid DOE compliance with NEPA when no EIS is necessary, and (3) facilitate preparation of an EIS when one is necessary. The EA shall include brief discussions of the need for the proposal, alternatives, environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

(e) "Environmental Impact Statement" means a document prepared in accordance with the requirements of section 102(2)(C) of NEPA.

(f) "Facility" means any man-placed item other than a structure.

(g) "Finding of No Significant Impact" (FONSI) means a document prepared by DOE which briefly presents the reasons why an action will not significantly effect on the human environment and for which an EIS therefore will not be prepared.

(h) "Flood or Flooding" means a temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters, and/or the unusual and rapid accumulation or runoff of surface waters from any source.

(i) "Floodplain" means the lowlands adjoining inland and coastal waters and relatively flat areas and flood-prone areas of offshore islands including, at a minimum, that area inundated by a 1 percent or greater chance flood in any given year. The base floodplain is defined as the 100-year (1.0 percent) floodplain. The critical action floodplain is defined as the 500-year (0.2 percent) floodplain.

(j) "Floodplain Action" means any DOE action which takes place in a floodplain.

(k) "Floodplain/Wetlands Assessment" means an evaluation consisting of a description of a proposed action, a discussion of its effects on the floodplain/wetlands, and consideration of alternatives.

(l) "Floodproofing" means the modification of individual structures and facilities, their sites, and their contents to protect against structural failure, to keep water out, or to reduce the effects of water entry.

(m) "High Hazard Areas" means those portions of riverine and coastal floodplains nearest the source of flooding which are frequently flooded and where the likelihood of flood losses and adverse impacts on the natural and beneficial values served by floodplains is greatest.

(n) "Minimize" means to reduce to the smallest degree practicable.

(o) "New Construction" for the purpose of compliance with E.O. 11990 includes draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after October 1, 1977.

(p) "Practicable" means capable of being accomplished within existing constraints. The test of what is practicable depends on the situation and includes consideration of many factors, such as environment, cost, technology, and implementation time.

(q) "Public Notice" means a brief notice published in the FEDERAL REGISTER, and circulated to affected and interested persons and agencies, which describes a proposed floodplain/wetlands action and affords the opportunity for public review.

(r) "Preserve" means to prevent modification to the natural floodplain/wetlands environment or to maintain it as closely as possible to its natural state.

(s) "Restore" means to reestablish a setting or environment in which the natural functions of the floodplain can again operate.

(t) "Statement of Findings" means a statement issued pursuant to E.O. 11988 which explains why a DOE action is proposed in a floodplain, lists alternatives considered, indicates whether the action conforms to State and local floodplain standards, and describes steps to be taken to minimize harm to or within the floodplain.

(u) "Structure" means a walled or roofed building, including mobile homes and gas or liquid storage tanks.

(v) "Wetlands" means those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflow, mudflats, and natural ponds.

(w) "Wetlands Action" means an action undertaken by DOE in a wetlands not located in a floodplain, subject to the exclusions specified at § 1022.5(c).

§ 1022.5 Applicability.

(a) This part shall apply to all organizational units of DOE, except that it shall not apply to the Federal Energy Regulatory Commission.

(b) This part shall apply to all proposed floodplain/wetlands actions, including those sponsored jointly with other agencies, where practicable alternatives to the proposed action are still available. With respect to programs and projects for which the appropriate environmental review has been completed or a final EIS filed prior to the effective date of these regulations, DOE shall, in lieu of the procedures set forth in this part, review the alternatives identified in the environmental review or in the final EIS to determine whether an alternative action may avoid or minimize impacts on the floodplain/wetlands. If project or program implementation has progressed to the point where review of alternatives is no longer practicable, or if DOE determines after a review of al-

ternatives to take action in a floodplain, DOE shall design or modify the selected alternative in order to minimize potential harm to or within the floodplain and to restore and preserve floodplain values. DOE shall publish in the FEDERAL REGISTER, a brief description of measures to be employed and shall endeavor to notify appropriate Federal, State, and local agencies and persons or groups known to be interested in the action.

(c) This part shall not apply to wetlands projects under construction prior to October 1, 1977; wetlands projects for which all of the funds have been appropriated through fiscal year 1977; or wetlands projects and programs for which a draft or final EIS was filed prior to October 1, 1977. With respect to proposed actions located in wetlands (not located in a floodplain), this part shall not apply to the issuance by DOE of permits, licenses, or allocations to private parties for activities involving wetlands which are located on non-Federal property.

(d) This part applies to activities in furtherance of DOE responsibilities for acquiring, managing, and disposing of Federal lands and facilities. When property in a floodplain or wetlands is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, DOE shall: (1) identify those uses that are restricted under Federal, State, or local floodplains or wetlands regulations; (2) attach other appropriate restrictions to the uses of the property; or (3) withhold the property from conveyance.

(e) This part applies to activities in furtherance of DOE responsibilities for providing federally undertaken, financed, or assisted construction and improvements. Applicants for assistance shall provide DOE with an analysis of the impacts which would result from any proposed wetland or floodplain activity.

(f) This part applies to activities in furtherance of DOE responsibilities for conducting Federal activities and programs affecting land use, including but not limited to, water and related resource planning, regulating and licensing activity.

(g) This part ordinarily shall not apply to routine maintenance of existing facilities and structures on DOE property within a floodplain/wetlands since such actions normally have minimal or no adverse impact on a floodplain/wetlands. However, where unusual circumstances indicate the possibility of impact on a floodplain/wetlands, DOE shall consider the need for a floodplain/wetlands assessment for such actions.

(h) The policies and procedures of this part which are applicable to floodplain actions shall apply to all proposed actions which occur in a wetlands located in a floodplain.

Subpart B—Procedures for Floodplain/Wetlands Review

§ 1022.11 Floodplain/wetlands determination.

(a) Concurrent with its review of a proposed action to determine appropriate NEPA requirements, DOE shall determine the applicability of the floodplain management and wetlands protection requirements of this part.

(b) In making the floodplain determination, DOE shall utilize the Flood Insurance Rate Maps (FIRM's) or the Flood Hazard Boundary Maps (FHBM's) prepared by the Federal Insurance Administration of the Department of Housing and Urban Development to determine if a proposed action is located in the base or critical action floodplain, as appropriate. For a proposed action in an area of predominantly Federal or State land holdings where FIRM or FHBM maps are not available, information shall be sought from the land administering agency (e.g., Bureau of Land Management, Soil Conservation Service, etc.) or from agencies with floodplain analysis expertise.

(c) In making the wetlands determination, DOE shall utilize information available from the following sources, as appropriate: (1) U.S. Fish and Wildlife Service National Wetlands Inventory; (2) U.S. Department of Agriculture Soil Conservation Service Local Identification Maps; (3) U.S. Geological Survey Topographic Maps; (4) State wetlands inventories; and (5) regional or local government-sponsored wetland or land use inventories.

§ 1022.12 Floodplain/wetlands assessment.

(a) If DOE determines, pursuant to §§ 1022.5 and 1022.11, that this part is applicable to the proposed action, DOE shall prepare a floodplain/wetlands assessment, which shall contain the following information:

(1) *Project Description.* This section shall describe the nature and purpose of the proposed action, and shall include a map showing its location with respect to the floodplain and/or wetlands. For actions located in a floodplain, the high hazard areas shall be delineated and the nature and extent of the potential hazard shall be discussed.

(2) *Floodplain/Wetlands Effects.* This section shall discuss the positive and negative, direct and indirect, and long- and short-term effects of the proposed action on the floodplain and/or wetlands. The effects of a proposed floodplain action on lives and property, and on natural and beneficial floodplain values shall be evaluated. For actions taken in wetlands, the effects on the survival, quality, and natural and beneficial values of the wetlands shall be evaluated.

(3) *Alternatives.* Alternatives to the proposed action which may avoid adverse effects and incompatible development in the floodplain/wetlands shall be considered, including alternate sites, actions, and no action. Measures that mitigate the adverse effects of actions in a floodplain or wetlands, including but not limited to minimum grading requirements, runoff controls, design and construction constraints, and protection of ecology-sensitive areas shall be addressed.

(b) For proposed floodplain or wetlands actions for which an EA or EIS is required, the floodplain/wetlands assessment shall be prepared concurrent with and included in the appropriate NEPA document.

(c) For floodplain/wetlands actions for which neither an EA or EIS is prepared, a separate document shall be issued as the floodplain/wetlands assessment.

§ 1022.13 Applicant responsibilities.

DOE may require applicants for a DOE permit, license, certificate, financial assistance, contract award, allocation or other entitlement to submit a report on a proposed floodplain/wetlands action. The report shall contain the information specified at § 1022.12 and shall be prepared in accordance with the guidance contained in this part.

§ 1022.14 Public review.

(a) For proposed floodplain/wetlands actions for which an EIS is required, the opportunity for early public review will be provided through applicable NEPA procedures. A Notice of Intent to prepare an EIS may be used to satisfy this requirement.

(b) For proposed floodplain/wetlands actions for which no EIS is required, DOE shall provide the opportunity for early public review through publication of a Public Notice, which shall be published in the FEDERAL REGISTER, as soon as practicable after a determination that a floodplain/wetlands may be affected and at least 15 days prior to the issuance of a statement of findings with respect to a proposed floodplain action. DOE shall take appropriate steps to inform Federal, State, and local agencies and persons or groups known to be interested in or affected by the proposed floodplain/wetlands action. The Public Notice shall include a description of the proposed action and its location and may be incorporated with other notices issued with respect to the proposed action.

(c) Following publication of the Public Notice, DOE shall allow 15 days

for public comment prior to making its decision on the proposed action, except as specified in § 1022.18(c). At the close of the public comment period, DOE shall reevaluate the practicability of alternatives to the proposed floodplain/wetlands action and the mitigating measures, taking into account all substantive comments received.

§ 1022.15 Notification of decision.

(a) If DOE finds that no practicable alternative to locating in the floodplain/wetlands is available, consistent with the policy set forth in E.O. 11988, DOE shall, prior to taking action, design or modify its action in order to minimize potential harm to or within the floodplain/wetlands.

(b) For actions which will be located in a floodplain, DOE shall publish a brief (not to exceed three pages) statement of findings which shall contain:

(1) A brief description of the proposed action, including a location map;

(2) An explanation indicating why the action is proposed to be located in the floodplain;

(3) A list of alternatives considered;

(4) A statement indicating whether the action conforms to applicable State or local floodplain protection standards; and

(5) A brief description of steps to be taken to minimize potential harm to or within the floodplain.

For floodplain actions which require preparation of an EA or EIS, the statement of findings may be incorporated into the FONSI or final EIS, as appropriate, or issued separately. Where no EA or EIS is required, DOE shall publish the statement of findings in the FEDERAL REGISTER and distribute copies to Federal, State, and local agencies and others who submitted comments as a result of the Public Notice. For floodplain actions subject to the Office of Management and Budget (OMB) Circular A-95, DOE shall send the statement of findings to the State and areawide A-95 Clearinghouses for the geographic area affected.

§ 1022.16 Requests for authorizations or appropriations.

DOE shall indicate in any requests for new authorizations or appropriations transmitted to OMB, if a proposed action will be located in a floodplain or wetlands, whether the proposed action is in accord with the requirements of E.O. 11990 E.O. 11988, and these regulations.

§ 1022.17 Follow-up.

For those DOE actions taken in floodplain/wetlands, DOE shall verify that the implementation of the selected alternative, particularly with regard to any adopted mitigating measures, is proceeding as described in the floodplain/wetlands assessment and statement of findings.

§ 1022.18 Timing of floodplain/wetlands actions.

(a) Prior to implementing a proposed floodplain action, DOE shall endeavor to allow at least 15 days of public review after publication of the statement of findings.

(b) With respect to wetlands actions (not located in a floodplain), DOE shall take no action prior to 15 days after publication of the Public Notice in the FEDERAL REGISTER.

(c) Where emergency circumstances, statutory deadlines, of overriding considerations of program or project expense or effectiveness exist, the minimum time periods may be waived.

§ 1022.19 Selection of a lead agency and consultation among participating agencies.

When DOE and one or more other Federal agencies are directly involved in a floodplain/wetlands action, DOE shall consult with such other agencies to determine if a floodplain/wetlands assessment is required, to identify the appropriate lead or joint agency responsibilities, to identify the applicable regulations, and to establish procedures for interagency coordination during the environmental review process.

§ 1022.20 Public inquiries.

Inquiries regarding DOE's floodplain/wetlands activities may be directed to the Assistant Secretary for Environment, Department of Energy, Washington, D.C. 20545.

§ 1022.21 Updating regulations.

DOE shall periodically review these regulations, evaluate their effectiveness, and make appropriate revisions.

[FR Doc. 79-6855 Filed 3-6-79; 8:45 am]

DEPARTMENT OF ENERGY

Implementation of Executive Order 12114 Environmental Effects Abroad of Major Federal Actions; Final Guideline

AGENCY: Department of Energy.

ACTION: Final guideline for implementation of Executive Order 12114.

SUMMARY: The Department of Energy (the Department) hereby adopts final Departmental guidelines implementing Executive Order 12114—Environmental Effects Abroad of Major Federal Actions, which was issued on January 4, 1979.

The guidelines published herein reflect certain revisions to the proposed guidelines, published in the Federal Register on September 6, 1979 (44 FR 52146), based upon the Department's consideration of comments received and upon experience acquired in working under Executive Order 12114. The guidelines supplement the procedures set forth in the Department's final guidelines for compliance with the National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, which were published in the Federal Register on March 28, 1980 (45 FR 20694), and are designed to be coordinated with the environmental review procedures established by those procedures. They are applicable to all organizational units of the Department, except the Federal Energy Regulatory Commission, an independent regulatory commission within the Department not subject to the supervision or direction of the other parts of the Department.

EFFECTIVE DATE: January 5, 1981.

FOR FURTHER INFORMATION CONTACT:

Dr. Robert J. Stern, Acting Director, NEPA Affairs Division, Office of Environment, Department of Energy, Room 4G–064, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585, 202–252–4600

Stephen H. Greenleigh, Esq., Assistant General Counsel for Environment, Department of Energy, Room 6D–033, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585, 202–252–6947

SUPPLEMENTARY INFORMATION:

I. Background
II. Comments and Other Revisions

I. Background

A. National Environmental Policy Act

The National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, requires that Federal agencies give appropriate weight to factors affecting the human environment during all stages of their decisionmaking process. In this connection, Federal agencies are required to prepare detailed statements on proposals for major Federal actions significantly affecting the quality of the human environment.

B. Council on Environmental Quality Regulations

The Council on Environmental Quality promulgated regulations establishing uniform procedures implementing the National Environmental Policy Act on November 29, 1978 (43 FR 55978). These regulations (40 CFR 1500 *et seq.*) require agencies to adopt implementing procedures to supplement these uniform procedures.

C. Department of Energy National Environmental Policy Act Guidelines

On March 28, 1980, the Department published in the Federal Register (45 FR 20694) final guidelines implementing the Council on Environmental Quality National Environmental Policy Act regulations.

D. Executive Order 12114

On January 4, 1979, President Carter signed Executive Order 12114, entitled Environmental Effects Abroad of Major Federal Actions. The Order represents the exclusive and complete determination by the Executive Branch of the procedural and other actions to be taken by Federal agencies to further the purposes of the National Environmental Policy Act with respect to the environment outside the United States, its territories and possessions.

E. Department Guidelines Implementing Executive Order 12114

The guidelines published herein provide the supplemental implementing procedures required by Executive Order 12114. They are intended for use by all persons acting on behalf of the Department in carrying out the Executive Order. The Executive Order and these final guidelines are not intended to create or enlarge any substantive or procedural rights or cause of action against the Department.

These implementing guidelines in large measure reiterate the Executive Order provisions. It is recommended that these guidelines be read and interpreted in conjunction with Executive Order 12114, the Department's guidelines implementing the Council on Environmental Quality National Environmental Policy Act regulations and the Department's Order 5440.1 governing internal National Environmental Policy Act processes to obtain a more complete understanding of the Department's environmental review policies and procedures.

The guidelines are applicable to all organizational elements of the Department except the Federal Energy Regulatory Commission, an independent regulatory body within the Department.

As required by section 2–1 of Executive Order 12114, the Department has consulted with the Department of State and the Council on Environmental Quality in developing these guidelines.

II. Comments and Other Revisions

Written comments on the proposed guidelines were received from the Department of State and one private organization. The Department has carefully considered all comments and has modified the proposed guidelines, as appropriate, to reflect those comments.

A. Department of State Comments

The State Department submitted a number of comments regarding the applicability of the Department's guidelines to nuclear activities. The following revisions were made to the proposed guidelines to reflect these comments:

1. Section 5.1.5 in the proposed guidelines was revised to clearly indicate that the environmental review of actions involving the export of a nuclear production, utilization or waste management facility will be accomplished under a set of Unified Procedures recently developed by the State Department and other Federal agencies, including the Department of Energy, and promulgated at 44 FR 65560 (November 13, 1979).

2. The exemption contained in the proposed guidelines regarding "small quantities" of nuclear material (number 4 in Appendix B) has been revised to remove the "small quantity" limitation. The Department believes that this revision will more closely follow the exemption contained in Section 2-5(a)(v) of Executive Order 12114 regarding nuclear fuel and material exports. The Department believes that, in general, the export of and subsequent arrangements involving nuclear material or isotopic material in accordance with the provisions of the Nuclear Non-Proliferation Act of 1978, the "Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978" (published in the Federal Register on June 9, 1978, 43 FR 25328), and Section 131 of the Atomic Energy Act of 1954, as amended, will not have a significant environmental impact on the global commons. Section 6.1 of these guidelines requires that the Department still review every such action to determine whether an exemption is warranted. If an exemption is used, section 7 of the guidelines requires that a brief record documenting the exemption be prepared.

3. The definitions of "foreign nation," "United States" and "global commons" in section 16 of the proposed guidelines have been revised.

B. Private Organization Comments

One private organization submitted three comments on the Department's proposed guidelines:

1. Referring to Part II B. 2. of the preamble and section 4.2 of the guidelines, it was unclear to the commentor what kinds of projects could be conducted in a foreign country without requiring that country's approval.

The referenced sections in the guidelines apply to actions taken by the United States, in concert with one or more foreign nations, which significantly affect the environment of a foreign nation which is not participating with the United States in the action and which is not otherwise involved in the action, such as by regulatory control. An example of such an action could be the construction, by the United States (with Departmental funding) and a foreign nation, of a coal liquefaction plant situated near the border between that foreign nation and a neighboring country which is not participating in the project. If the construction and operation of such a plant will significantly affect the environment of this neighboring country, section 4.2 of the Department's guidelines requires that the United States prepare an environmental study relevant or related to the action, or a concise analysis of the environmental issues involved. Pursuant to other provisions in the Department's guidelines, these studies or analyses will discuss all significant environmental impacts associated with the project, including those on the environment of the non-participating foreign nation. The Department believes that this section is sufficiently clear and that no revisions are necessary.

2. Referring to the general issue of the preparation of environmental review documents by the United States in concert with foreign nations or international organizations, the commentor felt that specific guidelines are needed to avoid potential delay while responsibilities and detailed content were being coordinated.

The Department recognizes that its procedures implementing Executive Order 12114 do not contain specific guidelines governing the preparation of environmental review documents by the United States in conjunction with foreign nations or international organizations. This lack of specificity could lead to some delay in the program while these details are determined. However, the Department believes that, given the variety of foreign policy sensitivities and considerations that are present in situations involving foreign nations and international organizations, it would be impractical to develop detailed generic procedures governing the cooperative preparation of environmental review documents. The Department believes that any potential delays can be minimized by proper coordination in the early stages of the environmental review process. The Department has thus not altered the language in its proposed guidelines regarding this subject area.

3. Should a foreign nation prepare its own environmental review for an action in which the United States is involved, the commentor felt that provisions should be provided in the guidelines to allow the United States to formally adopt all or portions of this review.

The Department agrees with the commentor that this authority should be explicity defined in the guidelines, and has revised the proposed guidelines by adding section 14.2 to so indicate.

With respect to Executive Order 12044, "Improving Government Regulations," the Department has determined that its guidelines implementing Executive Order 12114 are "significant" but not "major" because the anticipated effects of the guidelines primarily would be to provide internal direction for implementation of Executive Order 12114. Consequently, a regulatory analysis has not been prepared.

Issued in Washington, D.C., December 18, 1980.

Ruth C. Clusen,

Assistant Secretary for Environment.

Department of Energy Guidelines for Implementation of Executive Order 12114—Environmental Effects Abroad of Major Federal Actions

Part A—General

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Part A—General

Section 1 Background

Executive Order 12114 of January 4, 1979, represents the United States Government's exclusive and complete determination of the procedural and other actions to be taken by Federal agencies to further the purpose of the National Environmental Policy Act with respect to the environment outside the United States, its territories and possessions. The Executive Order requires that all Federal agencies taking actions subject to environmental review under the Order adopt their own implementing procedures.

Section 2 Purpose and Scope

These guidelines are intended for use by all persons acting on behalf of the Department in implementing Executive Order 12114. The guidelines are not intended to create or enlarge any procedural or substantive rights or cause of action against the Department.

Section 3 Applicability

These guidelines apply to all organizational elements of the Department except the Federal Energy Regulatory Commission.

Part B—Actions for Which Environmental Review Is Required

Section 4 Categories of Actions and Mandatory Environmental Review Requirements

In the decisionmaking process for actions in the following categories, the Department will prepare and take into consideration the documents or studies specified below:

4.1 Major Federal actions significantly affecting the environment of the global commons outside the jurisdiction of any nation (e.g., the oceans or Antarctica).

Actions in this category require the preparation of an environmental impact statement, including, as appropriate, generic, program and specific statements.

4.2 Major Federal actions significantly affecting the environment of a foreign nation not participating with the United States and not otherwise involved in the action.

Actions in this category require the preparation either:

4.2.1 A bilateral or multilateral environmental study relevant or related to the proposed action. The study is to be conducted by the United States and one or more foreign nations, or by an international body or organization in which the United States is a member or participant; or

4.2.2 A concise analysis of the environmental issues involved, including environmental assessments, summary environmental analyses or other appropriate documents.

4.3 Major Federal actions significantly affecting the environment of a foreign nation which provide to that nation:

(a) A product, or physical project producing a principal product or an emission or effluent, which is prohibited or strictly regulated by Federal law in the United States because its toxic effects on the environment create a serious public health risk (see Appendix A); or

(b) A physical project which in the United States is prohibited or strictly regulated by Federal law to protect the environment against radioactive substances.

For actions in this category, the Department will either:

4.3.1 Prepare a document as specified in Section 4.2.1; or

4.3.2 Prepare a document as specified in Section 4.2.2.

4.4 Major Federal actions outside the United States, its territories and possessions which significantly affect natural or ecological resources of global importance designated for protection by the President pursuant to section 2-3(d) of Executive Order 12114 or, in the case of such a resource protected by international agreement binding on the United States, by the Secretary of State.

For actions in this category, the Department will either:

4.4.1 Prepare a document as specified in Section 4.1; or

4.4.2 Prepare a document as specified in Section 4.2.1; or

4.4.3 Prepare a document as specified in Section 4.2.2.

Part C—Actions Exempted From Mandatory Environmental Review

Section 5 Actions Exempted by Executive Order 12114

5.1 The following actions are exempt from these guidelines:

5.1.1 Actions not having a significant effect on the environment outside the United States, as determined by the Department. (Actions having a potentially significant impact on the United States, its territories or possessions are subject to the provisions of the Council on Environmental Quality's National Environmental Policy Act regulations (40 CFR Part 1500, November 29, 1978) and the Department's guidelines implementing those regulations (45 FR 20694, March 28, 1980).

5.1.2 Actions taken by the President;

5.1.3 Actions taken by or pursuant to the direction of the President or Cabinet officer when the national security or interest is involved or when the action occurs in the course of an armed conflict;

5.1.4 Intelligence activities and arms transfers;

5.1.5 Actions providing to a foreign nation a nuclear production, utilization or waste management facility. The environmental review of these actions is governed by the Unified Procedures promulgated by the State Department at 44 FR 65560 (November 13, 1979).

5.1.6 All other nuclear actions not covered in section 5.1.5 above, except those actions which significantly affect the environment of the global commons, which will undergo environmental review pursuant to section 4.1 of these guidelines.

5.1.7 Votes and other actions in international conferences and organizations;

5.1.8 Disaster and emergency relief action.

Section 6 Actions Exempted by the Department

6.1 The Department has determined that the general classes of actions which are listed in Appendix B generally do not have significant environmental impacts requiring review under these guidelines. They are hereby excluded from mandatory environmental review under these guidelines unless the Department determines that a particular action within such classes will have a significant environmental effect requiring such review. The Department may amend or expand Appendix B, as appropriate.

6.2 The Department may exempt, on a case-by-case basis, any action from these guidelines when such exemption is determined by the Department to be necessary to meet:

6.2.1 Emergency circumstances;

6.2.2 Situations involving exceptional foreign policy or national security sensitivities;

6.2.3 Other such special circumstances.

6.3 In utilizing an exemption pursuant to section 6.2 above, the Department will consult with the Department of State and the Council on

Environmental Quality as soon as is feasible.

Section 7 Required Documentation for Exempted Actions

For actions in connection with which the Department utilizes any exclusion or exemption pursuant to section 5 or 6 of these guidelines, the Department will prepare a brief record which describes the basis for its determination to utilize such exclusion or exemption.

Part D—Other Provisions

Section 8 Public Involvement

The Department will provide for public involvement in the environmental review process conducted pursuant to these guidelines to the following extent:

8.1. Environmental impact statements prepared pursuant to Sections 4.1 or 4.4.1 of these guidelines shall be subject to the provisions of:

8.1.1 Departmental guidelines regarding publication of a Notice of Intent to prepare an environmental impact statement and public involvement in the environmental impact statement scoping process;

8.1.2 40 CFR 1502.9 regarding preparation of a draft and final environmental impact statement;

8.1.3 40 CFR 1503 regarding comment procedures for a draft environmental impact statement.

8.2 Documents or studies prepared pursuant to sections 4.2, 4.3 or 4.4.2 and 3 of these guidelines are not subject to the public involvement procedures in 8.1.1 through 8.1.3 above. The Department may, at its discretion, elect to utilize any or all of these procedures for any such document or study.

Section 9 Timing

9.1 The Department will commence preparation of environmental documents required by these guidelines as close as practicable to the time the Department is developing or is presented with a proposal, and complete such documents early enough so that they can serve practically as an important contribution to the decisionmaking process.

9.2 Until an environmental document required by these quidelines has been completed and considered, the Department will take no action concerning the proposal which would have an adverse environmental impact or limit or prejudice the choice of reasonable alternatives.

9.3 For actions which have significant impacts both on the environment of the United States, its territories or possessions and on the environment of foreign nations or the global commons, documents prepared pursuant to sections 4.1, 4.2 or 4.3 of these guidelines analyzing the impacts outside the U.S. will, to the extent practicable, be prepared and reviewed in conjunction with the analyses of the domestic impacts of the proposed action.

Section 10 Contents

10.1 Environmental impact statements prepared pursuant to section 4.1 or 4.4.1 of these guidelines will follow the recommended format of 40 CFR 1502.10 and contain the types of information specified in 40 CFR 1502.11–1502.18.

10.2 Bilateral or multilateral environmental studies prepared pursuant to sections 4.2.1, 4.3.1 or 4.4.2 will contain a currently valid analysis of all significant environmental impacts of the proposed action.

10.3 Environmental analyses prepared pursuant to section 4.2.2, 4.3.2 or 4.4.3 will include brief discussions of:

10.3.1 The proposed action and the need therefor;

10.3.2 The reasonable alternatives to the proposed action which could be implemented directly or indirectly by the United States; and

10.3.3. All significant environmental impacts associated with the proposed action and the reasonable alternatives.

Section 11 Notice of Availability

11.1 The Department will, as soon as feasible, inform other Federal agencies with relevant interest and expertise of the availability of any documents prepared pursuant to these guidelines.

11.2 The Department will determine, after consultation with the Department of State, the appropriate time and manner for informing an affected nation of the availability of any relevant documents prepared pursuant to these guidelines.

11.3 As soon as practicable after notification to an affected nation in accordance with section 11.2 of these guidelines, the Department will provide notice to the public of the availability of the environmental review documents specified in sections 4.1, 4.2, 4.3, and 4.4 of these guidelines.

Section 12 Modifications to Contents, Timing and Availability

The Department will make appropriate modifications to the contents, timing and availability of documents, where necessary, to:

12.1 Enable the Department to decide and act promptly as and when required;

12.2 Avoid adverse impacts on foreign relations or infringement in fact or appearance of other nations' sovereign responsibilities; or

12.3 Ensure appropriate reflection of:

12.3.1 Diplomatic factors;

12.3.2 International commercial, competitive and export promotion factors;

12.3.3 Needs for governmental or commercial confidentiality;

12.3.4 National security considerations;

12.3.5 Difficulties of obtaining information and agency ability to analyze meaningfully environmental effects of a proposed action; and

12.3.6 The degree to which the Department is involved in or able to affect a decision to be made.

12.4 Modifications to the contents of documents might include, for example, the use of generic, typical or hypothetical environmental impact analyses where critical site specific data cannot be obtained from an affected foreign nation. Regarding modifications to the availability of a document, where an affected nation notifies the Department of its desire not to notify the public of the availability of a document prepared pursuant to sections 4.2, 4.3, 4.4.2, or 4.4.3 of these guidelines, the Department may waive the requirements of section 11.3 above regarding notices of availability.

Section 13 Coordination With the Department of State

The Department will coordinate all communications with foreign governments concerning environmental agreements and other arrangements implementing these guidelines with the Department of State.

Section 14 Duplication of Resources

14.1 The Department will not have to prepare any document or study required by Section 4 of these guidelines if it determines that a document or study already exists that is adequate in scope and content to meet the requirements of these guidelines.

14.2 The Department may adopt all or part of existing environmental analyses, including those prepared by foreign countries or international organizations, when the Department determines that these analyses are adequate in scope and content to fulfill the requirements of these guidelines.

14.3 The Department will, in the early stages of preparing any document or study described in Section 4 above, request the cooperation of any Federal agency which the Department determines to possess a statutory mission or expertise relevant to the proposed action.

14.4 Where an action involves multiple Federal agencies including the Department of Energy, a lead agency, as determined by the agencies involved, will have responsibility for implementing the provisions of Executive Order 12114 using its own procedures implementing the Executive Order.

14.5 If a major Federal action having significant effects on the environment of the United States or the global commons requires preparation of an environmental impact statement by the Department, and if the action is included in Section 4.2 or 4.3 above as an action having significant effects upon the environment of a foreign nation, the environmental impact statement does not have to contain a review of these foreign impacts. The appropriate type of environmental review, as described in Section 4.2 or 4.3 above, may be issued as a separate document.

Section 15 Miscellaneous Provisions

The provisions of Sections 5 and 6 regarding exclusions or exemptions from these procedures do not apply to major Federal actions significantly affecting the environment of the global commons unless permitted by law.

Section 16 Definitions

16.1 *Environment* means the natural and physical environment, and it excludes social, economic and other environments. Social and economic effects do not give rise to any requirements under these guidelines.

16.2 *Federal Action* means any action that is potentially subject to United States Government control and responsibility. It includes actions that are implemented, funded or approved directly or indirectly by the United States Government. It does not include actions in which the United States participates in an advisory, information gathering, representational or diplomatic capacity but does not implement, fund or approve the action or cause the action to be implemented. An action significantly affects the environment if it does significant harm to the environment even though on balance the Department believes the action to be beneficial to the environment.

16.3 *Foreign Nation* means any territory under the jurisdiction of one or more foreign governments, including the territorial seas thereof. For the purpose of these procedures, actions having significant environmental effects on the resources of a foreign nation's continental shelf or, to the extent its claim of jurisdiction is recognized by the United States, its fisheries zone, shall be considered to be actions having significant environmental effects on that foreign nation.

16.4 *United States* means the States, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Marianas, the Trust Territory of the Pacific Islands, American Samoa, the United States Virgin Islands, Guam and the other territories and possessions of the United States, including the territorial seas thereof. For the purpose of these procedures, actions having significant environmental effects on the resources of the continental shelf of the United States, or on resources of United States Fisheries Conservation Zones subject to the jurisdiction of the United States, shall be considered to be actions having significant environmental effects in the United States.

16.5 *Global Commons* is equivalent to *areas outside the jurisdiction of any nation* and means all areas not described in subsection 16.3 and not described in subsection 16.4 above.

Section 17 Compliance

These guidelines are intended for use by all persons acting on behalf of the Department of Energy in carrying out the provisions of Executive Order 12114. Any deviations from the guidelines must be soundly based and must have the advance approval of the Secretary of the Department of Energy.

Appendix A—Illustrative List for Determining Compliance with Section 4.3

1. The following is an illustrative, non-inclusive list of the products, emissions and effluents encompassed by section 4.3 of these proposed guidelines: Asbestos, acrylonitrile, pesticides, mercury, arsenic, polychlorinated biphenyls, vinyl chloride, isocyanates, benzene, beryllium, and cadmium.

2. The following is an illustrated, non-inclusion list of the products, emissions and effluents *not* encompassed by section 4.3: Ammonia, chlorine, sulphuric acid, sulphur dioxide, sulfate and sulfate liquors, caustic soda, nitric acid, nitrogen oxides, and phosphoric acid.

Appendix B—Actions Normally Excluded by the Department From Preparation of an Environmental Impact Statement, Bilateral or Multilateral Environmental Study or Concise Environmental Analysis Under These Guidelines

1. Approval of Departmental participation in international "umbrella" agreements for cooperation in energy research and development which do not commit the United States to any specific projects or activities.

2. Approval of technical exchange arrangements for information, data or personnel with other countries or international organizations.

3. Approval of arrangements to assist other countries in identifying and analyzing their energy resources, needs and options.

4. Approval of the export of and subsequent arrangements involving nuclear materials or isotopic material in accordance with the provisions of the Nuclear Non-Proliferation Act of 1978, the "Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978" (published in the Federal Register on June 9, 1978, 43 FR 25328) and Section 131 of the Atomic Energy Act of 1954, as amended.

[FR Doc. 81-158 Filed 1-2-81; 8:45 am]

BILLING CODE 6450-01-M

United States Government Department of Energy

memorandum

DATE: June 10, 1988

REPLY TO ATTN OF: EH-25

SUBJECT: Guidance Related to Analysis of Impacts to Workers in National Environmental Policy Act (NEPA) Documentation

TO: DISTRIBUTION

The purpose of this memorandum is to provide general guidance regarding the analysis of impacts to workers in DOE environmental impact statements (EISs) and environmental assessments (EAs) in order to assist DOE program and field offices in meeting the requirements of NEPA and to establish a general consistency in the Department's NEPA documentation. This guidance was prompted by several questions raised in this regard and was developed by the Office of NEPA Project Assistance, after consultation with the Office of General Counsel.

Background

Neither the Council on Environmental Quality (CEQ) regulations for implementing NEPA nor the Department of Energy (DOE) NEPA guidelines specifically address the appropriate treatment of impacts to workers in NEPA documents, and questions have recently been raised regarding this subject. The CEQ regulations define the "human environment" as "the natural and physical environment and the relationship of people with that environment," and require that this definition "shall be interpreted comprehensively" (40 CFR 1508.14). Furthermore, the regulations include health among the "effects" which must be evaluated when establishing the reasonably foreseeable impacts of a proposed action and its alternatives (40 CFR 1508.8). There is no indication that analyses of impacts to workers are beyond the scope of NEPA, and to the contrary, in recent EIS scoping comments, the Environmental Protection Agency has specifically included requests for analyses of occupational impacts. Consultation with the CEQ and with the Office of General Counsel established that there has been no litigation directly on this point.

To gain further perspective on this matter, a survey of past EISs prepared by DOE and other agencies was conducted. The review revealed a fairly uniform treatment of nonradiological impacts to workers. The EISs generally discussed both routine and accidental impacts if the impacts were considered to be potentially significant. In contrast, the review found less consistency in the analyses of radiological impacts to workers. Although radiological occupational impacts were generally evaluated for routine operations, impacts to workers under accident conditions were often omitted.

Occupational Impacts Analysis

To reduce inconsistencies in future NEPA documents, we have determined that DOE NEPA documentation should include an analysis of potentially significant impacts to workers. The analysis should include both radiological and nonradiological impacts under routine and accident conditions. The scope of the discussion should include potential impacts to workers in adjacent facilities as well as those workers directly associated with the project. Furthermore, the analysis of accidents should consider both the potential impacts to workers, as a direct result of an accident, and those impacts associated with potential cleanup activities.

When analyzing occupational impacts, in particular those associated with workers within a proposed facility, it is recognized that NEPA documents frequently must be prepared when detailed design information is limited. If sufficient information is not available to quantify the impacts to workers, and such impacts are potentially significant, the NEPA document should disclose the fact that information is incomplete or unavailable and should present: (1) a discussion of the reasons why a credible quantitative evaluation of impacts to workers cannot be performed in a timely manner; (2) an explanation of why such quantitative information is not essential to a reasoned choice among alternatives, or when preparing an EA, why the information is not necessary to determine whether to prepare an EIS or a finding of no significant impact; (3) a discussion of the Safety Analysis and Review System (DOE Order 5481.1B) and how it functions to ensure the adequate protection of worker health; and (4) a qualitative discussion of projected impacts to workers.

This qualitative discussion could include a brief summary referencing the requirements and procedures established in the appropriate DOE safety orders pertaining to facility design, construction, and operation, e.g., DOE Order 6430.1A, General Design Criteria, and safety orders providing for occupational health and safety. Information pertinent to facility design features, both administrative and engineered, related to mitigation of occupational impacts could be presented. Examples of such measures for a nuclear facility may include potential implementation of remote handling technology, extra shield wall thickness, and well-designed emergency preparedness procedures targeted at reducing occupational impacts by providing effective warning systems and orderly evacuation plans.

Conclusion

We believe the preceding guidance will clarify the appropriate treatment of occupational impacts analysis in the Department's NEPA documents and in doing so represents a continued commitment to maintain the highest standards of protection for workers in DOE facilities. If you have any questions regarding this general

guidance, please call me. For further information regarding its application to particular NEPA documents, please direct your staff to contact Carol Borgstrom, Acting Director, Office of NEPA Project Assistance, at FTS 896-4600.

Ernest C. Baynard, III
Assistant Secretary
Environment, Safety and Health

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United States Government **Department of Energy**

memorandum

DATE: November 15, 1991

REPLY TO ATTN OF: EH-20

SUBJECT: Guidance on Implementation of the DOE NEPA/CERCLA Integration Policy

TO: Distribution

Note: Under the Secretarial Policy Statement on NEPA (June 13, 1994; Tab IV-3) DOE now will rely, as a general rule, on the CERCLA process for review of actions to be taken under CERCLA. Therefore, the references in this guidance to DOE's NEPA/CERCLA integration policy have been superseded (except when DOE chooses, after consultation with stakeholders and as a matter of policy, to integrate the NEPA and CERCLA processes for specific proposed actions). The Office of NEPA Oversight has included this guidance in the NEPA Compliance Guide, however, because it is a useful discussion of the relationship among programmatic, sitewide, and project-specific NEPA reviews.

Background

On October 26, 1990, EH proposed guidance on implementing the Department of Energy's (DOE's) policy of integrating the procedural and documentation requirements of the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), wherever practical, and provided an opportunity to comment. In response, we received fourteen sets of comments that, in general, supported the proposed NEPA pyramid approach. The final guidance (below) preserves this overall framework for NEPA/CERCLA integration. The Attachment presents responses to comments that were not incorporated in the final guidance.

The Environmental Protection Agency (EPA) and the Council on Environmental Quality (CEQ) held a workshop in July 1991 on the practical issues presented as Federal agencies seek to ensure that CERCLA actions satisfy those NEPA values that are neither in conflict with, nor redundant of, the procedures set forth in CERCLA and the National Contingency Plan. While it is the legal position of the United States, as expressed by the Department of Justice (DOJ), that NEPA does not apply to CERCLA activities, DOJ agrees that it is useful to forge a consensus concerning a practical and uniform approach to these policy issues.

DOE and other agencies participated in the EPA/CEQ workshop, which identified NEPA values that often lack sufficient analysis in CERCLA documents (such as cumulative, socioeconomic, and ecological impacts). EPA has announced an 18-24 month trial period of working with CEQ and other agencies to develop single documents that address the requirements of CERCLA and the values of NEPA, but has not yet issued formal internal guidance. All parties are determined that incorporating NEPA values into the remedial action process should not cause delays.

Some of you have asked whether we have a policy for integrating the NEPA process with the Resource Conservation and Recovery Act (RCRA) corrective action (cleanup) process. We do not have

such a policy, but are considering one, as it may provide the efficiencies of time and effort that we believe are provided by the NEPA/CERCLA integration policy. Because we do not have a policy, the final guidance does not refer to NEPA/RCRA integration.

GUIDANCE

Introduction

The DOE NEPA/CERCLA integration policy in DOE Order 5400.4 states:

> Where DOE remedial actions under CERCLA trigger the procedures set forth in NEPA, it is the policy of DOE to integrate the procedural and documentation requirements of CERCLA and NEPA, wherever practical.

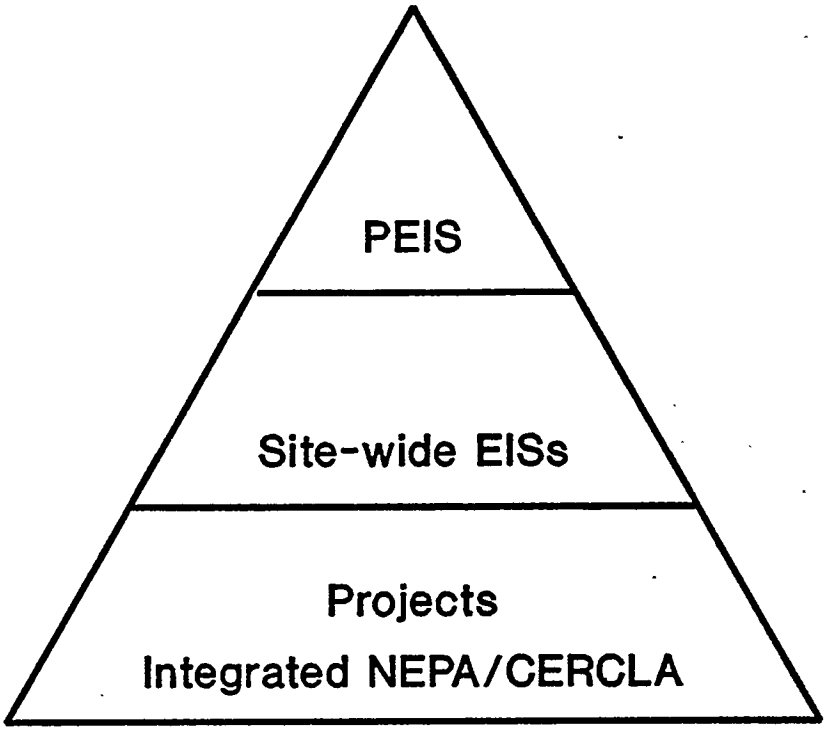
DOE's NEPA/CERCLA integration policy is not intended to represent a statement on the legal applicability of NEPA to remedial actions under CERCLA.

To assist DOE implementation of the NEPA/CERCLA integration policy, EH, after consultation with the Office of General Counsel, provides the following guidance, based on a tiered approach to NEPA review.

NEPA Pyramid

The CEQ NEPA regulations (40 CFR 1500-1508) envision a process of tiering NEPA documents from one level of decisionmaking to another. Tiering refers to the coverage of general matters in broader environmental impacts statements (EISs) with subsequent narrower EISs or environmental assessments (EAs) used to address more specific activities. Tiering is appropriate when it helps to focus on issues that are ripe for decision and exclude from consideration issues already decided or not yet ripe (40 CFR 1508.28).

DOE generally should use a tiered approach to NEPA review for its remedial and waste management activities. While CERCLA issues will be carefully considered at all levels, integration of NEPA and CERCLA documentation and procedures will occur primarily at the project-specific (e.g., operable unit) level. This approach can be depicted by a NEPA pyramid. (See Figure).



DOE NEPA STRATEGY
FOR ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

Programmatic EIS (PEIS) on Environmental Restoration and Waste Management: Addresses major DOE-wide policy issues such as regional vs. decentralized treatment, storage, and disposal; long-term land-usability; cleanup priorities; technology development.

Site-wide EISs: Address individual and cumulative impacts of sizing, siting, constructing, and operating treatment, storage, and disposal facilities plus cumulative impacts of cleanup actions at DOE sites.

Project-level Integrated NEPA/CERCLA Documents: Address impacts of individual cleanup actions; expect 75-90% of cleanup actions to be covered by categorical exclusions, Engineering Evaluation/Cost Analysis-Environmental Assessment/Findings of No Significant Impact (EE/CA-EA/FONSIs), or Remedial Investigation/Feasibility Study-EA/FONSIs (RI/FS-EA/FONSIs); very few integrated RI-FS/EISs anticipated.

FIGURE: NEPA PYRAMID

At the top of the NEPA pyramid is the programmatic EIS (PEIS) on a DOE-wide strategy for environmental restoration and waste management in preparation by EM; the Notice of Intent was issued October 22, 1990 (55 FR 42633). This PEIS will address major policy issues, such as regional vs. decentralized treatment, storage, and disposal alternatives; long-term land-usability policies; cleanup priorities; and alternative technology development approaches. (A DP PEIS on reconfiguring the nuclear weapons complex also is being prepared; the Notice of Intent was issued February 11, 1991 (56 FR 5590).)

In the middle of the NEPA pyramid are site-wide EISs (for major DOE sites) that may either encompass all site operations or focus on selected functions, such as environmental restoration and waste management activities. Site-wide EISs will address the individual and cumulative impacts of ongoing and proposed site activities. With regard to impacts from environmental restoration and waste management activities, site-wide EISs should address the cumulative impacts of all reasonably foreseeable cleanup actions at a site and of sizing, siting, constructing, and operating treatment, storage, and disposal facilities to support both cleanup actions and continuing operations. (This discussion applies to site-wide EAs as well. Although DOE's policy is to prepare site-wide EISs for certain large multiple-facility DOE sites, an EIS or EA may be prepared for other, smaller sites.)

Site-wide EISs assess impacts from continuing and proposed actions. Site characterization data may be incomplete when a site-wide EIS is prepared and some impacts analyses may have to be based on estimates. Where adequate information is available, site-wide EISs should support NEPA records of decision (RODs) for new (or major modifications to existing) treatment, storage, or disposal facilities (including the location and approximate size of new facilities). The site-wide EISs also should support NEPA RODs for the overall approach to environmental restoration activities, by including the estimated maximum impacts (for example, the maximum increases in air emissions expected from existing or new facilities or from ground disturbance). Pollution prevention and waste minimization measures should be factored into the alternatives to be analyzed.

NEPA decisionmaking based on site-wide EISs may need to be sequenced in order not to prejudice decisionmaking under CERCLA. This can be done by issuing phased site-wide NEPA RODs or revised RODs, as long as the new or revised decision is adequately supported by the site-wide EIS. This is particularly important with regard to NEPA review for individual cleanup projects. Although a site-wide EIS may be used for NEPA review of individual cleanup projects, we expect,

as noted above, that there will not always be enough information available when a site-wide EIS is prepared to adequately incorporate NEPA values for individual projects; therefore, NEPA values should be incorporated into CERCLA reviews, as discussed below.

At the bottom of the NEPA pyramid are the large number of individual cleanup actions. We expect that 75-90% of these cleanup actions will be adequately covered for NEPA purposes by categorical exclusions (CXs), or by EA-level NEPA reviews and corresponding findings of no significant impact (FONSIs). DOE established CXs pertaining to cleanup actions on September 7, 1990 (55 FR 37174), and EH-1 issued guidance on "Use of the NEPA Categorical Exclusion for Removal-type Actions" on March 19, 1991.

For EA-level NEPA reviews, integrated NEPA/CERCLA documents should be prepared to address the impacts of individual cleanup actions, normally by operable unit. We expect that with adequate planning, a well-prepared CERCLA document (RI/FS or engineering evaluation/cost analysis (EE/CA)) would require little or no modification to address NEPA values adequately.

To facilitate their issuance by the Department, these integrated documents should be coordinated with the Office of Environmental Compliance as they are developed, specify that they have been prepared to satisfy both the NEPA and CERCLA processes, and be titled an RI/FS-EA or EE/CA-EA when undergoing state and EPA review. Although a completed RI/FS or EE/CA may be submitted for adoption as an EA, we do not recommend such deferral of NEPA review because NEPA values should be considered in the earliest possible stages of decisionmaking. When major new facility construction projects (e.g., incinerators, disposal facilities) with potentially significant impacts have been adequately covered in the site-wide EISs, we expect there will be very few integrated RI/FS-EISs at the operable unit level.

If an EE/CA-EA or RI/FS-EA is prepared for a project, the corresponding FONSI should be issued before the CERCLA ROD. If an RI/FS-EIS is prepared for a project, the NEPA and CERCLA RODs should be integrated to the extent practical.

Coordination Among Pyramid Elements

Preparation of site-wide EISs should be closely coordinated with the development of the PEISs but should not necessarily await completion of the PEISs. Once a PEIS is completed, however, a site-wide EIS that was completed earlier should be reviewed to determine if a supplement or a revised ROD for the

site-wide EIS is needed to conform to decisions arising from the PEIS.

Likewise, NEPA review for individual cleanup projects should be closely coordinated with the development of the corresponding site-wide EIS but should not necessarily await completion of the site-wide EIS. Once the site-wide EIS is completed, however, any earlier decisions for specific projects that have not been implemented should be examined to determine if they conform to the later decisions arising from the site-wide EIS or if changes in the projects need to be made.

Project-specific NEPA/CERCLA documents should, where appropriate, reference the site-wide EIS's cumulative impacts assessment of multiple related cleanup actions and major new facilities and update that assessment as necessary. Although cumulative impacts may be assessed more appropriately and efficiently in site-wide EISs, a project-level review that precedes a site-wide EIS should assess potential cumulative impacts to which that project would contribute.

Interim Actions

Interim actions that are within the scope of an ongoing PEIS or site-wide EIS are permissible under DOE's NEPA/CERCLA integration policy if they satisfy the requirements of CERCLA per the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR 300.430(a)(1)(ii)(B), and NEPA per 40 CFR 1506.1 and 10 CFR Part 1021 (when promulgated). Nevertheless, under this policy these NEPA provisions may not interfere with full and timely performance of DOE's CERCLA obligations. EH-1 is developing guidance concerning interim actions under NEPA.

We are planning to have a one-day DOE-wide NEPA/CERCLA Workshop in the near future for NEPA and CERCLA staffs from Program and Field Offices to discuss NEPA/CERCLA strategies being developed and implemented for their sites. If you have any questions on this guidance, or would like to participate in planning for the DOE NEPA/CERCLA workshop, please contact Kathleen I. Taimi, Director, Office of Environmental Compliance, on (202) 586-2113 (FTS 896-2113), or Carol M. Borgstrom, Director, Office of NEPA Oversight, on (202) 586-4600 (FTS 896-4600).

Paul L. Ziemer, Ph.D.
Assistant Secretary
Environment, Safety and Health

Attachment

Attachment: Responses to comments on "Proposed Guidance on Implementation of the DOE NEPA/CERCLA Integration Policy" that were not incorporated in the final guidance

Many commentors requested detailed guidance on how to integrate the two processes. We plan to provide detailed guidance gradually, as we gain experience. Some requested that additional EA and EIS classes of actions regarding restoration actions be added to the NEPA rulemaking package. As DOE gains experience with restoration actions, we may propose new or amended classes of actions in future rulemakings. There were also several questions on the general structure and intent of site-wide NEPA documents, which we will address in separate guidance.

There was a request that the guidance establish NEPA review schedules to ensure that time limits established in interagency agreements are met. The variety of the type and complexity of DOE's remedial actions precludes establishing a time period that would be practical for all actions. Even if we were to prescribe time limits, they would be permissive rather than mandatory. It was similarly suggested that approval of CXs be presumed after a defined time period following submission of the CX to the approving authority, but this would be contrary to SEN-15-90 and DOE 5440.1D, the NEPA Order.

One commentor requested that the guidance address the contractor conflict-of-interest issue (i.e., identify portions of NEPA documentation and cleanup work that could be accomplished by Management and Operation (M&O) contractors). In the CEQ regulations, there is a requirement (40 CFR 1506.5) that contractors preparing EISs state that they have no financial or other interest in the outcome of the project. This requirement does not apply to the preparation of EAs. Because we expect that most NEPA/CERCLA integrated documents will be EA-level reviews, we do not expect to encounter many NEPA conflict-of-interest concerns. The conflict-of-interest issue may be moot, however, if DOE proceeds with an alternative business strategy for environmental restoration (55 FR 45844; October 31, 1990). Under this alternative strategy, an Environmental Restoration Management Contractor (ERMC) would assist DOE in managing all the environmental restoration work at each DOE field office, a function currently being performed by M&O contractors at most DOE sites. The strategy is still being developed, and roles have not been defined. DOE has issued a draft Request for Proposals for the Fernald Environmental Management Project (56 FR 34057; 56 FR 34057), however, that would implement the ERMC strategy.

A question was asked about criteria for deciding whether NEPA procedures had been triggered by CERCLA actions and who decides whether it is practical to integrate NEPA and CERCLA. DOE's policy is to incorporate NEPA values into its CERCLA process (whenever the CERCLA process is followed) even if NEPA does not apply to CERCLA actions as a matter of law. Whether deviations from this policy can occur because of impracticality will be decided case-by-case by consultation among EH, GC, and EM. We are working to eliminate obstacles to integration; this guidance is part of that work.

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U.S. Department of Energy

Washington, D.C.

ORDER

DOE 4320.1B *

1-7-91
Change 1: 3-26-92

SUBJECT: SITE DEVELOPMENT PLANNING

1. PURPOSE. To establish policies and assign responsibilities and authorities for the planning and development of Department of Energy (DOE) sites.

2. CANCELLATION. DOE 4300.1B, REAL PROPERTY AND SITE DEVELOPMENT PLANNING, of 7-1-87, Chapters 1 and 2.

3. SCOPE. The provisions of this Order apply to all Departmental Elements, except as otherwise provided by this Order, statute, or specific delegation of authority from the Secretary of Energy. The provisions of this Order shall be applied by Contracting Officers to management and operating contracts.

4. EXCLUSIONS.

   a. Administrators of Power Marketing Administrations. In accordance with Sections 302 of the Department of Energy Organization Act (PL 95-91), the Secretary operates and maintains the Power Marketing Administrations' (PMA) electric power transmission systems by and through the PMA Administrations. The PMAs have in place site development processes, which are geared to the special needs of utility operations, are responsive to coordinated multiutility system requirements, and are in conformance with prudent utility practice. In view of the unique nature of the Administrators' obligations to meet their statutory and public utility responsibilities for the safety, security and reliability of electric power transmission and of their legal and contractual obligations, the Administrators shall determine the appropriate site development planning criteria for their facilities. This will include consideration of appropriate parts of the criteria set forth by this Order.

* **The Office of NEPA Oversight has included this Order in the NEPA Compliance Guide because of the coordination required under the Order between site development planning documents and NEPA documents.**

Vertical line denotes change.

DISTRIBUTION:
All Departmental Elements

INITIATED BY:
Office of Organization, Resources, and Facilities Management

b. Director, Naval Nuclear Propulsion Program. Executive Order 12344, statutorily prescribed by PL 98-525 (42 USC 7158 note), establishes the responsibilities and authority of the Director, Naval Nuclear Propulsion Program (who is also the Deputy Assistant Secretary for Naval Reactors within the Department) over all facilities and activities, which comprise the joint Navy-DOE Program. In view of the unique nature of naval nuclear propulsion applications, and the statutorily prescribed responsibilities noted above, the Director shall determine the appropriate site development planning criteria applicable to program property and activities, which will include consideration of appropriate parts of the criteria set forth by this Order.

5. REFERENCES. The following references are useful or necessary to perform the functions of this Order:

a. DOE 5000.1A, INSTITUTIONAL PLANNING OF MULTIPROGRAM LABORATORIES, of 9-12-86, which establishes the institutional planning process for DOE multiprogram laboratories.

b. DOE/AD/06212-1, "Site Development Planning Handbook," P-1, of 1-81, which provides a suggested methodology, along with some specific techniques for preparing a Site Development and Facility Utilization Plan.

c. DOE/MA/06212-2, "Site Development Planning Handbook Supplement," P-2, of 11-82, which is a case study to demonstrate the principles and illustrate the process of facility planning.

d. DOE/MA-0129, "Site Development Planning for Energy Management," P-3, of 8-85, which identifies the relationship between site planning and energy consumption and how consumption can be reduced.

e. DOE/MA-0328, "Utilities Planning and Management," of 8-88, which provides guidance in the planning, acquisition and management of utility services.

f. Office of Management and Budget Circular A-16, Coordination of Surveying and Mapping Activities of May 16, 1967 (as amended), which describes the responsibilities of Federal agencies with respect to coordination of Federal surveying and mapping activities financed in whole or in part by Federal funds.

g. DOE 5440.1C, NATIONAL ENVIRONMENTAL POLICY ACT, of 4-9-85, which establishes policy and procedures to implement National Environmental Policy Act (NEPA).

h. SEN-15-90, NATIONAL ENVIRONMENTAL POLICY ACT, of 2-5-90, which establishes DOE policy and procedures to implement NEPA.

i. DOE 5650.3, IDENTIFICATION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (UCNI), of 2-29-88, which establishes policies, procedures, and responsibilities for the identification and control of UCNI.

j. SEN-25-90, STRATEGIC PLANNING INITIATIVE, of 7-24-90, which establishes policy concerning implementation of a process for planning, programming and budgeting.

6. DEFINITIONS.

a. Facility. A general term to describe fixed site improvements such as buildings, structures, roads, and utilities.

b. Field Element. Any officially established Departmental organization located outside the Washington, DC, metropolitan area.

c. Outlay Program Managers. Assistant Secretaries for Conservation and Renewable Energy; Environmental Restoration and Waste Management; Nuclear Energy; Fossil Energy; Defense Programs; and the Directors of Energy Research; New Production Reactors; and Civilian Radioactive Waste Management, who manage the Headquarters organizations responsible for outlays of Federal funds other than for salaries and expenses.

d. Program Mission Projections. Prepared by the outlay program managers and identify the level of support, product, or services required at each site.

e. Mission Resource Requirements. Prepared by the site and describe the necessary resources, i.e., people, equipment, cubic feet of storage material, etc., required to meet program mission projections at that specific site.

f. Facilities Requirements. Prepared by the site and quantify the size and configuration of buildings, roads, structures, lands, and other facilities/resources at a site required to satisfy the mission resource requirements.

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g. Site. A geographic entity comprising leased or owned land, buildings, and other structures required to perform program activities.

h. Unclassified Controlled Nuclear Information. Certain unclassified Governmental information prohibited from unauthorized dissemination under section 148 of the Atomic Energy Act and DOE 5650.3.

i. Site Development Plan (SDP). A summary level document for senior managers to use that presents site development issues that require a commitment of resources to solve.

j. Technical Site Information. The documented result of the site planning process that contains information and data for use by staff and technical personnel.

k. Master Plan. A document or map that shows facilities or land uses required to support future missions at some point in time, usually 20 years.

7. POLICY. It is the policy of the Department that:

a. All sites shall have in place a process to plan for and develop real property holdings to support the missions of the site. This process shall result in two documents: (1) the "Technical Site Information" described in Chapter I for use by technical and staff personnel, and (2) the "Site Development Plan" described in Chapter II for use by senior managers.

b. All sites are required to have the Technical Site Information (TSI) and a SDP. See Chapter II for specific guidance concerning Oak Ridge Reservation, Idaho National Engineering Laboratory, Hanford Site, Nevada Test Site, Strategic Petroleum Reserve, and Savannah River Site.

c. The TSI shall be the documented result of the planning process, contain detailed information structured for technical and staff personnel use, and shall address, as a minimum, those issues outlined in Chapter I relative to the stewardship of real property at a site.

d. Site planning is a continuing process. As such, the TSI shall be maintained consistently with the SDP, shall be updated yearly, and shall be approved by the responsible manager of the operations office.

e. The SDP shall be sufficiently flexible to be structured for use by senior managers making decisions concerning broad programmatic issues and shall be in the format described in Chapter II. This document will be a summary and will present those site initiatives and issues that require program resource commitments or support.

f. The Site Development Plan shall be revised as required, issued yearly, cover a period of 20 years into the future and be approved by the Field Office Manager.

g. The mission resource requirements shall reflect the most recent guidance from Headquarters Program Offices and from current planning, programming and budgeting systems.

h. Sites shall include in the planning process the acquisition and use of standard Geographic Information Systems (GIS), which promote coordinated development, use, sharing and dissemination of surveying, mapping, and related spatial data. Cooperation with State and local governments and the private sector is encouraged to the fullest practical extent.

i. At the time a SDP is developed or revised, the Field Office Manager and/or outlay program manager shall evaluate any existing site-wide or relevant programmatic NEPA documentation, in consultation with Assistant Secretary for Environment, Safety and Health, to determine whether further NEPA documentation is required. Likewise, reviewers of the SDP and TSI shall evaluate any existing site-wide or relevant programmatic NEPA documentation for consistency.

8. RESPONSIBILITIES AND AUTHORITIES.

a. The Secretary or Designee.

(1) Establishes principles and policies relating to site development planning.

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(2) Shall make determinations and resolve site development issues where conflicting programmatic requirements, land uses, or other issues cannot otherwise be resolved at lower organizational levels.

(3) Shall determine on a yearly basis those issues or matters relating to site development planning that require review and evaluation, and shall delegate review authority.

b. Director of Administration and Human Resource Management.

(1) Provides within DOE Headquarters the core of professional planning expertise to the Secretary or Designee, to Headquarters Program Offices, and to Field Elements.

(2) Provides recommendations to the Secretary or Designee to develop policies relating to site development planning criteria.

(3) Assesses and evaluates the planning process at the Field Elements on behalf of the Secretary or his Designee.

(4) Reviews, independently and jointly with outlay program managers, the Field Elements for areas and methods to improve site development planning policy, and for those issues or matters directed by the Secretary or Designee.

c. Outlay Program Managers.

(1) Provide the program mission projections (from Strategic Plans per SEN-25-90) upon which the SDP is based.

(2) Concur with the site's mission resource requirements.

(3) Jointly reviews annually, with the Director of Administration and Human Resource Management, the site planning process for field elements and other site planning issues or matters as directed by the Secretary or Designee.

d. Headquarters Program Secretarial Officer with Landlord Responsibilities.

(1) Review SDP.

(2) May request, as required, detailed supporting planning information from Field Elements such as engineering evaluations of facility support capabilities, descriptions of physical plant infrastructure units, status of regulatory compliance, near-term construction schedules, TSI documentation, and environmental, utility, and transportation plans.

(3) Jointly reviews annually, with the Director of Administration and Human Resource Management, the site planning process at field elements and other site planning issues or matters as directed by the Secretary or Designee.

e. Field Office Managers shall:

(1) Oversee at each site the development, implementation, maintenance, and documentation of a planning process that will address, as a minimum, all those elements outlined in Chapter I. This shall include formal coordination between site planning and all other facility-related administrative activities such as real property management, facility maintenance planning, environmental/safety/health/security performance, energy conservation, design for new construction, and budgetary planning.

(2) Approve SDP and TSI documents.

(3) Formally review the planning process yearly for each site under its cognizance and maintain official documentation and records of those reviews.

(4) Ensure the format of all SDP from sites under their cognizance is consistent with the format outlined in Chapter II.

(5) Ensure that SDP and other related documents are reviewed for classified information and UCNI.

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9. APPROVALS AND PROCEDURES.

a. As shown on Figure 1, outlay program managers shall provide program mission projections or appropriate program guidance to the Heads of Field Elements.

b. Field Office Managers shall provide, to the outlay program managers for concurrence, the mission resource requirements based on the most recent program guidance or mission projections.

c. Preparation and approval of the TSI and the SDP based on the mission resource requirements will be accomplished by the responsible Manager of the Field Office. (For sites that report directly to a Headquarters organization, these responsibilities will be assumed by the cognizant outlay program manager.)

d. SDP shall be forwarded to the Headquarters Program Secretarial Officers with landlord responsibilities, one copy to the Director of Organization, Resources and Facilities Management, Office of Administration and Human Resource Management, and one copy to the Assistant Secretary for Environment, Safety and Health.

BY ORDER OF THE SECRETARY OF ENERGY:

JOHN J. NETTLES, JR.
Director of Administration
and Human Resource Management

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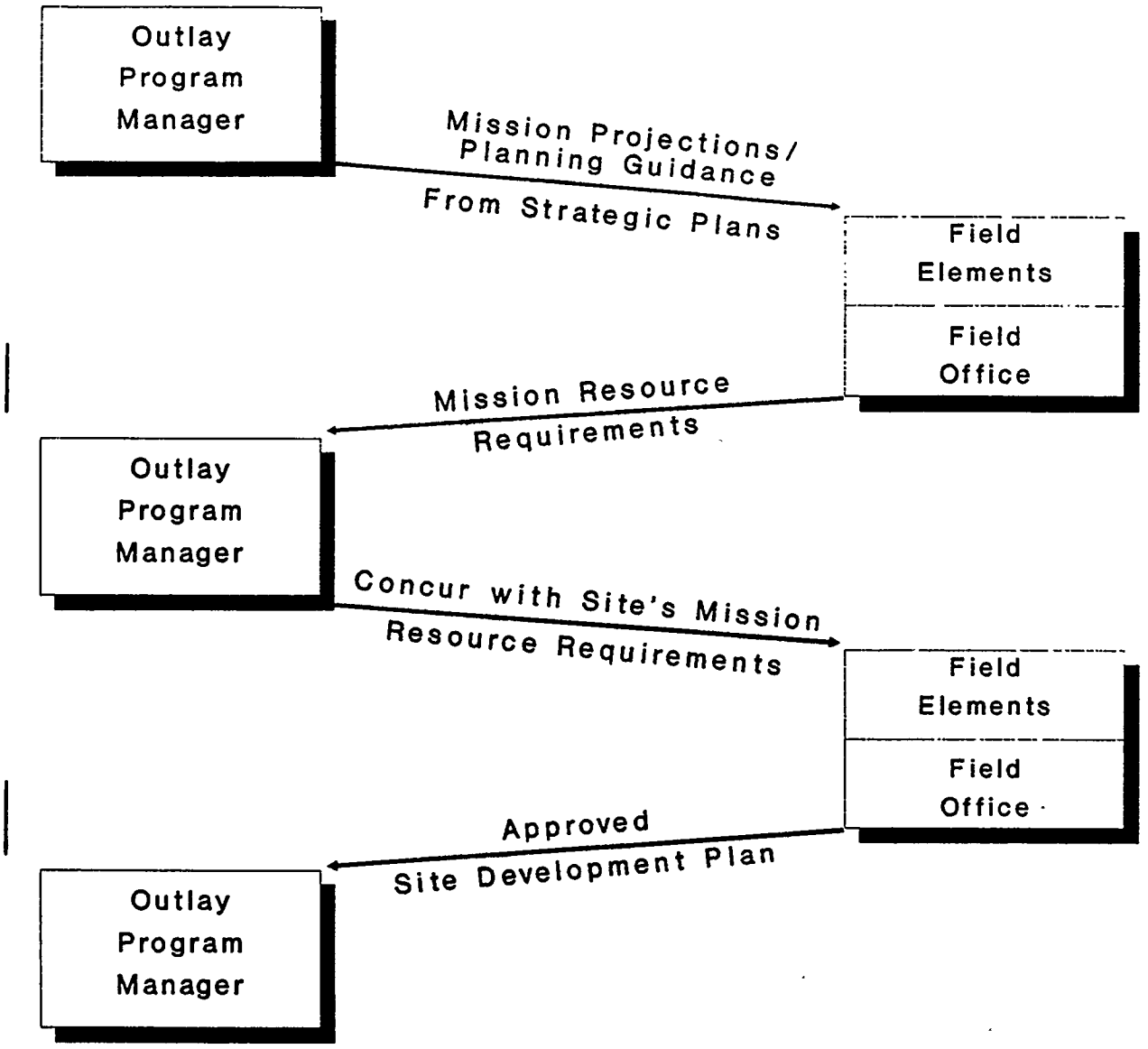


Figure 1
Site Development Plan Sequence of Events

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CHAPTER I

SITE DEVELOPMENT PLANNING

1. PLANNING PROCESS.

   a. The planning process, as it relates to site planning, is defined as those incremental steps used by a site planner to:

      (1) Identify and define current and future site missions;
      (2) Evaluate existing site conditions and regional influences;
      (3) Determine and quantify facility requirements to accomplish the missions of the site;
      (4) Formulate alternatives to satisfy the facility requirements;
      (5) Evaluate and rank the alternatives based on their merits; and
      (6) Develop a plan of actions to implement the preferred solution.

   b. Site planning should not be accomplished in a vacuum and all affected parties should have input into the process. The Field Office Manager shall determine the appropriate level of community involvement in the planning process. This involvement will vary with each site and may range from meetings with local planning boards or public officials to formal hearings. The Field Office Manager shall prepare a community relations plan that addresses the level of community involvement and a plan of action and milestones.

   c. The planning process must be documented so that others may follow the site planner's thought processes to arrive at the solutions and plan of actions. This documentation shall be called "Technical Site Information" (TSI). Listed below is a detailed outline of the minimum TSI that documents the thought processes of the site planner to satisfy the requirements of this Order. The planning process and TSI may be modified to best serve the needs of a site, but the process must be based on industry-wide accepted and recognized planning principles. There may be additional unique requirements that should be used for special situations such as:

      (1) At production sites industrial engineering fundamentals are usually paramount and should be used extensively in the planning process to identify the flow of work product and to identify facility requirements.

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(2) At research laboratories a campus setting may be the most suitable working environment and planning should reflect that parameter.

d. The TSI shall be comprehensive and shall be located and maintained at the site. It is not intended to reproduce in the TSI in total that information which is found in other planning documents, such as the Environmental Restoration and Waste Management Five-Year Plan. The intent is to summarize or reference those other planning documents, and to discuss the impacts on land use, siting of facilities, and mission. The documentation in the TSI shall be sufficient to permit readers to easily understand the analysis and conclusions established through the planning process. The TSI has been logically grouped into five sections with related subtopics. The subtopics may be rearranged into other sections to meet the unique requirements of a site, but all subtopics must be addressed as part of the planning process. The format of the TSI will generally be one volume containing the five sections. Each section, however, may be a stand-alone document if large amounts of material and data are required to document the planning process. In this case, the TSI may consist of two to five volumes depending on the grouping of the sections in each volume. Planners are urged to use judgement in expanding or contracting the steps outlined to fit the specific site being planned.

2. TECHNICAL SITE INFORMATION.

a. Regional Conditions. Address the following issues:

(1) History. Describe the history of the site and how it has developed to the present.

(2) Regional Overview. Using a map and narrative, evaluate the relationship of the site with the surrounding region concerning demographic features, community attitudes and pressures, local issues or problems, labor supply, materials availability, housing, schools, and any other factors that may aid, limit, or otherwise affect the future development or operation of the site.

(3) Specific Locale Conditions. Address and map the location of population densities, zonings, land use patterns, and other pertinent issues in the vicinity of the site and any other laws or regulations that may affect the future use of the site. Examples are wetlands protection, coastal zone management, air quality standards, historic preservation, etc.

(4) Public Transportation. Evaluate and map the location of transportation facilities that serve the site such as road networks, airlines service, railroad and waterborne services.

(5) Geology/Topography. Evaluate and map the location of features that may affect future use and development such as fault locations, earthquake potential, water table depths and aquifers, wetlands, flood plains, forested areas, ecological areas, etc.

(6) Meteorology. Address conditions such as prevailing winds, temperatures, probability and intensities of severe storms, tornados, and prolonged rainy or dry seasons.

(7) Floodplains/Wetlands. Development of a Site Development Plan is an "action" defined in 10 CFR Part 1022, Compliance with Floodplain/Wetlands Environmental Review Requirements. The development of a site plan for any site with facilities or activities in a 100 year floodplain must comply with the requirements in Part 1022 (e.g., carefully evaluating the impacts of actions proposed in those plans and providing for public review before the plan is approved). Site plans for sites that store or dispose of hazardous materials within the 500 year floodplain must also meet Part 1022 requirements.

b. Existing Site Conditions. Define present site conditions and mission program needs to provide a base on which to define long-term goals and build short-term plans. Address the following topics relating to land use and siting of facilities as a minimum:

(1) Existing Land Use. Identify the present uses of all lands at the site. This information shall be shown on a map along with site boundaries and owned or leased offsite land and buildings. Attendant problems and opportunities for these land uses should be addressed. Also identify the existing or potential use/storage/disposal of hazardous constituents within the 500 year floodplain.

(2) Mission and Program. Identify past trends and present mission, programs, and workload being performed at the site and the special needs of each.

(3) Population. Collect data on population at the site, the distribution by area and improvement, and analyze the degree and type of interaction among the various population groups.

(4) Functions. Perform an analysis of each of the site's functions. Using narrative, maps and graphics, show material or work process flow and describe interrelationships. Evaluate the suitability of the existing functional layout.

(5) Utilities. Identify all sources and supplies of utilities and site trends for consumption and demand of those utilities. Evaluate current and future capacity, condition, availability, and current and future costs of public utilities.

(6) Site Improvements.

(a) Prepare a map or maps showing all facilities on the site including buildings, structures and transportation systems, such as roads, railroads, landing fields, pathways, parking areas, entrances and exits. Buildings or lands that are contaminated and the impact of the siting of facilities or missions should be designated and the type of contamination shown. Also show areas suspected of being contaminated for which no characterization data is available.

(b) Provide descriptions and appropriate maps of all utility systems such as electric, gas, water, sewer, steam, compressed air, industrial gases, and transmission lines.

(c) Provide a table listing each facility (buildings, structures, transportation and utility systems) and the following information:

1 For buildings and structures, data should include identification number and name; present use; area or size; condition; percentage being used full time; estimated remaining economic or useful life, historical interest, unique features and possible future use, and estimated work required to cure functional or economic obsolescence.

2 For transportation and utility systems, data should include present conditions, capacity, percentage of time in full use, estimated remaining functional or economic life, expansion capability, and estimated work required to cure obsolescence or deterioration.

(7) Physical Characteristics. Identify and map the location of natural factors and physical constraints of the site including topography, slopes, geology, faults, flood plains, hydrology, vegetation, ecological areas, wildlife, cultural resources, and endangered species.

(8) Security. Identify on a map or aerial photograph the location of buffer zones, security zones, lighting, fencing, barriers, and gates or other security features commensurate with the security classification of the document. Special effort should be taken to ensure the protection of classified information and UCNI.

(9) Safety. Identify on a map hazardous areas, explosive arcs, and any required separation between areas. Address any significant industrial or operational safety issues as they relate to siting of facilities or missions. Identify the location of the nearest resident to hazardous areas on a map or aerial photograph.

(10) Environmental Issues. Address the locations of and methods for waste disposal, waste storage, and waste treatment, as well as any other pertinent environmental issues. This information may be referenced in the TSI if already included in National Environmental Policy Act documents.

(11) Summary. Address in summary fashion, the capabilities, limitations, and deficiencies of the site and their impact on the site's ability to perform its missions.

c. Planning Analysis. Perform a planning analysis using the Regional Conditions and Existing Site Conditions evaluations as a base. Define mission resource requirements from the program mission projections and state the goals that will be used to develop the Master Plan. Specifically, provide the following:

(1) Mission Resource Requirements. Define and quantify long-range (20-year) program mission projections in terms of numbers of personnel, production units, storage needs, constant research dollars, or other pertinent measurable units.

(2) Determine Facility and Land Requirements. Determine the types, numbers, and sizes of facilities and associated land requirements that will support the program mission projections and mission resource requirements. These requirements shall be determined on the basis of historic trends, quantitative analysis, or an actual engineering/architectural space or work flow analysis.

(3) Goals. Establish goals or objectives to provide a framework for economically and effectively developing a site to accomplish missions and programs over a 20-year period. Specific goals required to accomplish this task will vary from site to site depending on the condition and capacity of facilities and the rate of program change or growth. Examples of specific goals or objectives would be:

(a) Eliminate overcrowding in administrative facilities;

(b) Eliminate incompatible land uses;

(c) Improve site transportation;

(d) Realign utility systems to serve proposed load centers;

(e) Regroup all nuclear research facilities to a specific area at the site;

(f) Avoid environmentally sensitive areas, e.g., wetlands, floodplains, wildlife habitats, etc.; and

(g) Reduce operating and maintenance costs.

(4) Evaluation. Compare, by program and the Real Property Inventory System use codes, the facility requirements with the existing assets of the site to determine excesses and deficiences in corresponding classes of facilities. Economic restrictions, functional life of the assets, and new regulations should be taken into account. Perceived limitations should be described as part of this evaluation.

(5) Analyze Alternatives. Identify practical alternatives available to provide facilities and land to meet program mission projections. Identify the preferred alternative.

(6) Develop a Plan. Develop a plan to provide for the facility and land requirements to accomplish the site's missions. The plan should address eliminating the facility excesses and deficiences identified in paragraph c(4) above. The methodology and any significant tools (such as "ideal site plans" or cost benefit analyses) used in developing the plan shall be documented.

(7) Changes in Direction. If mission projections of funding levels change significantly from the mission resource requirements, reanalyze alternatives to determine which is best.

(8) Consideration of Alternatives. Both major projects and major system acquisitions carry specific NEPA considerations. Under the proposed DOE rule for compliance with NEPA, major projects will normally require Environmental Analysis,* and major system acquisitions, normally Environmental Impact Statement. Demonstrate that alternatives have been considered in the planning for major projects and major system acquisitions in order to satisfy the requirements of NEPA and SEN-15-90. This information may be referenced if included in other documentation.

(9) Floodplains. If existing or potential use/storage/disposal in a 500 year floodplain is identified, special impact assessment process must be completed before the plan shall be approved.

d. Prepare and Document the Master Plan. Prepare a Master Plan from the Planning Analysis. Using maps and narrative, show the proposed configuration of the site 20 years into the future. The following issues shall be addressed and documented:

(1) Future Land Uses. Identify planned dedicated uses for existing Government-owned or leased lands and all lands proposed for acquisition.

(2) Future Functional Locations. Identify the major operating and support uses, planned interactions, and where applicable, material and/or process flow for the entire site.

* The Office of NEPA Oversight notes that, under 10 CFR Part 1021, Subpart D, Appendix C1, this reference should be to an environmental assessment.

(3) Future Facility Locations and Uses. Identify, on maps, the planned uses of existing buildings and other structures and those that are to be demolished or declared excess. Identify the use and general location of new construction showing proposed building sites and designate future development zones for various programs and support functions.

(4) Utilities. Identify future loads, load configuration (e.g., pulse steady, time of day peak), types of service required (interruptible, firm, high reliability), and planned utility sources (e.g., on-site generation/process or offsite purchase). Using maps and narrative, show future distribution systems, on-site plants, significant modifications to present systems, and new utilities construction.

(5) Future Circulation. Show transportation systems, including air, rail, roads, parking, and pathways and significant changes or additions.

(6) Future Security. Identify existing and proposed security zones, fences, lighting, barriers, portals, and other improvements for security, commensurate with the security classification of the document.

(7) Future Safety. Identify hazardous areas, arcs, buffer zones, fire protection, and other safety-related areas. Solutions to operational or industrial safety issues identified in other steps of the planning process relating to land use and siting of facilities should be addressed.

(8) Future Environmental Issues. Areas planned to be set aside for waste disposal and waste treatment shall be identified. Address the impact on siting of facilities. This information may be referenced if contained in NEPA documents.

e. TSI Five-Year Plan. Prepare a Five-Year Plan that outlines the incremental steps necessary to reach the goals outlined in the Master Plan. Document these steps and proposed projects (line items, general plant, capital equipment, or operating expense funded). The Five-Year Plan shall begin with the current budget year under preparation and run out 4 additional years. The following issues shall be addressed and documented:

(1) Facility Uses. Prepare a table showing the existing and planned buildings with the present use of each, its proposed use at the end of the 5-year period, and address the interim actions required to accomplish any changes. Address how these uses implement the goals and objectives of the Master Plan.

(2) Modifications to the Site. On a map locate all new construction and improvements, major alterations or modifications, and demolition planned for the 5-year period. Provide a tabular list of the site modifications with the proposed fiscal year of accomplishment and total estimated cost and scope for the fiscal year in which they will be funded.

(3) Updates. The Five-Year Plan shall be updated yearly to reflect the addition of a new fiscal year and any changes to the objectives, which have caused changes to the plan.

Vertical line denotes change.

CHAPTER II

SITE DEVELOPMENT PLAN FORMAT

1. CONCEPT: The Site Development Plan is a brief document that presents site development issues that require a commitment of resources from an outlay program manager to solve. The plan should state the problems or issues to be solved, identify the solution and corresponding resource requirements, and impact if not provided. The plan documents, in summary, the thought process that leads to the request for resources. Special effort should be taken to ensure the protection of classified information and UCNI.

2. SPECIAL REQUIREMENTS: All sites shall have one Site Development Plan. However, Strategic Petroleum Reserve, Oak Ridge Reservation, Idaho National Engineering Laboratory, Hanford Site, Savannah River Site, and the Nevada Test Site may have one landlord Site Development Plan each and one Site Development Plan for each noncontiguous or uniquely separate area. The landlord Site Development Plan shall address those issues that require resource commitments from the landlord. Plans for the individual noncontiguous or uniquely separate areas shall address those issues that require resource commitments from their respective outlay program managers.

3. FORMAT

   a. All Site Development Plans shall be of a consistent format within a body of text, tables and graphs 10 pages or less plus a title page and table of contents. The pages shall be 8-1/2" wide x 11" long, printed on one side, and shall be contained in a white 1/2" wide 3-ring binder. Two folding maps (an Existing Land Use map and a Master Plan map) are required, shall be self contained within the Site Development Plan, and shall have a bar (graphic) scale, legend, and North arrow. The suggested size for these maps is 11" x 17". Due to the size and complexity of some sites, the two map limitation may restrict the usefulness of the document. In these situations the head of the operations office may waive the two map limit on a case-by-case exception basis.

b. The contents of each page of the Site Development Plan in the following paragraphs are to be considered a guide. All the topics shall be addressed, but the length of the topics may be shortened or expanded to convey meaningful information about the site. The length of the body of text may be less than but shall not exceed 10 pages.

4. CONTENTS OF PAGES 1 AND 2.

a. Existing Missions, Workload, and Site Population. Discuss the following:

(1) Existing major missions at the site as provided by outlay program managers, i.e., perform research, manufacture a product, etc.;

(2) Workload as provided by the outlay program manager, i.e., specific research goals or objectives to be reached within a specified timeframe, quantities of a product to be manufactured (if not classified), etc.; and

(3) Population or personnel loading at the site.

b. Site and Regional Information.

(1) Briefly describe any conditions that exist or may develop in the surrounding regions that would enhance or deter from accomplishing the missions at the site.

(2) Describe the site itself addressing:

(a) Condition of facilities;

(b) Conditions that would enhance or deter establishing new or expanding current missions; and

(c) Factors that may influence the future use of the site.

5. CONTENTS OF PAGES 3 AND 4

a. Program Mission Projections and Mission Resource Requirements. Discuss the following:

(1) Future missions projections (relate to any changes in current missions);

(2) Mission resource requirements;

(3) Future workload as provided by the outlay program managers, i.e., specific research goals or objectives to be reached within a specified timeframe, quantities of a product to be manufactured (if not classified), etc.; and

(4) Future population or personnel loading at the site.

6. CONTENTS OF PAGES 5, 6, 7 AND 8

a. Master Plan. Discuss the following relevant to the future of the site:

(1) Goals (What are we trying to accomplish?);

(2) Facility and land requirements;

(3) Future land uses;

(4) Future major facility locations and construction programs;

(5) Utility sources, loads, and distribution/collection system configurations; and

(6) Provide a one page summary tabular chart of the 5-year construction program at the site including the cost and scope of the projects.

Note: The Master Plan shall be coordinated with all other program initiatives that have an impact on facilities and land management at the site. Some of these initiatives are the Laboratory Institutional Plan, environmental restoration/hazardous waste management plans, workload plans, National Environmental Policy Act per SEN-15-90, etc.

7. CONTENTS OF PAGES 9 AND 10. Use this section to identify special considerations. Address any site planning issues that should be brought to the attention of senior level managers including issues that need resolution, solutions to those issues, the required resource commitments, and impact if not provided.

Vertical line denotes change.

8. MAPS. Provide the following:

   a. Existing Land Use Map;

   b. Master Plan Map.

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memorandum

DATE: MAY 26 1992

REPLY TO ATTN OF: EH-25

SUBJECT: Recommendations on Alternative Actions for Analysis in Site-wide NEPA Reviews

TO: Secretarial Officers
Field Office Managers

Background

The purpose of this memorandum is to recommend the treatment of the proposed action and the no action alternatives in site-wide National Environmental Policy Act (NEPA) reviews that are prepared for continuing and reasonably foreseeable future actions at Department of Energy (DOE) sites. DOE prepares site-wide NEPA reviews in accordance with section 1021.331 of the DOE NEPA Regulations (10 CFR Part 1021, published on April 24, 1992 at 57 FR 15122) to improve and coordinate agency plans, functions, programs, and resource utilization, among other reasons.[1]

Many DOE sites contain facilities that support diverse and unrelated missions and activities. Site-wide NEPA documents provide an opportunity for cumulative, "programmatic" review of the collective potential environmental effects of such facilities at a specific geographic location. A site-wide NEPA review is a means of considering changes in the overall operating (*i.e.*, "production") mode of a site, including mission changes where appropriate, and provides current environmental impact information to support and simplify subsequent "tiered" NEPA reviews. Site-wide NEPA documents also provide an opportunity to address the cumulative impacts of all reasonably foreseeable activities, including environmental restoration activities and related activities of sizing, siting, constructing, and operating treatment, storage, and disposal facilities to support both cleanup actions and continuing operations. This analysis of environmental restoration activities constitutes the second "tier" of the pyramid described in my November 15, 1991, memorandum "Guidance on Implementation of the DOE NEPA/CERCLA Integration Policy."

The Council on Environmental Quality (CEQ) regulations governing NEPA review require examination of all reasonable alternatives; that is, alternatives that "are practical or feasible from the technical and economic standpoint and using common sense" (CEQ: Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 46 FR 18026, March 23, 1981). (Note that alternatives that are outside DOE's legal jurisdiction or

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[1] Draft guidance was distributed to NEPA Compliance Officers (NCOs) for discussion in July 1991. We thank the NCOs for their suggestions and note that an NCO Task Group is working to recommend further guidance on site-wide NEPA reviews.

outside the scope of actions that Congress has approved or funded for DOE may sometimes be reasonable alternatives for NEPA purposes.)

Site-wide NEPA reviews, involving both continuing actions and new proposals, present conceptual interpretation problems for the "no action" alternative and "proposed action" that do not arise in NEPA reviews for conventional projects. This memorandum, prepared in consultation with the Office of General Counsel, addresses the problems by applying the experience gained in planning and preparation of the site-wide NEPA review (environmental impact statement (EIS) in this case) for the Lawrence Livermore National Laboratory (LLNL). This guidance is not intended to apply retroactively -- that is, to decisions that have already been made -- but rather to provide a framework for planning future site-wide NEPA reviews, benefiting from the LLNL experience.

Guidance

(A) No Action Alternatives

Discussion of the no action alternative is required by the Council on Environmental Quality regulations (40 CFR 1502.14) and serves as a benchmark for comparison with the environmental effects of the action alternatives. In the context of a review of ongoing operations, such as a site-wide NEPA review, "no action" can assume either of the following two meanings:

(1) Continuing the present course of action without substantial new proposals (*i.e.*, no action = no change in *status quo*).

(2) Discontinuing the present course of action by phasing-out operations in the near term and embarking upon decommissioning the site (*i.e.*, no action = no "production" activities at the site).

Each of these two different meanings of the "no action" alternative, which are referred to below as No Action Alternatives 1 and 2, should be analyzed in site-wide NEPA reviews.

No Action Alternative 1 -- Continue Present Course of Action: This alternative should include current operations and ongoing environmental restoration activities. The present course of action would include actions necessary for safe and environmentally sound operations, such as routine maintenance and site characterization. The No Action Alternative 1 should exclude major cleanup activities and facility upgrades in general, unless the NEPA review for these activities has been completed and the decision has been made to proceed. These proposed activities generally should be excluded from the No Action Alternative 1 even if DOE is under a court order or has entered into an Interagency Agreement, Federal Facility Compliance Agreement, or Consent Order for such actions. Exclusion of these proposed activities is necessary to show the effects of present site operations without benefit of proposed improvements. This treatment of No Action Alternative 1 parallels the treatment of alternatives in documents

such as remedial investigations/feasibility studies prepared under the Comprehensive Environmental Response, Compensation, and Liability Act.[2]

No Action Alternative 2 -- Discontinue Operations in the Near Term and Decommission: CEQ regulations require that a range of alternatives be considered in decisionmaking (40 CFR 1505.1), and consideration of discontinuing operations in the near term and decommissioning represents one end of the range for site-wide NEPA reviews.[3] Alternatives are not necessarily constrained by legally-mandated or authorized activities, and they cannot be automatically dismissed because they are inconsistent with an established mission. A discontinue and decommission alternative performs much the same function when assessing a continuing activity as the conventional no action alternative performs for a new activity; *i.e.*, as noted above, by reflecting a cessation of production activities it establishes one end of the range of alternatives. For this reason, we recommend that this alternative be analyzed to present the full range of alternatives and their environmental impacts to the decisionmaker and the public.

The extent to which No Action Alternative 2 is analyzed will vary with the site, but the analysis should show the general environmental conditions (*e.g.*, number of workers unemployed, volume of site debris and waste) that would result from closing operations and decommissioning the site. The analysis should not aim to support specific decommissioning activities or alternatives (*e.g.*, whether the site could be released for unrestricted use); these would be the subject of a subsequent NEPA review if No Action Alternative 2 were selected. The analysis also should not consider remote

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[2] Note: We have carefully considered whether No Action Alternative 1 should include actions that would be taken to fulfill a court order or commitments under an Interagency Agreement, Federal Facility Compliance Agreement, or Consent Order. Some people believe that excluding future actions that would stem from these commitments from consideration under this alternative would mistakenly imply that DOE does not intend to fulfill obligations under the subject Agreements or Orders. There should be no such confusion, however. While these commitments are part of DOE's planning process, the actions to be taken to fulfill these commitments will often not yet have been decided; that is, the actions are not "continuing operations." Until the decisionmaking process is complete, including necessary environmental reviews, the specific actions that would be taken to satisfy the more general commitments are "proposed actions." We believe that any potential misunderstanding regarding DOE's intention to comply with its commitments can readily be avoided in this context by clear and careful descriptions of the alternatives being considered in the site-wide NEPA documents.

[3] As a matter of course, the impacts of discontinuing operations and decommissioning the site, as an eventual consequence of site operations, should be addressed in a site-wide NEPA review under any alternatives that contemplate continued operations. The impacts might be analyzed (usually in a fairly general manner) under No Action Alternative 1, for example, and referenced (and further annotated, if appropriate) under other continued operations alternatives.

issues, such as what future facility, if any, would be located on the site. The analysis should note whether the site's functions could be performed at other existing facilities, but such possibilities need not be analyzed in detail unless such a relocation has already been identified elsewhere as a reasonable alternative. The analysis of environmental restoration projects for No Action Alternative 2 and the proposed action alternative (see below) should be similar, because the time horizon for these two alternatives is similar and environmental restoration projects would be part of the decommissioning process.

(B) Proposed Action Alternative

The proposed action alternative, in the context of a site-wide NEPA review, encompasses No Action Alternative 1 plus near-term proposed projects. "Near-term" proposed projects are proposed projects that would typically be initiated within 5 to 10 years and that can be described with sufficient specificity for their potential environmental impacts to be evaluated.

Near-term proposed projects should include actions in three major areas, if applicable: (1) facility upgrades, modifications, and renovations; (2) new construction projects (*e.g.*, waste treatment, storage, or disposal facilities; production or research facilities); and (3) environmental restoration. The cumulative impact of these projects should be addressed under the proposed action alternative, although project-specific NEPA reviews (tiered from the site-wide reviews) may also be required.

If appropriate for the site, the proposed action alternative should include sub-alternatives that consider scaling down operations that have the greatest environmental impact or using alternative technologies or management strategies having reduced environmental impacts, such as pollution prevention and waste minimization programs, consistent with carrying out the site's authorized mission(s).

In summary, the impacts of the proposed action alternative may be contrasted with impacts of No Action Alternative 1 to determine only the contribution of all proposed new projects and with those of No Action Alternative 2 to determine the contribution of both continuing and proposed site operations.

If there are any questions regarding this guidance or the alternatives to be considered in specific site-wide NEPA documents, please direct them to Carol M. Borgstrom, Director, Office of NEPA Oversight, at (202) 586-4600.

Paul L. Ziemer, Ph.D.
Assistant Secretary
Environment, Safety and Health

cc: NEPA Compliance Officers
NEPA Contacts
Richard A. Bradley, S-1

DOE F 1325.8
(8-89)

United States Government **Department of Energy**

memorandum

DATE: August 7, 1992

REPLY TO ATTN OF: EH-25

SUBJECT: Appendix A Categorical Exclusions

TO: NEPA Compliance Officers (NCOs)

This is to reaffirm our policy on procedures for application of the categorical exclusions listed in Appendix A to Subpart D of DOE's NEPA regulations (57 FR 15122, April 24, 1992; to be codified at 10 CFR 1021). As you recall, the April 2, 1992, EH-1 memorandum to Secretarial Officers and Field Office Managers stated that application of Appendix A categorical exclusions need not be documented. At the May 1992 NCO meeting we indicated that we would not audit program or field offices for records of Appendix A categorical exclusions. We did indicate, however, that we might audit for established office procedures for application of those categorical exclusions.

We expect offices to establish procedures whereby Secretarial Officers, or Field Office Managers with delegated authority for Subpart D determinations, periodically (e.g., annually) review potential activities under their jurisdictions that would fit within the typical classes of action in Appendix A to ensure compliance with 10 CFR 1021.410(b). From the Secretarial Officer's or Field Office Manager's general working knowledge of program or field office activities, and with the NCO's advice, he or she should be able to judge whether any future Appendix A actions would present extraordinary circumstances that may affect the significance of environmental effects of the proposals (10 CFR 1021.410(b)(2)) or would be connected or related to other actions with potentially significant impacts (10 CFR 1021.410(b)(3)).

The preamble to the DOE NEPA regulations states that Appendix A includes those classes of actions with impacts so remote or conjectural as to preclude meaningful consideration and some classes of actions to which NEPA probably does not apply. Therefore, we do not believe that recordkeeping for Appendix A determinations is warranted, although an office may elect to do so. Please note that EH-25 would have no need to receive copies of any such records.

If you have any questions about Appendix A categorical exclusion procedures, please direct them to Stan Lichtman, Director, Waste Activities Division, (202) 586-4610.

Carol Borgstrom

Carol M. Borgstrom
Director
Office of NEPA Oversight

cc: William Dennison, GC-11

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EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: October 15, 1992

REPLY TO ATTN OF: EH-25

SUBJECT: Integrating Pollution Prevention with NEPA Planning Activities

TO: NEPA Compliance Officers

The purpose of this memorandum is to advise you of the direction that the Environmental Protection Agency (EPA) and Council on Environmental Quality (CEQ) appear to be taking regarding pollution prevention and NEPA, and to encourage you to use the NEPA process to incorporate pollution prevention principles into the DOE planning and decisionmaking process.

The Pollution Prevention Act of 1990 affirms Congressional commitment to a new approach in improving environmental quality. The Act establishes as national policy the following hierarchy of actions for environmental protection:

1. prevent or reduce pollution at the source wherever feasible;

2. recycle in an environmentally safe manner the pollution that cannot be prevented;

3. treat in an environmentally safe manner the pollution that cannot be prevented or recycled; and

4. dispose of pollution only as a last resort.

On February 26, 1991, EPA issued a National Pollution Prevention Strategy (which outlined a national policy and provided guidance on integrating pollution prevention into all ongoing environmental protection efforts (56 FR 7849-64). EPA's goal, as stated in its draft Federal Sector Pollution Prevention Strategy (August, 1991), is "to establish the Federal government as the national leader in implementing pollution prevention policies and practices across all missions, activities, and functions in order to promote the sustainable use of natural resources and protect human health and the environment."

EPA has indicated an intent to consider pollution prevention in its review of NEPA documents. In its scoping comments on DOE's Programmatic Environmental Impact Statement (PEIS) on Reconfiguration of the Nuclear Weapons Complex, EPA commented that DOE should describe pollution prevention and waste

minimization policies and practices throughout the PEIS. More recently, in the 1992 LLNL Continuing Operations Draft EIS, EPA expressed environmental concerns (rating the document EC-1) partially because the document failed to consider a full range of pollution prevention measures in the analysis.

The idea of pollution prevention within the framework of NEPA is not new. The very purpose of NEPA is "to promote efforts which will prevent or eliminate damage to the environment." Further,the CEQ regulations direct all Federal agencies to "**...use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects** of these actions on the quality of the human environment; and use all practicable means...to restore and enhance the quality of the human environment and **avoid or minimize any possible adverse effects of their actions** upon the quality of the human environment (40 CFR 1500.2(e) & (f) emphasis added)."

DOE's Waste Reduction Policy Statement, issued June 27, 1990, uses the same environmental hierarchy in guidance provided for waste minimization at DOE operating facilities. In that statement, EH-1, EM-1, and S-3 directed that "waste reduction will be a prime consideration in research activities, process design, facility upgrade or modernization, new facility design, facility operations, and facility decontamination and decommissioning."

DOE's Policy on Waste Minimization and Pollution Prevention (August 20, 1992) uses a similar approach, and expresses a commitment to "the inclusion of cost-effective waste minimization and pollution prevention in all of its activities, **including consideration of these concepts and approaches in DOE's program planning and major assessment processes, where appropriate, such as NEPA**, multi-year planning, and Complex Configuration Studies" (emphasis added).

We understand that EPA and CEQ are preparing guidance on incorporating pollution prevention principles in the NEPA process. Until such guidance is issued and in keeping with the foregoing discussion, program offices should consider pollution prevention options as potential alternatives or mitigating measures in NEPA documents. Consideration should be given to the many significant opportunities for DOE to reduce or prevent pollution at the source through cost-effective changes in production, operation, and raw material use.

If there are questions regarding this information, please call me at (202) 586-4600.

Carol Borgstrom

Carol M. Borgstrom
Director
Office of NEPA Oversight

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EFG (07 FC)

United States Government **Department of Energy**

memorandum

DATE: October 16, 1992 (modified September 1994)

REPLY TO ATTN OF: EH-25

SUBJECT: Procedures for Compliance with Floodplain/Wetlands Environmental Review Requirements (10 CFR Part 1022)

TO: Distribution

Attached are models of documents, developed in consultation with GC-11, that we recommend be used in implementing 10 CFR Part 1022. Use of these models should simplify and speed the preparation and approval of routine floodplain and/or wetland documents. The attachments include models of a Notice of Involvement and a Floodplain Statement of Findings which would be published in the Federal Register and a Finding of No Significant Impact (FONSI) with a Floodplain Statement of Findings incorporated. These models will be incorporated in the revised NEPA Compliance Guide.

We are also exploring options for revision to 10 CFR Part 1022 and would appreciate any suggestions you may have.

If you have any comments on the procedures, send them to the attention of John Pulliam in EH-25, (202) 586-4597.

Carol Borgstrom

Carol M. Borgstrom
Director
Officer of NEPA Oversight

Attachments

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[6450.01]

DEPARTMENT OF ENERGY

Notice of [Floodplain][Wetlands][Floodplain and Wetlands] Involvement[1] for [insert project name]

AGENCY: Department of Energy (DOE)

ACTION: Notice of [Floodplain][Wetlands][Floodplain and Wetlands] Involvement

SUMMARY: DOE proposes to [describe the proposed action briefly] in [floodplain][wetlands][floodplain and wetlands] located in XYZ County, XYZ State. In accordance with 10 CFR Part 1022, DOE will prepare a [floodplain][wetlands][floodplain and wetlands] assessment and will perform this proposed action in a manner so as to avoid or minimize potential harm to or within the affected [floodplain][wetlands][floodplain and wetlands].

DATE: Comments are due to the address below no later than [insert 15 days after publication].

ADDRESS: Comments should be addressed to [address].

---

[1] [ ] Use the appropriate formulation depending upon whether only floodplains, only wetlands, or both floodplains and wetlands are involved in the proposed action.

FOR FURTHER INFORMATION ON THIS PROPOSED ACTION, CONTACT:

[Program Contact]
[Address]
[Phone]
[FAX]

FOR FURTHER INFORMATION ON GENERAL DOE FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS, CONTACT:

Carol M. Borgstrom, Director
Office of NEPA Oversight, EH-25
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585
(202) 586-4600 or (800) 472-2756

SUPPLEMENTARY INFORMATION:

[Describe the proposed action and location with respect to the floodplain.]

In accordance with DOE regulations for compliance with floodplain and wetlands environmental review requirements (10 CFR Part 1022), DOE will prepare a [floodplain][wetlands][floodplain and wetlands] assessment for this proposed DOE action. [If a floodplain is involved, add one of the following three statements:

Alternative 1 (to be used if no environmental assessment (EA) or environmental impact statement (EIS) is being prepared)[2]

> After DOE issues the assessment, a floodplain statement of findings will be published in the Federal Register.

Alternative 2 (to be used if an EA is being prepared)

> The assessment will be included in the environmental assessment (EA) being prepared for the proposed project in accordance with the requirements of the National Environmental Policy Act. A floodplain statement of

---

[2] Note that the Federal Register Notice of Intent (NOI) to Prepare an EIS may be used as the vehicle for notifying the public of floodplain/wetlands involvement in lieu of publishing a separate Notice of Floodplain/Wetlands Involvement.

findings will be included in any finding of no significant impact that is issued following the completion of the EA or may be issued separately.

Alternative 3 (to be used if an EIS is being prepared)

The assessment and a floodplain statement of findings will be included in the environmental impact statement being prepared for the proposed project in accordance with the National Environmental Policy Act.

Issued in _____ on _____.

_____
Program Office Official

Reminder to users of this example: With respect to wetlands actions (not located in a Floodplain), DOE shall take no action prior to fifteen days after publication of this notice.

[6450.01]

DEPARTMENT OF ENERGY

Floodplain Statement of Findings for [insert project name]

AGENCY: Department of Energy (DOE)

ACTION: Floodplain Statement of Findings

SUMMARY: This is a Floodplain Statement of Findings for [insert project name] prepared in accordance with 10 CFR Part 1022. DOE proposes to [describe the proposed action briefly] in a floodplain located in XYZ County, XYZ State. DOE prepared a [floodplain][floodplain and wetlands] assessment describing the effects, alternatives, and measures designed to avoid or minimize potential harm to or within the affected floodplain. DOE will endeavor* to allow 15 days of public review after publication of the statement of findings before implementing the proposed action.

FOR FURTHER INFORMATION, CONTACT:

[Program Contact]
[Address]
[Phone]
[Fax]

* If DOE has the flexibility to allow the 15-day review period, this sentence should read: "DOE will allow 15 days of public review. . ."

FOR FURTHER INFORMATION ON GENERAL DOE FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS, CONTACT:

Carol M. Borgstrom, Director
Office of NEPA Oversight, EH-25
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585
(202) 586-4600 or (800) 472-2756

SUPPLEMENTARY INFORMATION:

This is a Floodplain Statement of Findings for [insert project name] prepared in accordance with 10 CFR Part 1022. A Notice of [Floodplain][Floodplain and Wetlands] Involvement was published in the Federal Register on [insert date of publication and Federal Register citation] and a [floodplain][floodplain and wetlands] assessment was incorporated in the [Environmental Assessment][Draft Environmental Impact Statement]. DOE is proposing to [describe the proposed action briefly] in the [identify the floodplain](see the map). The action is proposed to be located in the floodplain because [explain why]. Alternatives to the proposed action are [list alternatives considered]. The proposed action [does][does not] conform to applicable State or local floodplain protection standards. [Explain if action does not conform to standards.]

[Describe the steps to be taken to avoid or minimize potential harm to or within the affected floodplain.]

DOE will endeavor* to allow 15 days of public review after publication of the statement of findings prior to implementing the proposed action.

Issued in _____ on _____.

_____
Program Office Official

* If DOE has the flexibility to allow the 15-day review period, this sentence should read: "DOE will allow 15 days of public review. . ."

[6450.01]

DEPARTMENT OF ENERGY

Finding of No Significant Impact and Floodplain Statement of Findings for [insert project name]

AGENCY: Department of Energy (DOE)

ACTION: Finding of No Significant Impact and Floodplain Statement of Findings

[Add the following to the FONSI.]

FLOODPLAIN STATEMENT OF FINDINGS

This is a Floodplain Statement of Findings prepared in accordance with 10 CFR Part 1022. A Notice of [Floodplain][Floodplain and Wetlands] Involvement was published in the Federal Register on [insert date of publication] and a [floodplain][floodplain and wetlands] assessment was incorporated in the Environmental Assessment. DOE is proposing to [describe the proposed action briefly] in the [identify the floodplain](see the map). The proposed action is to be located in the floodplain because [explain why]. Alternatives to the proposed action are [list alternatives considered]. The proposed action [conforms] [does not conform] to applicable State or local floodplain protection standards. [Explain if action does not conform to standards.]

[Describe the steps to be taken to avoid or minimize potential harm to or within the affected floodplain.]

DOE will endeavor* to allow 15 days of public review after publication of the statement of findings before implementing the proposed action.

* If DOE has the flexibility to allow the 15-day review period, this sentence should read: "DOE will allow 15 days of public review. . ."

Report

of the

Environmental Assessment Process Improvement Team

January 1994

Prepared by team members from:
DP-3.2
EH-25
EM-22
GC-11
Albuquerque Operations Office
Idaho Operations Office
Kansas City Area Office
Los Alamos Area Office
Oak Ridge Operations Office

* This report (also referred to as the "Earl Bean Report") was the impetus for many of the changes to the DOE NEPA review process made by the Secretarial Policy Statement on NEPA (June 13, 1994; Tab IV-3). Portions of the report that are useful as independent guidance [the Executive Summary, Table of Contents, Appendix A (DOE Example Quality Assurance Plan for the Review of Environmental Assessment Documents)and Appendix B (DOE Internal Scoping of Environmental Assessments)] are reprinted here. Copies of the full report are available from the Office of NEPA Oversight.

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Executive Summary

In late 1992, Department of Energy Weapons Production Plant Managers and Design Laboratory Managers identified a need to reduce review and approval time for NEPA documents, particularly Environmental Assessments (EAs).

As a result of the identified need, a Team composed of DOE Headquarters and Operations Office personnel used a seven-step Process Quality Management Improvement technique to analyze the DOE EA process and recommend improvements.

In step 1, **establish process management responsibilities**, NEPA documentation owners, customers, and stakeholders were identified.

In step 2, **define process and identify customer requirements**, the EA preparation and review process was charted, and time required for preparation and review was analyzed; it was determined that EAs should be thorough, complete, objective, legally sufficient, and understandable.

In step 3, **define and establish measures**, it was determined that guidance for NEPA documentation lacked standards for preparers and reviewers, leading to conflicting expectations of what is required. At the time the Team was being formed, EH-25 was preparing its Recommendations for Preparing EAs and EISs, but more formal Quality Assurance (QA) guidance is needed.

In step 4, **assess conformance to requirements**, areas analyzed included conformance of EA preparation to requirements, conformance of preparation and review cycle time to stakeholder expectations, and chronic problem areas, including EA quality and review time.

In step 5, **process improvement opportunities**, quality improvement opportunities that were identified included implementing EH-25's EA preparation guidance, improving preparer and reviewer training, identifying ownership, establishing a formal QA preparation program, developing standing preparation capability, developing an internal EA scoping process, implementing EA preparation contracting improvements, and refining the EH Recommendations paper based on user feedback. Process cycle time reduction opportunities included improving preparation quality, reducing multiple reviews, delegating EA approval and FONSI authority, developing in-house EA preparation capability, and improving management information and tracking of program review.

In step 6, **rank improvement opportunities and set objectives**, the Team identified but did not rank as to importance the following improvement opportunities:

- Training in the use of EH-25's guide for the preparation of EAs, EH Recommendations for Preparing EAs and EISs.
- A process for integrating NEPA analysis into program and project planning.
- Uniform EA review procedures among Program Offices.
- Quality Assurance programs for preparing and reviewing EAs.
- Delegation of approval authority for EAs and FONSIs from EH to Program Offices and from Program Offices to Operations Offices following establishment and implementation of internal scoping procedures and Quality Assurance programs.
- Annual reviews at which program and project personnel could share EA lessons learned with NEPA compliance officers.
- Audits of Operations Office EA preparation to ensure quality.
- Use of contracting process to ensure EA quality and timeliness.
- Improved systems for scheduling and tracking EAs.
- Clarifying and identifying EA ownership.
- Commitment in DOE policy to quality and timely NEPA documentation.

In Step 7, **improve process quality**, implementation of these recommendations and other improvement actions would result in higher quality preparation processes and an overall reduction in the time required for the review, revision, and approval process. The Team recommends that EH take the lead to implement these recommendations.

DOE Example Quality Assurance Plan for the Review of Environmental Assessment Documents

I. Introduction

NEPA is the federal government's basic charter for assuring protection of the environment. Environmental Assessments are NEPA documents that analyze the environmental impacts of proposed actions and alternative actions and aid the Department of Energy in planning these projects. The preparation and review of Environmental Assessment Documents can take several months to complete, therefore it is essential to consider quality assurance requirements for these documents early in the NEPA process.

Note: This example Quality Assurance Program Plan for the Review of Environmental Assessment Documents is based on the Kansas City Area Office Quality Assurance Program Plan for the review of Environmental Assessment Documents. This example quality assurance program plan is not meant to be adopted as a plan that will be adequate in all situations for any DOE facility. Other DOE facilities wishing to develop similar quality assurance plans may need to modify this for their site-specific factors.

This Quality Assurance Plan defines policy, responsibilities, minimum requirements, and provides guidance for implementing a comprehensive quality assurance program for the review of Environmental Assessment Documents at the Department of Energy's (facility name).

II. Scope

The process requirements, established in this Quality Assurance Plan (QAP), shall be applied to the review of the National Environmental Policy Act (NEPA) Environmental Assessment (EA) Documents, as covered by DOE Order 5700.6C, "Quality Assurance".

III. References

40 CFR 1500-1508, "Council on Environmental Quality National Environmental Policy Act (NEPA) Implementation Procedures; Appendices"
10 CFR 1021, "Department Of Energy National Environmental Policy Act (NEPA) Implementing Procedures"
10 CFR 1022, "Department Of Energy Compliance with Floodplain/Wetlands Environmental Review Requirements"
DOE Order 5440.1E, "National Environmental Policy Act"
DOE Order 5700.6C, "Quality Assurance"
Other internal program drivers as appropriate

Note: The following sections use the Kansas City Area Office organization as the example. Each DOE office preparing a Quality Assurance Plan would need to substitute its organization and appropriate roles and responsibilities in these sections.

IV. Organizational Roles and Responsibilities

A. Organization

The organizational structure for the Kansas City Area Office ES&H Branch can be found in Attachment A.

B. The ES&H Branch Chief shall be responsible for:

- approving the contractor's Quality Assurance Program Plan (QAPP),
- approving the EA before submittal to the Operations or Program Offices,
- and updating this QAP, as required, to incorporate additional customer requirements and expectations.

C. The Environmental Manager shall be responsible for:

- reviewing the contractor's QAPP prior to approval by the ES&H Branch Chief,
- and reviewing the EA document.

D. The Environmental Staff shall be responsible for:

- providing support to the Environmental Manager for the above stated responsibilities

Further explanations of these responsibilities are stated in the sections following.

V. Approval of Contractor's Quality Assurance Program Plan

The Environmental Manager shall evaluate the contractor's Quality Assurance Program Plan (QAPP) for the Preparation and Review of Environmental Assessment Documents to assure that it adequately addresses the technical and environmental requirements stated in the Section C References. An example NEPA Quality Assurance Program Plan designed to be used as an outline for the preparation of site-specific NEPA QAPPs is included as Attachment C.

The Operations Quality Assurance (OQA) Manager shall evaluate the contractor's QAPP to assure compliance with the quality requirements outlined in DOE Order 5700.6C, "Quality Assurance."

The ES&H Branch Chief shall provide approval of the contractor's QAPP, based upon input from the Environmental and OQA Managers.

VI. Review of Environmental Assessment (EA) Document

The Environmental Manager shall review the EA document to assure that:

- The contractor's QAPP requirements are present and adequate.

- The customer's requirements and expectations are fulfilled. This shall be accomplished by completing the checklists found in Attachment B and by performing a thorough technical and editorial review. The checklist was prepared based upon CEQ NEPA Regulations (40 CFR 1500), DOE NEPA Regulations (10 CFR 1021), Albuquerque Field Office NEPA Guidance Memoranda, EH-25's "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements," and other related federal environmental, safety, and health laws and regulations. *The checklist is not meant to substitute for the original laws, regulations, and guidance. The checklist is not meant to replace professional knowledge, and it is not a substitute for thorough technical and editorial review of the EA Document.*

The OQA Manager shall review the EA package to ensure that the ES&H checklists are complete and acceptable. Evidence of this will be provided by a signature on the concurrence ladder of the transmittal memo to the Operations or Program Offices.

The Area Office Counsel shall review the EA package to ensure that the EA is legally sufficient. Evidence of this will be provided by a signature on the concurrence ladder of the transmittal memo to the Operations or Program Offices.

The ES&H Branch Chief shall submit the EA document to the Operations or Program Office based upon input from the Environmental Manager, the OQA Manager, and the Area Office Counsel.

VII. Assessment of Process

An audit schedule is to be set up at the time the need for the preparation of an EA is defined. This shall include audits applicable to each individual EA.

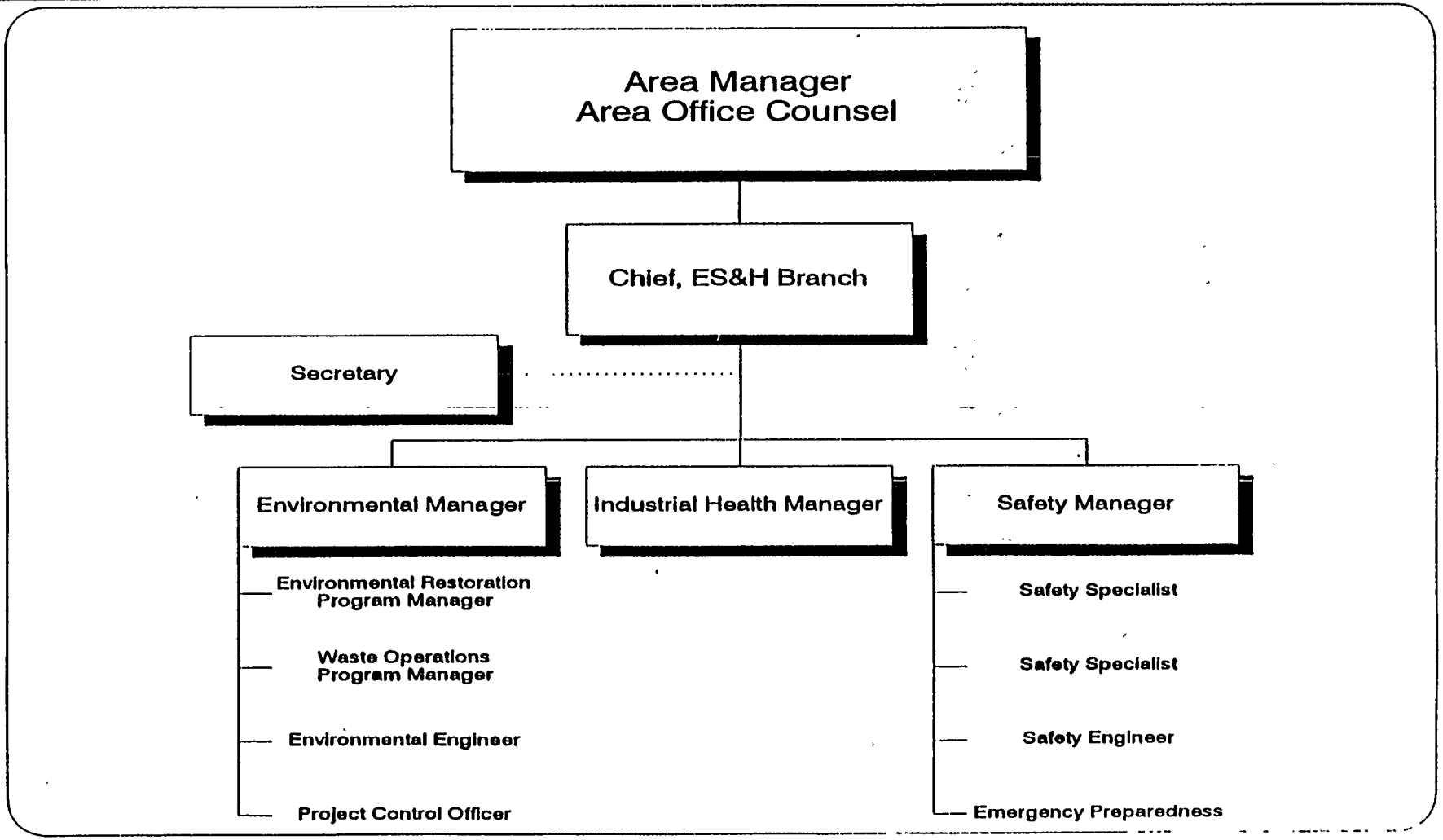
VIII. Training

Personnel performing activities shall have the proper qualifications to assure suitable proficiency and adequate capabilities are achieved. Initial training shall be accomplished by attendance at a NEPA training course approved by the ES&H Branch Chief. Update training shall be required as needed to maintain competence; such training shall complement and enhance the content of the initial training. Update training may be accomplished either on-the-job, attendance at a quarterly NEPA Compliance Officer Meeting, or other methods as approved by the ES&H Branch Chief.

Attachment A

The Kansas City Area Office
ES&H Branch Organizational Chart

U. S. Department Of Energy
Kansas City Area Office
Environment, Safety and Health Branch



Effective October 1, 1993

Attachment B

Checklist with Regulatory Requirements and Customer Expectations

The Kansas City Area Office developed a checklist to be used as an aid in reviewing Environmental Assessment Documents prepared for the Kansas City Area Office. This checklist is not meant to replace professional knowledge and is not a substitute for thorough technical and editorial review of the Environmental Assessment Document. Only one example page is attached from the Kansas City Area Office Checklist.

EH-25 is considering developing a comprehensive checklist that can be adapted to the needs of each particular DOE Site.

Statement of Purpose and Need

	Yes	No	NA	Adequacy* (1,2,3)	Page	Comments
Does the statement of purpose and need describe the need for DOE action? [40 CFR 1508.9]						
Does the statement of purpose and need relate to the broad requirement or desire for agency action, and not to the need for the specific proposal?						
Is the statement of purpose and need written so that it does not inappropriately limit the range of reasonable alternatives?						
Does the statement of purpose and need identify the problem or opportunity to which the agency is responding?						

This page is part of a checklist developed by the Department of Energy Kansas City Area Office to be used as an aid in reviewing Environmental Assessment Documents prepared for the Kansas City Area Office. Checklist items are based upon NEPA, the CEQ NEPA Regulations, DOE NEPA Regulations, EH-25 Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements, and other guidance and regulations as applicable.

EH-25 is developing a more comprehensive checklist that can be adapted to each particular site's specific needs. EH plans to provide the more comprehensive checklist to NEPA Compliance Officers in the near future. The format of the EH-25 checklist may vary somewhat from this format.

Discussion of Alternatives

	Yes	No	NA	Adequacy* (1,2,3)	Page	Comments
Does the EA address a range of reasonable alternatives that satisfies the agency's purpose and need?						
Is a graded approach (sliding scale) used when determining how many alternatives to identify and the depth of analysis?						
Is there an explanation of why alternatives that appear obvious or have been identified by the public are not reasonable?						
Are reasonable alternatives outside the DOE's jurisdiction addressed?						

*Adequacy Definitions: 1 - Fully Meets Requirements 2 - Essentially Meets Requirements 3 - Does not meet requirements

Attachment C

Contractor Example
NEPA Quality Assurance Program Plan

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE PROGRAM QUALITY ASSURANCE PROGRAM PLAN

1.0 BACKGROUND

[This section discusses the requirements and applicability of NEPA. The following is an example of text that could be included in this section.]

Compliance with NEPA is required for all proposed DOE activities affecting the quality of the environment of the United States, its territories or possessions. NEPA requires the analysis and consideration of environmental impacts in Federal Government decision making. All DOE activities performed at the (Site Name) must be reviewed and evaluated for potential environmental impact. Preparation and review of NEPA documents can take several months. It is essential to consider NEPA requirements early in the planning process because (1) DOE regulations require it; (2) It makes for better planning and decision making, and (3) It avoids potential delays/costs to project. DOE must comply with the requirements of NEPA before a proposed action reaches a stage where significant resources are committed.

(Site Name) implementation of this DOE requirement is documented in Operating Procedure (List all site operating and administrative NEPA procedures here) and individual internal procedures within the affected organizations. The development of a Quality Assurance Program will assure continued compliance with NEPA by requiring and evaluating all controls and documents used to implement the program.

This Quality Assurance Program Plan is applicable to all activities performed in conjunction with the (Site Name) National Environmental Policy Act Compliance Program. Some requirements, and supplemental requirements may be delegated to qualified subcontractors, but the (Site Name) retains responsibility for the delegated functions and activities.

2.0 DRIVERS

The DOE has various orders and memoranda which outline authorities and responsibilities within the DOE as well as requirements for document preparation. These requirements are illustrated in Figure 1, NEPA Environmental Assessment Document Hierarchy.

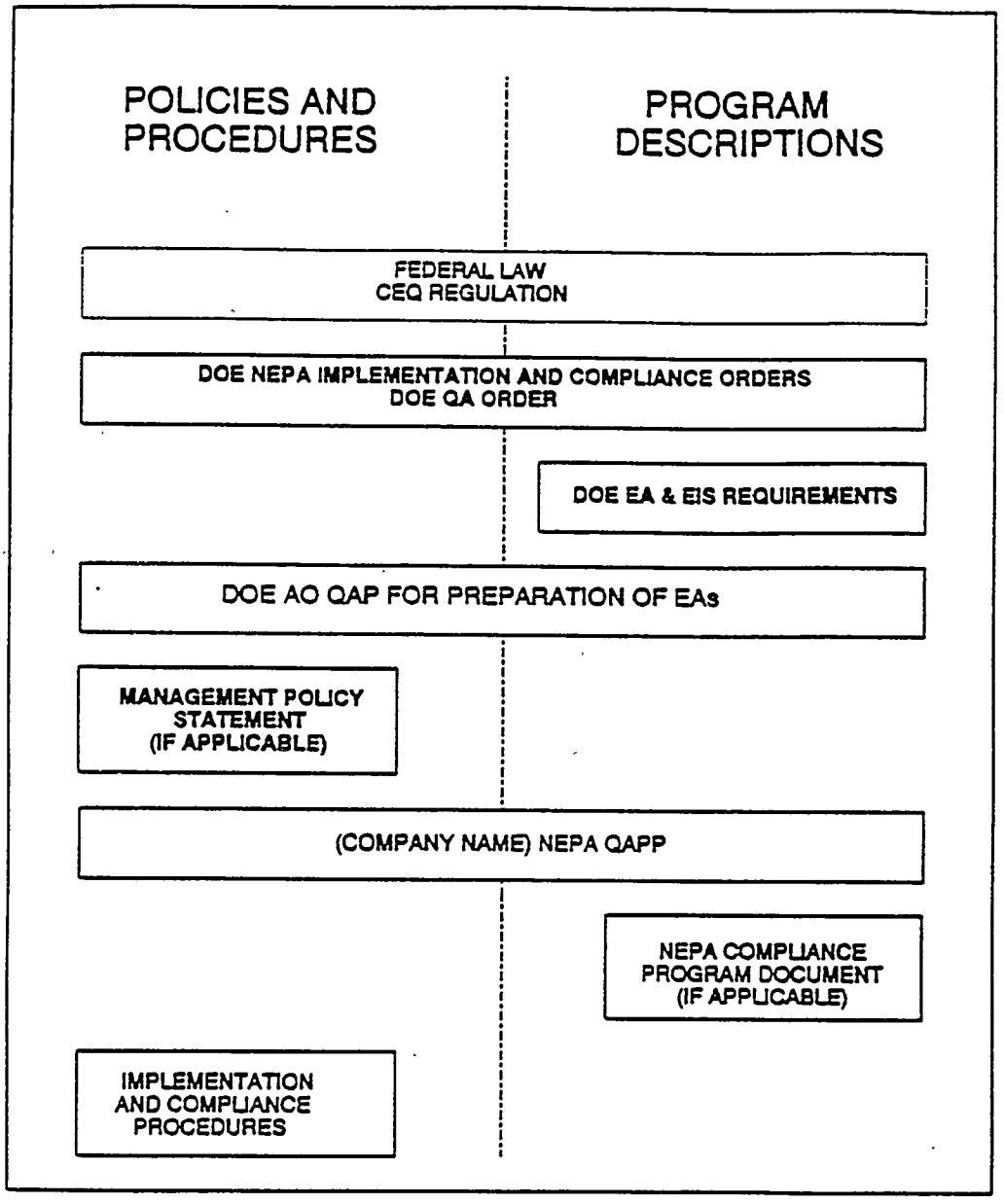


Figure 1. NEPA ENVIRONMENTAL ASSESSMENT DOCUMENT HIERARCHY

The following documents are used to develop and implement the (Site Name) NEPA Compliance Program. Environmental Assessments (EAs) will be developed utilizing the applicable requirements of these documents. If additional customer requirements are added, this QAPP will be revised to reflect the most current requirements.

National Environmental Policy Act (NEPA) Program Drivers

40 CFR Parts 1500-1508, Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act

10 CFR 1021, National Environmental Policy Act (NEPA); Implementing Procedures and Guidelines Revocation

DOE-HQ, Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements (May 1991)

Secretary of Energy Notice (SEN) 15-90, National Environmental Policy Act, dated February 5, 1990

DOE Order 5440.1E, National Environmental Policy Act Compliance Program

DOE-Field Office NEPA Order or Directive(s)

10 CFR 1022, Compliance With Floodplain/Wetlands Environmental Review Requirements

DOE-Field Office NEPA Guidance Memorandum

(Site Name) NEPA Management Policy Statement

(Site Name) NEPA Operating Procedure (OP)

(Site Name) NEPA Administrative Procedure (AP)

(Site Name) NEPA Internal Procedure(s)

(Site Name) National Environmental Policy Act (NEPA) Compliance Program Document

DOE Order 5700.6C, Quality Assurance

DOE-Area Office, Quality Assurance Program for Preparation of Environmental Assessments

(Site Name) Quality Assurance Program Plan

(Site Name) NEPA Quality Assurance Program Plan

(Site Name) Operations Quality Assurance Manual

3.0 GENERAL

[This section provides an overview of managerial and organizational responsibilities and commitments. An organizational chart can be used to highlight organizations with responsibility for NEPA Compliance. Listed below is an example of how this section could be structured.]

The (Site Name) National Environmental Policy Act (NEPA) Compliance QAPP is written to show how the (Site Name) NEPA Compliance Program satisfies the applicable requirements of DOE Order 5700.6C, Quality Assurance. In order to clearly demonstrate this relationship, the (Site Name) NEPA Compliance Program QAPP is arranged to match the format of DOE Order 5700.6C, Attachment 1, Quality Assurance Program Implementation Guide.

Through implementation of the (Site Name) NEPA Compliance Program QAPP, (Site Name) will successfully accomplish the objective of providing and maintaining a prevention oriented program. A proactive, preventative approach to NEPA compliance activities will ensure deliverables meet requirements and satisfy DOE's expectations, now and in the future.

Figure 2 provides the structure for organizations having responsibilities in the (Site Name) NEPA Compliance Program.

DISPLAY COMPANY ORGANIZATIONAL CHART
INCLUDE ALL ORGANIZATIONS WITH
RESPONSIBILITY FOR NEPA COMPLIANCE

4.0 QUALITY ASSURANCE CRITERIA

Include subsections describing the applicable quality assurance criteria in the areas of management, performance, and assessment as identified in DOE Order 5700.6C. Descriptions of the content of each subsection listed below are included in the DOE Order 5700.6C, Section 9.b. Quality Assurance Criteria.

4.1 Program

In this section describe in detail, all organizations within your site with responsibilities and authority for NEPA Compliance.

4.2 Personnel Training and Qualification

Discuss NEPA training for responsible individuals (program coordinators) as well as document preparers.

4.3 Quality Improvement

Discuss or refer to quality control measures used during document preparation and review.

4.4 Documents and Records

In this section, include a discussion of the tracking system used for tracking NEPA documentation.

4.5 Work Processes

Discuss processes for document initiation and review. Refer to specific procedures for detail.

4.6 Design

This criteria may not be applicable based on individual site NEPA implementation. Refer to DOE Order 5700.6C for detailed description.

4.7 Inspection and Acceptance Testing

This criteria may not be applicable based on individual site NEPA implementation. Refer to DOE Order 5700.6C for detailed description.

4.8 Management Assessment

Include a discussion of internal assessments performed by individuals/organizations responsible for program compliance.

4.9 Independence Assessment

Include a discussion of assessments performed by individuals/organizations (internal or external) who are not responsible for program compliance.

APPENDIX B

DOE Internal Scoping of Environmental Assessments

This paper discusses an approach for conducting informal internal scoping for DOE Environmental Assessments (EA). In order to improve the quality of first drafts of DOE EAs and increase the involvement and understanding of the DOE program managers, several groups within DOE and the EA preparer must have a common understanding of the EA process and the expected content of the document. Internal scoping should promote that understanding. DOE internal scoping should occur early in the project development cycle, when sufficient information about the basic parameters is available to permit discussion of the issues. This activity should be viewed in the first step in the process of preparation of the EA. It may occur at the point where the management and operating (M&O) contractor or other project proponent has decided to recommend to DOE that an EA would be the appropriate level of NEPA documentation but has not started writing the EA. Internal DOE scoping should be initiated by the DOE EA owner. The purpose of the internal scoping process is to determine issues and alternatives that need to be evaluated in an EA and the depth of analysis required. Scoping may occur in one or a few meetings, or through an exchange of memoranda if the project is very straight forward.

Internal DOE scoping would not replace the need or desire for public input through either a public EA scoping process or involvement of stakeholder or other interested groups. Internal scoping would still be beneficial to get more interdisciplinary input and obtain DOE concurrence on the proposed scope and level of analysis before the proposal is presented to external groups.

January 14, 1994

Scoping the EA

Internal scoping should occur when a concept is first defined as a proposal and can be meaningfully evaluated. It may occur before the DOE EA determination if the determination may be controversial or if a better DOE understanding of the proposal would be beneficial. Scoping is intended to be an informal exchange of information to ensure the best product and a common understanding of the task. The participants should include the contractor project/design engineer and program manager, the DOE program/project manager, a contractor environmental/NEPA specialist, the field counsel, the DOE field NEPA Compliance Officer (NCO) or field NEPA Point of Contact, and other environmental specialists as appropriate. Depending on the complexity, the degree of public concern or technical controversy regarding an action, the DOE-HQ program manager and NCO, EH-25 and GC-11 may need to be involved.

The first part of the discussion should center on the purpose and need for the action so that the scope of the proposal and the reasonable alternatives may be identified and agreed upon. The description of the proposed action should include all project requirements for construction and operation, i.e. utilities, office space, number of workers, land area required, transportation requirements, any other related or connected actions necessary to allow the project to proceed, and any schedule requirements or development of a schedule, see Appendix D. It should also be determined if other existing or ongoing NEPA reviews related to the action could be used for tiering or referencing and whether and how any public participation activities should occur. Public participation could include EA scoping (either a published notice that an EA is being prepared and that DOE would accept comments or an announcement of a public meeting), or public review and comment on a pre-approval EA or a proposed FONSI. Any public involvement issues or needs should be raised. The postulated environmental impacts and the potential significance of the impacts should be discussed to the extent that they are known. This information should be of a depth appropriate for making a

NEPA determination, preparing a project schedule consistent with the NEPA process, and beginning the EA.

Depth of Analysis in the EA

Internal DOE scoping should include a discussion of the depth of analysis of impacts from implementing the proposal and where the proposal fits on the "sliding scale of significance" (see "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements", U.S. DOE Office of NEPA Oversight, May 1993). The scoping group also needs to review the potential impacts, the significance of the impacts, and the level of public concern over particular impacts, i.e. air, surface water, groundwater, wetlands. The types of analysis to be conducted for the EA, including any field data that must be collected, computer modeling to be performed, and accident scenarios to be evaluated should be discussed. It may also be appropriate for the document preparers and people doing the modeling to communicate their information needs to the project engineers during this meeting to make sure that information is available early enough in the process. The HQ program manager and NCO, EH-25, and possibly GC, may wish to participate in this part of the discussion, again depending on the complexity of the proposal. Since this information is not expected to be available in detail at this point in the evaluation, the scoping session(s) should be used to identify areas that need analysis and to discuss the depth of analysis that would be appropriate based on the preliminary information available and the sliding scale approach to NEPA analysis. The purpose of having a variety of disciplines and interested parties together at the meeting is to ensure that there are as few surprises during the analysis and EA preparation as possible.

Products of DOE Internal Scoping

This process should result in a record of participants involved and decisions reached, as well as any non-consensus opinions. The decisions should include the scope of the

analysis (to include purpose and need, and proposed action), a list of alternatives to be evaluated, the depth of analysis required for the potential environmental impacts, public involvement to be pursued, any schedules developed, and NEPA analyses from which to tier or to reference, when appropriate. This information should then be given to the EA preparers as their scope of work from DOE. It should also be maintained in project files to refresh corporate memories as the analysis progresses. The record may include target schedules and designated contacts or reviewers. If the analysis reveals new or more significant impacts than described the direction may need to be modified.

Factors Influencing Selection of Scoping Participants

As discussed above, the amount of resources invested in the internal scoping of an EA should be proportional to the complexity, environmental impact and degree of existing or potential public concern and technical controversy of the action. Some issues to consider when developing the list of participants are: public controversy, range of environmental issues, complexity of the proposed action itself, proposed actions closely related to actions normally requiring an EIS, proposed actions related to ongoing NEPA reviews, proposed actions with schedules defined by milestones in negotiated agreements with regulatory agencies, or proposals with perceived or potential severe safety hazards. As the complexity/controversy increases, the level of interest by HQ programs, EH-25 and GC increases, and their involvement early in the EA process should be considered.

While scoping prior to a determination may not benefit from EH or GC involvement and would probably not be considered a part of their role in the NEPA process, the HQ program office, including the NCO, should be involved in controversial determinations. EH-25 and GC should be considered for involvement in the discussions related to where the proposal fits on the sliding scale of significance. The HQ program office and NCO may choose to discuss the proposal with EH and GC to determine whether they should be involved.

Conclusion

The end result of the internal scoping process should benefit and strengthen the DOE NEPA review process by leading to a common understanding early in the review cycle among all team members of what the EA analysis will include. This, in turn, should facilitate and expedite review and approval of the EA when the analyses are completed.

DIRECTORY OF POTENTIAL STAKEHOLDERS FOR DEPARTMENT OF ENERGY ACTIONS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

SECOND EDITION
JULY 1994

U.S. DEPARTMENT OF ENERGY
ENVIRONMENT, SAFETY AND HEALTH
OFFICE OF NEPA OVERSIGHT

Note: This publication, also referred to as the "Yellow Book," is available separately as a bound document.

DIRECTORY OF POTENTIAL STAKEHOLDERS FOR DEPARTMENT OF ENERGY ACTIONS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

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PREFACE

This directory provides information on potential stakeholders for the Department of Energy's actions under the National Environmental Policy Act of 1969 (NEPA). The directory was prepared by the Office of NEPA Oversight, in consultation with the Office of the Assistant General Counsel for Environment and the Office of Public and Consumer Affairs, and approved by the Assistant Secretary for Environment, Safety and Health.

Among the public involvement provisions of the Council on Environmental Quality regulations implementing NEPA are the following requirements, which are binding on the Department:

- Agencies must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken [40 CFR 1500.1(b)].

- Agencies must involve environmental agencies, applicants, and the public, to the extent practicable, in preparing environmental assessments and must affirmatively solicit comments on draft environmental impact statements from those persons or organizations who may be interested or affected [40 CFR 1501.4(b) and 1503.1(a)(4)].

- Agencies must also provide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected and must solicit appropriate information from the public [40 CFR 1506.6(b) and (d)].

To assist Department program and field offices in compliance with these requirements, this directory includes the following potential stakeholders:

- Federal Agencies
- State NEPA Points-of-Contact
- DOE Points-of-Contact for Indian Tribal Issues
- Non-Governmental Organizations

For practical reasons, the directory does not include comprehensive information on local governments or organizations. Rather, the information provided is meant to supplement any lists of affected or interested parties that Departmental offices may have compiled for particular projects or facilities.

The Office of NEPA Oversight plans to update this directory periodically. Please direct any questions, changes or suggestions to the Office of NEPA Oversight, EH-25, 202-586-4600 (fax 202-586-7031).

FEDERAL AGENCIES
POTENTIALLY INTERESTED IN RECEIVING
DOE NEPA DOCUMENTS

ADVISORY COUNCIL ON HISTORIC PRESERVATION
Old Post Office Building
Suite 803
1100 Pennsylvania Ave., NW
Washington, DC 20004
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Director, Eastern Office
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APPALACHIAN REGIONAL COMMISSION
Community Development Division
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Senior Science Advisor
Phone: 202-884-7750 FAX: 202-884-7682

ARMS CONTROL AND DISARMAMENT AGENCY
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Washington, DC 20451
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CENTRAL INTELLIGENCE AGENCY

Office of Medical Services
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Attn: Larry McGinty
Chief, Environmental Safety Group
Phone: 703-482-4533 FAX: 703-356-2503

Facilities Management Group
5X02NHB
Washington, DC 20505
Attn: Keith Backman
Chief, Engineering Branch
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DEFENSE NUCLEAR FACILITIES SAFETY BOARD
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Washington, DC 20004
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DELAWARE RIVER BASIN COMMISSION
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Executive Director
Phone: 609-883-9500 FAX: 609-883-9522

DEPARTMENT OF AGRICULTURE (USDA)

Agricultural Research Service
Office of Technology Transfer
AG Box 0302, Room 358A
Washington, DC 20250
Attn: Dr. Richard M. Parry, Jr.
Acting Assistant Administrator
Phone: 202-720-3973

Agricultural Stabilization and Conservation Service
Room 4711, CEPD
P.O. Box 2415
14th and Independence Ave., SW
Washington DC 20013
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Chief
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Animal and Plant Health Inspection Service
Biotechnology, Biologics, and Environmental Protection
Federal Building, Room 828
6505 Belcrest Road
Hyattsville, MD 20782
Attn: Carl Bausch
Deputy Director, Environmental Analysis and Documentation
Phone: 301-436-8565 FAX: 301-436-5992

Economic Research Service
Resources and Technology Division
1301 New York Ave., NW
Room 524 A
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Phone: 202-219-0455 FAX: 202-219-0477 or 0029

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Natural Resources and Rural Development
Extension Service
USDA-ES-NRRD
South Agriculture Building
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14th & Independence Ave., SW
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Forest Service
Auditors Building, 5 South
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Phone: 202-205-1708 FAX: 202-205-1074

Rural Electrification Administration
Environmental Compliance Office
South Agriculture Building
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Soil Conservation Service
Ecological Services Division, Room 6159
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DEPARTMENT OF COMMERCE

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Office of Ecology and Conservation
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Phone: 202-482-5916 FAX: 202-482-1156

DEPARTMENT OF DEFENSE (DOD)

Army Corps of Engineers
Office of Environmental Policy
(CECW-AO)
Office of Chief of Engineers
Pulaski Building, Room 7116
20 Massachusetts Ave., NW
Washington, DC 20314-1000
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Phone: 202-272-0166 FAX: 202-272-0472

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1660 Air Force
Pentagon
Washington, DC 20330-1660
Attn: Nilda Mesa
Assistant Deputy for Pollution Prevention and Environment
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Department of the Army
Office of Assistant Chief for Installation Management
Office of the Director of Environmental Programs
ATTN: DAIM-DD-C
600 Army Pentagon
Washington, DC 20310-0600
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Department of the Navy
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200 Stovall St.
Alexandria, VA 22332-2300
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Environmental Planning Branch
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1220 Pacific Highway
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Washington, DC 20380-0001
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DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

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4770 Bufford Highway, NE
Atlanta, GA 30341-3724
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Food and Drug Administration
Center for Devices and Radiological Health
Room 380U
1390 Piccard Drive
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Correspondence Monitor
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Food and Drug Administration
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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

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1849 C St., NW, Room 2340
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12 copies of a draft and 6 copies of a final document for projects in the Eastern United States including MN, IA, MO, AR, and LA. The same numbers of copies should be provided for projects in AS, GU, HI, PR, VI, and the Trust Territories.

18 copies of a draft and 9 copies of a final document for projects in the Western United States westward of the western boundaries of MN, IA, MO, AR, and LA.

18 copies of a draft and 9 copies of a final document for review requests that are national in scope (e.g., agency regulations, scientific reports, special reports, program plans, and other interagency documents). Projects that are located in more than one State (e.g., pipelines) also require additional copies.

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Civil Engineering Division
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DEPARTMENT OF TREASURY

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FEDERAL EMERGENCY MANAGEMENT AGENCY

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FEDERAL ENERGY REGULATORY COMMISSION

Office of Hydropower Licensing
Room 1129, 810 UPC
1st St., NE
Washington, DC 20426
Attn: Fred E. Springer
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Phone: 202-219-2700 FAX: 202-219-0205

FEDERAL MARITIME COMMISSION

Bureau of Tariffs, Certification, and Licensings
Room 940
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GENERAL ACCOUNTING OFFICE

Resources Community and Economic Development Division
General Accounting Office Building
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Washington, DC 20548
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Director, Energy Issues
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El Paso, TX 79902-1422
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INTERSTATE COMMERCE COMMISSION

Section of Energy and Environment
Division of Analysis
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MARINE MAMMAL COMMISSION

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Headquarters
Environmental Management Division
Code JE
2 Independence Square, SW
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NEPA Coordinator
Phone: 202-358-1112 FAX: 202-358-2861

NATIONAL CAPITAL PLANNING COMMISSION

Technical Planning Services Division
801 Pennsylvania Ave., NW
Suite 301
Washington, DC 20576
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Environmental Specialist
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NATIONAL SCIENCE FOUNDATION

Office of General Counsel
4201 Wilson Boulevard
Room 1265
Arlington VA 22230
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Phone: 703-306-1060 FAX: 703-306-0149

NUCLEAR REGULATORY COMMISSION

Office of Nuclear Reactor Regulation
Mail Stop 11H21
Washington, DC 20555
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Office of State Programs
Mail Stop 3D23
Washington, DC 20555
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Office of Nuclear Materials Safety and Safeguards
Mail Stop T8A 23
Washington, DC 20555
Attn: Robert M. Bernero
Director
c/o Cathy Poland
Phone: 301-415-7812 FAX: 301-415-5370

OFFICE OF MANAGEMENT AND BUDGET

Environmental Branch
725 17th St., NW
Washington, DC 20503
Attn: Robert Fairweather
Chief
Phone: 202-395-6827 FAX: 202-395-5836

PUBLIC HEALTH SERVICE

Parklawn Building 17A-10
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Rockville, MD 20857
Attn: Stephen Aoyama
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SECURITIES AND EXCHANGE COMMISSION

Public Utility Regulation
Room 10227, Stop 10-6
450 5th St., NW
Washington, DC 20549
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SMALL BUSINESS ADMINISTRATION
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SUSQUEHANNA RIVER BASIN COMMISSION
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Harrisburg, PA 17102
Attn: Paul Swartz
Executive Director
Phone: 717-238-0422 FAX: 717-238-2436

TENNESSEE VALLEY AUTHORITY

Environmental Management
WT 8C-K
400 West Summit Hill Dr.
Knoxville, TN 37902
Attn: M. Paul Schmierbach
Manager
Phone: 615-632-6578 FAX: 615-632-6855

U.S. POSTAL SERVICE
475 L'Enfant Plaza West, SW
Washington, DC 20260-7224
Attn: Kevin W. Ferguson, Ph.D.
Nationwide Environmental Programs
Analyst
Phone: 202-268-6239 FAX: 202-268-6016

STATE NEPA POINTS OF CONTACT POTENTIALLY INTERESTED IN RECEIVING DOE NEPA DOCUMENTS

The following is a list of NEPA Points of Contact, as designated to the Department by the Governor directly or through the Office of Management and Budget's A-95 Clearinghouse process. Correspondence should be addressed to the State NEPA Points of Contact; Governors' addresses are provided for information.

ALABAMA

State NEPA Point of Contact:

James W. Warr, Director
Alabama Department of Environmental Management
1751 Congressman W. L. Dickinson Drive
P.O. Box 301463
Montgomery, AL 36130-1463
Phone: 205-271-7700 FAX: 205-271-7950

Governor:

The Honorable Jim Folsom, Jr.
Governor of Alabama
State Capitol
Montgomery, AL 36130

ALASKA

State NEPA Point of Contact:

Paul Rusanowski, Director
Division of Governmental Coordination
Office of the Governor
P.O. Box 110030
Juneau, AK 99811-0030
Phone: 907-465-3562 FAX: 907-465-3075

Governor:

The Honorable Walter J. Hickel
Governor of Alaska
P.O. Box 110001
Juneau, AK 99811-0001

AMERICAN SAMOA

State NEPA Point of Contact:

Reupena S. T. Tagaloa, Director
Territorial Energy Office
Samoa Energy House, Tafuna
American Samoa Government
Pago Pago, American Samoa 96799
Phone: (011-684) 699-1101 FAX: (011-684) 699-2835

Governor:

The Honorable A. P. Lutali
Governor of American Samoa
Pago Pago, American Samoa 96799

ARIZONA

State NEPA Point of Contact:

Executive Assistant to the Governor
Governor's Office
1700 West Washington
Phoenix, AZ 85007
Phone: 602-542-4331 FAX: 602-542-7601

Governor:

The Honorable Fife Symington
Governor of Arizona
State Capitol, West Wing
1700 West Washington
Phoenix, AZ 85007

ARKANSAS

State NEPA Point of Contact:

Tracy Copeland
State Clearinghouse
Office of Intergovernmental Service
Department of Finance and Administration
P.O. Box 3278
Little Rock, AR 72203
Phone: 501-682-1074 FAX: 501-682-5206

Governor:

The Honorable Jim Guy Tucker
Governor of Arkansas
250 State Capitol Building
Little Rock, AR 72201

CALIFORNIA

State NEPA Point of Contact:

Michael Chiriatti, Jr., Chief
State Clearing House
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
Phone: 916-445-0613 FAX: 916-323-3018

NOTE: The State of California has requested that 10 copies of each NEPA document be provided to Michael Chiriatti and requests that the NEPA document be accompanied by a one-page State Distribution Form (a "Notice of Completion") to ensure complete distribution.

Governor:

The Honorable Pete Wilson
Governor of California
State Capitol, 1st Floor
Sacramento, CA 95814

COLORADO

State NEPA Point of Contact:

The State of Colorado has withdrawn from the clearinghouse review process effective July 1992, and has not designated a separate NEPA Point of Contact. DOE offices should exercise their own judgment in contacting the appropriate state agency or agencies for coordination of NEPA documents on a case-by-case basis.

NEPA documents concerning the Rocky Flats Plant should be sent to:

Steve Tarleton
Rocky Flats Program Unit
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, CO 80222-1530
Phone: 303-692-3013 FAX: 303-782-4969

Governor:

The Honorable Roy Romer
Governor of Colorado
136 State Capitol Building
Denver, CO 80203-1792

CONNECTICUT

State NEPA Point of Contact:

Bill Quigg
Intergovernmental Review Coordinator
Office of Policy and Management
80 Washington Street
Hartford, CT 06106-4459
Phone: 203-566-3410 FAX: 203-566-3456

Governor:

The Honorable Lowell P. Weicker, Jr.
Governor of Connecticut
State Capitol
210 Capitol Avenue
Hartford, CT 06106

DELAWARE

State NEPA Point of Contact:

Francine Booth, Federal Aid Coordinator
Budget Office
Thomas Collins Building
Dover, DE 19901
Phone: 302-739-3326 FAX: 302-739-5661

Governor:

The Honorable Tom Carper
Governor of Delaware
Legislative Hall
Dover, DE 19901

FLORIDA

State NEPA Point of Contact:

Suzanne Traub-Metlay
Florida State Clearinghouse
Intergovernmental Affairs Policy Unit
Office of Planning and Budgeting
Executive Office of the Governor
1603 The Capitol
Tallahassee, FL 32399-0001
Phone: 904-488-8114 FAX: 904-488-9005

NOTE: Questions and correspondence should be directed to Suzanne Traub-Metlay. Florida has requested 30 days for preapproval review of environmental assessments.

Governor:

The Honorable Lawton Chiles
Governor of Florida
The Capitol
Tallahassee, FL 32399-0001

GEORGIA

State NEPA Point of Contact:

Joe Tanner, Commissioner
Department of Natural Resources
Floyd Towers East, Suite 1252
205 Butler Street
Atlanta, GA 30334
Phone: 404-656-3500 FAX: 404-656-0770

Governor:

The Honorable Zell Miller
Governor of Georgia
203 State Capitol
Atlanta, GA 30334

GUAM

State NEPA Point of Contact:

Michael J. Reidy, Director
Bureau of Budget and Management Research
Office of the Governor
P.O. Box 2950
Agana, GU 96910
Phone: 011-671-472-2285

Governor:

The Honorable Joseph Ada
Governor of Guam
Executive Chamber
P.O. Box 2950
Agana, GU 96910

HAWAII

State NEPA Point of Contact:

Director
Office of Environmental Quality Control
220 South King Street, Suite 400
Fourth Floor
Honolulu, HI 96813
Phone: 808-586-4185 FAX: 808-586-2452

Governor:

The Honorable John D. Waihee, III
Governor of Hawaii
5 State Capitol
Honolulu, HI 96813

IDAHO

State NEPA Point of Contact:

Steve R. Hill, Administrator
INEL Oversight Program
1410 N. Hilton
Boise, ID 83706
Phone: 208-334-0498 FAX: 208-334-0429

Provide a copy of any material sent to Mr. Hill to:

David L. Humphrey, Deputy Director
Director's Office
Department of Health and Welfare
P.O. Box 83720
Boise, ID 83720-0036

NOTE: The State of Idaho has requested 30 days for preapproval review of environmental assessments.

Governor:

The Honorable Cecil D. Andrus
Governor of Idaho
State Capitol Building
West Wing, 2nd Floor
Boise, ID 83720

ILLINOIS

State NEPA Point of Contact:

Terri Moreland, Director
of Science and Technology
State of Illinois Office
444 North Capitol Street
Suite 240
Washington, DC 20001
Phone: 202-624-7760 FAX: 202-724-0689

Governor:

The Honorable Jim Edgar
Governor of Illinois
207 State Capitol Building
Springfield, IL 62706

INDIANA

State NEPA Point of Contact:

Jean Blackwell, Budget Director
State Budget Agency
212 State House
Indianapolis, IN 46204
Phone: 317-232-5610 FAX: 317-233-3323

Governor:

The Honorable Evan Bayh
Governor of Indiana
206 State House
Indianapolis, IN 46204-2797

IOWA

State NEPA Point of Contact:

Larry Wilson, Director
Iowa Department of Natural Resources
Wallace Building
Des Moines, IA 50319
Phone: 515-281-5385 FAX: 515-281-6794

and (for radioactive shipments issues)

Ellen Gordon, Administrator
Emergency Management Division
Department of Public Health
Hoover State Office Building
Des Moines, IA 50319-0075
Phone: 515-281-3231

Governor:

The Honorable Terry E. Branstad
Governor of Iowa
State Capitol Building
Des Moines, IA 50319

KANSAS

State NEPA Point of Contact:

Charles Jones, Director
Division of Environment
State Department of Health and Environment
Forbes Field
Building 740
Topeka, KS 66620
Phone: 913-296-1535 FAX: 913-296-8464

Governor:

The Honorable Joan Finney
Governor of Kansas
Two State Capitol
Topeka, KS 66612

KENTUCKY

State NEPA Point of Contact:

Phillip Shepard, Secretary
Kentucky Cabinet for Natural
Resources and Environmental Protection
Capital Plaza Tower, Fifth Floor
Frankfort, KY 40601
Phone: 502-564-3350 FAX: 502-564-3354

Governor:

The Honorable Brereton C. Jones
Governor of Kentucky
100 State Capitol
Frankfort, KY 40601

LOUISIANA

State NEPA Point of Contact:

Martha Madden, Coordinator
Governor's Office of Permits
P.O. Box 94095
Baton Rouge, LA 70804
Phone: 504-922-3252 FAX: 504-922-3256

Governor:

The Honorable Edwin Edwards
Governor of Louisiana
State Capitol
P.O. Box 94004
Baton Rouge, LA 70804

MAINE

State NEPA Point of Contact:

Deborah J. Richard, Acting Commissioner of
Environmental Protection
Station #17
Augusta, ME 04333
Phone: 207-287-2812 FAX: 207-287-7826

Governor:

The Honorable John R. McKernan, Jr.
Governor of Maine
State House Station 1
Augusta, ME 04333

MARYLAND

State NEPA Point of Contact:

Roland English, Chief
Maryland State Clearinghouse
Department of State Planning
301 West Preston Street
Baltimore, MD 21201-2365
Phone: 410-225-4490 FAX: 410-225-4480

Governor:

The Honorable William Donald Schaefer
Governor of Maryland
State House
100 State Circle
Annapolis, MD 21401

MASSACHUSETTS

State NEPA Point of Contact:

Director
Massachusetts Environmental Policy Act Unit
Executive Office of Environmental Affairs
100 Cambridge Street, Room 2000
Boston, MA 02202
Phone: 617-727-9800 FAX: 617-727-2754

Governor:

The Honorable William Weld
Governor of Massachusetts
State House, Executive Office
Boston, MA 02133

MICHIGAN

State NEPA Point of Contact:

Richard Pastula
Federal Grants Office
P.O. Box 30225
Lansing, MI 48909
Phone: 517-335-1590 FAX: 517-373-6683

Governor:

The Honorable John Engler
Governor of Michigan
Olds Plaza
P.O. Box 30013
Lansing, MI 48909

MINNESOTA

State Point of Contact:

Melva Weir
Legislative Relations
Room 121, State Capitol
St. Paul, MN 55155
Phone: 612-297-1622 FAX: 612-296-8933

Provide a copy of any material sent to Ms. Weir to:

Krista L. Sanda, Commissioner
Minnesota Department of Public Service
121 Seventh Place East, Suite 200
St. Paul, MN 55101-2145
Phone: 612-296-7107 FAX: 612-297-1959

Governor:

The Honorable Arne Carlson
Governor of Minnesota
130 State Capitol
St. Paul, MN 55155

MISSISSIPPI

State NEPA Point of Contact:

Jimmy Palmer, Executive Director
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
Phone: 601-961-5000 FAX: 601-354-6965

Governor:

The Honorable Kirk Fordice
Governor of Mississippi
P.O. Box 139
Jackson, MS 39205

MISSOURI

State NEPA Point of Contact:

Lois Pohl
Federal Assistance Clearinghouse
Office of Administration
Division of General Services
P.O. Box 809
Room 760, Truman Building
Jefferson City, MO 65102
Phone: 314-751-4834 FAX: 314-751-7819

Governor:

The Honorable Mel Carnahan
Governor of Missouri
216 State Capitol
P.O. Box 720
Jefferson City, MO 65102

MONTANA

The State of Montana has withdrawn from the clearinghouse process and has not designated a separate NEPA Point of Contact. DOE offices should exercise their own judgment in contacting the appropriate state agency or agencies for coordination of NEPA documents on a case-by-case basis.

Governor:

The Honorable Marc Racicot
Governor of Montana
204 State Capitol
Helena, MT 59620

NEBRASKA

State NEPA Point of Contact:

Randolf Wood, Director
Department of Environmental Quality
1200 N Street, Suite 400
Lincoln, NE 68508
Phone: 402-471-2186 FAX: 402-471-2909

Governor:

The Honorable Ben Nelson
Governor of Nebraska
State Capitol
P.O. Box 94848
Lincoln, NE 68509-4848

NEVADA

State NEPA Point of Contact

Maud Naroll
Nevada State Clearinghouse
Department of Administration
Capitol Complex
Carson City, NV 89710
Phone: 702-687-4065 FAX: 702-687-3983

Governor:

The Honorable Robert J. Miller
Governor of Nevada
Executive Chambers
Capitol Complex
Carson City, NV 89710

NEW HAMPSHIRE

State NEPA Point of Contact:

Robert W. Varney, Commissioner
Department of Environmental Services
Hazen Drive
Concord, NH 03301
Phone: 603-271-3503 FAX: 603-271-2867

Governor:

The Honorable Steve Merrill
Governor of New Hampshire
208-214 State House
Concord, NH 03301

NEW JERSEY

State NEPA Point of Contact:

Lawrence Schmidt, Director
Office of Program Coordination
Department of Environmental Protection and Energy
CN 418
Trenton, NJ 08625-0418
Phone: 609-292-2662 FAX: 609-777-0942

Governor:

The Honorable Christine T. Whitman
Governor of New Jersey
State House
Trenton, NJ 08625

NEW MEXICO

State NEPA Point of Contact:

Judith M. Espinosa, Secretary
New Mexico Environment Department
1190 St. Francis Drive
Santa Fe, NM 87502
Phone: 505-827-2850 FAX: 505-827-2836

NOTE: The State of New Mexico has requested that 3 copies of each NEPA document be provided to Ms. Espinosa.

Governor:

The Honorable Bruce King
Governor of New Mexico
State Capitol Building
Santa Fe, NM 87503

NEW YORK

State NEPA Point of Contact:

Thomas J. McDonald, Supervisor
New York State Clearinghouse
Division of the Budget
State Capitol
Albany, NY 12224
Phone: 518-474-1605 FAX: 518-473-9359

and/or:

Mr. Gary Striar
Office of Policy Planning
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233
Phone: 518-457-6996 FAX: 518-457-8175

Governor:

The Honorable Mario M. Cuomo
Governor of New York
State Capitol
Albany, NY 12224

NORTH CAROLINA

State NEPA Point of Contact:

Chrys Baggett, Director
NC Department of Administration
116 W. Jones Street
Raleigh, NC 27603-8003
Phone: 919-733-7232 FAX: 919-733-9571

Governor:

The Honorable James Hunt, Jr.
Governor of North Carolina
116 West Jones Street
Raleigh, NC 27603-8001

NORTH DAKOTA

State NEPA Point of Contact:

Shirley R. Dykshoorn, Director
ND Office of Intergovernmental
Assistance
State Capitol--14th Floor
600 East Boulevard Avenue
Bismarck, ND 58505-0170
Phone: 701-224-2094 FAX: 701-224-2308

Governor:

The Honorable Edward Schafer
Governor of North Dakota
State Capitol
600 East Boulevard Avenue
Bismarck, ND 58505

NORTHERN MARIANA ISLANDS

State NEPA Point of Contact:

State Single Point of Contact
Planning and Budget Office
Office of the Governor
Saipan, CM, Northern Mariana Islands 96950

Governor:

The Honorable Froilan C. Tenorio
Governor of the Commonwealth of the
Northern Mariana Islands
Saipan, Northern Mariana Islands 96950

OHIO

State NEPA Point of Contact:

Larry Weaver
State Single Point of Contact
State/Federal Funds Coordinator
State Clearinghouse
Office of Budget and Management
30 East Broad Street 34th Floor
Columbus, OH 43266-0411
Phone: 614-466-0698 FAX: 614-466-5400

Governor:

The Honorable George Voinovich
Governor of Ohio
Vern Riffe Center
77 South High Street
30th Floor
Columbus, OH 43215

OKLAHOMA

State NEPA Point of Contact:

The State of Oklahoma has withdrawn from the clearinghouse review process effective July 1992, and has not designated a separate NEPA Point of Contact. DOE offices should exercise their own judgment in contacting the appropriate state agency or agencies for coordination of NEPA documents on a case-by-case basis.

Governor:

The Honorable Dave Walters
Governor of Oklahoma
212 State Capitol
Oklahoma City, OK 73105

OREGON

State NEPA Point of Contact:

The State of Oregon has withdrawn from the clearinghouse review process effective November 30, 1991, and has not designated a separate NEPA Point of Contact. DOE offices should exercise their own judgment in contacting the appropriate state agency or agencies for coordination of NEPA documents on a case-by-case basis.

Governor:

The Honorable Barbara Roberts
Governor of Oregon
254 State Capitol
Salem, OR 97310-0370

PENNSYLVANIA

State NEPA Point of Contact:

Nina Huizinga
Department of Environmental Resources
Secretary's Office of Policy
P.O. Box 2063
Harrisburg, PA 17105-2063
Phone: 717-783-8727 FAX: 717-783-8470

Governor:

The Honorable Robert P. Casey
Governor of Pennsylvania
225 Main Capitol Building
Harrisburg, PA 17120

PUERTO RICO

State NEPA Point of Contact:

Norma Burgos
President
Puerto Rico Planning Board
Minillas Government Center
P.O. Box 41119
San Juan, PR 00940-9985
Phone: 809-727-4444 FAX: 809-724-3270

Governor:

The Honorable Pedro J. Rossello
Governor of the Commonwealth of
Puerto Rico
La Fortaleza
San Juan, PR 00901

RHODE ISLAND

State NEPA Point of Contact:

Daniel W. Varin, Associate Director
Statewide Planning Program
Department of Administration
Division of Planning
1 Capitol Hill
Providence, RI 02908
Phone: 401-277-2656 FAX: 401-277-2083

NOTE: Questions and correspondence should be directed to: Review Coordinator, Office of Strategic Planning.

Governor:

The Honorable Bruce G. Sundlun
Governor of Rhode Island
State House
Providence, RI 02903

SOUTH CAROLINA

State NEPA Point of Contact:

Omeagia Burgess
State Single Point of Contact
Grant Services
Office of the Governor
1205 Pendleton Street
Room 477
Columbia, SC 29201
Phone: 803-734-0494 FAX: 803-734-0505

NOTE: The State of South Carolina has requested that 14 copies of an environmental assessment or 20 copies of an environmental impact statement be provided to Ms. Burgess.

Governor:

The Honorable Carroll A. Campbell, Jr.
Governor of South Carolina
State House
P. O. Box 11369
Columbia, SC 29211

SOUTH DAKOTA

State NEPA Point of Contact:

Robert E. Roberts
Secretary
Department of Environment and Natural Resources
523 East Capitol
Pierre, SD 57501
Phone: 605-773-3151 FAX: 605-773-6035

Governor:

The Honorable Walter Dale Miller
Governor of South Dakota
State Capitol
500 East Capitol Avenue
Pierre, SD 57501-5070

TENNESSEE

State NEPA Point of Contact:

Charles Brown
Tennessee State Planning Office
307 John Sevier Building
500 Charlotte Avenue
Nashville, TN 37243-0001
Phone: 615-741-1676 FAX: 615-532-7918

NOTE: The State of Tennessee has requested 30 days for preapproval review of environmental assessments.

Provide a copy of any material sent to Mr. Brown to:

Earl Leming, DOE Oversight
Tennessee Department of Environment and Conservation
761 Emory Valley Road
Oak Ridge, TN 37831

and

Ellen Smith
Environmental Quality Advisory Board
116 Morningside Drive
Oak Ridge, TN 37830

and

Dr. Amy McCabe
Oak Ridge Local Oversight Committee
136 S. Illinois Ave., Suite 208
Oak Ridge, TN 37830

Governor:

The Honorable Ned Ray McWherter
Governor of Tennessee
State Capitol
Nashville, TN 37243-0001

TEXAS

State NEPA Point of Contact:

Susan Rieff
Director of Environmental Policy
Governor's Policy Council
P.O. Box 12428
Austin, TX 78711
Phone: 512-463-2198 FAX: 512-463-1975

and

Thomas C. Adams
State Single Point of Contact
Texas Office of State-Federal Relations
P.O. Box 13005
Austin, TX 78711
Phone: 512-463-1771 FAX: 512-463-1984

NOTE: Texas has requested 30 days for preapproval review of environmental assessments.

Governor:

The Honorable Ann Richards
Governor of Texas
P. O. Box 12428
Capitol Station
Austin, TX 78711

UTAH

State NEPA Point of Contact:

Carolyn Wright
Governor's Office of Planning and Budget
Room 116
State Capitol Building
Salt Lake City, UT 84114
Phone: 801-538-1535 FAX: 801-538-1547

Governor:

The Honorable Mike Leavitt
Governor of Utah
210 State Capitol
Salt Lake City, UT 84114

VERMONT

State NEPA Point of Contact:

Nancy McAvoy
Office of Policy Research and Coordination
109 State Street
Montpelier, VT 05609
Phone: 802-828-3326 FAX: 802-828-3339

Governor:

The Honorable Howard Dean
Governor of Vermont
Pavilion Office Building, 5th Floor
109 State Street
Montpelier, VT 05609

VIRGIN ISLANDS

State NEPA Point of Contact:

Jose L. George, Director
Office of Management and Budget
No. 41 Norre Gade, Emancipation Garden State, Second Floor
Charlotte Amalie, VI 00802
Phone: 809-774-0750 FAX: 809-776-0069

Governor:

The Honorable Alexander A. Farrelly
Governor of the Virgin Islands of the
United States
21-22 Kongens Gade
St. Thomas, VI 00802

VIRGINIA

State NEPA Point of Contact:

Administrator
Department of Environmental Quality
Division of Public Affairs
P.O. Box 10009
Richmond, VA 23240-0009
Phone: 804-786-4500 FAX: 804-371-7604

NOTE: The Commonwealth of Virginia has requested that 6 copies of NEPA documents be provided to the Administrator.

Governor:

The Honorable George F. Allen
Governor of Virginia
Capitol Building, 3rd Floor
Richmond, VA 23219

WASHINGTON

State NEPA Point of Contact:

Barbara Ritchie, NEPA Coordinator
Environmental Review Section
Washington State Department of Ecology
P.O. Box 47703
Olympia, WA 98504-7703
Phone: 206-407-6922 FAX: 206-407-6904

Governor:

The Honorable Mike Lowry
Governor of Washington
Legislative Building, MS AS-13
Olympia, WA 98504-0413

WEST VIRGINIA

State NEPA Point of Contact:

Fred Cutlip, Director
Community Development Division
West Virginia Development Office
Building #6 Room 553
Charleston, WV 25305
Phone: 304-558-4010 FAX: 304-558-3248

Governor:

The Honorable Gaston Caperton
Governor of West Virginia
State Capitol Building
Charleston, WV 25305

WISCONSIN

State NEPA Point of Action:

James R. Klauser, Secretary
Wisconsin Department of Administration
101 East Wilson Street, 10th Floor
P.O. Box 7864
Madison, WI 53707-7864
Phone: 608-266-1741 FAX: 608-267-3842

NOTE: Questions and correspondence should be directed to:

Martha Kerner, Section Chief
Federal-State Relations Office
Wisconsin Department of Administration
101 East Wilson Street, 6th Floor
P.O. Box 7868
Madison, WI 53707-7868
Phone: 608-266-0267

Governor:

The Honorable Tommy G. Thompson
Governor of Wisconsin
State Capitol
P.O. Box 7863
Madison, WI 53707-7863

WYOMING

State NEPA Point of Contact:

Julie Hamilton
State Planning Coordinator's Office
Herschler Building
Fourth Floor, East Wing
Cheyenne, WY 82002
Phone: 307-777-7574 FAX: 307-638-8967

Governor:

The Honorable Michael J. Sullivan
Governor of Wyoming
State Capitol
Cheyenne, WY 82002-0010

AMERICAN INDIAN TRIBES POTENTIALLY INTERESTED IN RECEIVING DOE NEPA DOCUMENTS

There are well over 500 Federally-recognized American Indian Tribes and Alaska Native Corporations. Assistance on coordination with tribes concerning proposed actions is available from the relevant program and/or field Departmental points of contact on Indian issues listed below. The Office of NEPA Oversight also maintains a list of tribal contacts.

Secretary of Energy Advisory Board
Executive Director, HR-2
Forrestal Building, Room 7B-198
Phone: 202-586-7092

Chief Financial Officer
Julie Squires, CR-3
Forrestal Building, Room 4A-149
Phone: 202-586-4047

Office of Civilian Radioactive Waste Management
Ben Easterling, RW-5
Forrestal Building, Room 5A-051
Phone: 202-586-5399

Assistant Secretary for Congressional, Intergovernmental and International Affairs
Vicki Thornton, CI-30
Forrestal Building, Room 8E-070
Phone: 202-586-1599

Assistant Secretary for Defense Programs
Henry Garson, DP-34
Germantown, Room A-110
Phone: 301-903-0470

Office of Economic Impact and Diversity
Sterling Nichols, ED-2
Forrestal Building, Room 5B-110
Phone: 202-586-1594

or

Corlis Moody, ED-1
Forrestal Building, Room 5B-110
Phone: 202-586-8383

Indian Tribes

Assistant Secretary for Energy Efficiency and Renewable Energy
Sandra Monje, EE-522
Forrestal Building, Room 5E-052
Phone: 202-586-8295

Energy Information Administration
Dolly Collier, EI-22
Forrestal Building, Room 2H-055
Phone: 202-586-1108

Office of Energy Research
Ted Tomczak, ER-14
Germantown, Room J-309
Phone: 301-903-6916

Assistant Secretary for Environment, Safety and Health
Lois Thompson, EH-232
Forrestal Building, Room GA-098
Phone: 202-586-9581

Assistant Secretary for Environmental Management
Margaret Fernandez, EM-5
Forrestal Building, Room 5A-031
Phone: 202-586-5821

and

Don Beck, EM-5
Forrestal Building, 5B-031
Phone: 202-586-7633

Assistant Secretary for Fossil Energy
Keith Frye, FE-13
Germantown (270 Corporate Center), Room 3051
Phone: 301-903-2098

Office of the General Counsel
Judy Kosovich, GC-73
Forrestal Building, Room 6H-064
Phone: 202-586-6399

Office of Hearings and Appeals
Thomas Mann, HG-20
Forrestal Building, Room 6G-087
Phone: 202-586-2094

Assistant Secretary for Human Resources and Administration
Diane Foster, HR-321.2
Forrestal Building, Room 4F-077
Phone: 202-586-8592

Office of Inspector General
Barbara Chism, IG-14
Forrestal Building, Room 5D-031
Phone: 202-586-1931

Office of Non-Proliferation and National Security
James Ford, NN-1.3
Forrestal Building, Room 6A-093
Phone: 202-586-9374

or

Joanne Phipps, NN-1.3
Forrestal Building, Room 6A-093
Phone: 202-586-1366

Office of Nuclear Energy
Phil Garon, NE-12
Forrestal Building, Room 5A-157
Phone: 202-586-6823

Office of Public and Consumer Affairs
Joanna Stancil, PA-3
Forrestal Building, Room 8G-087
Phone: 202-586-3019

Assistant Secretary for Policy, Planning and Program Evaluation
Gay Leslie, PO-52
Forrestal Building, Room 7H-082
Phone: 202-586-6428

Office of Science Education and Technical Information
Rich Stephens, ET-50
Forrestal Building, Room 5B-168
Phone: 202-586-8949

Office of Small and Disadvantaged Business Utilization
James Dixon, ED-3
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AMERICAN FRIENDS SERVICE COMMITTEE
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Concord, MA 01742
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CITIZENS FOR ALTERNATIVES TO RADIOACTIVE DUMPING
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Albuquerque, NM 87106
Attn: Garland Harris
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CITIZENS FOR ENVIRONMENTAL JUSTICE
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Savannah, GA 31401
Attn: Mildred McClain
Phone: 912-233-0907 FAX: 912-233-5105

COALITION FOR HEALTH CONCERN
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Kevil, KY 42053
Attn: Ronald Lamb
Phone: 502-462-3495 FAX: 502-462-3495

CONCERNED CITIZENS FOR NUCLEAR SAFETY
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Santa Fe, NM 87501
Attn: Margaret Carde
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New York, NY 10018
Attn: Alice Slater
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ENVIRONMENTAL DEFENSE INSTITUTE
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Troy, ID 83871
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Columbia, SC 29205
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FLORIDA COALITION FOR PEACE & JUSTICE
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Attn: Bruce Gagnon
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GREENPEACE
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Attn: Chris Zimmer
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Spokane, WA 99201
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HEART OF AMERICA NORTHWEST
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MILITARY TOXICS PROJECT
RRI, Box 2020
Litchfield, ME 04350
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NATIONAL TAXPAYERS UNION
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Board on Environmental Studies and
Toxicology, Mail Code HA354
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West Central Region (ND, SD, NE, KS, OK, IA, MO, AK)
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Anchorage, AK 99501
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NATIONAL CONGRESS OF AMERICAN INDIANS
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NATIONAL FISH AND WILDLIFE FOUNDATION
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NATIONAL PARKS AND CONSERVATION ASSOCIATION
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NATIONAL TRUST FOR HISTORIC PRESERVATION
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NATIONAL WATER RESOURCES ASSOCIATION
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Lander, WY 82520
Attn: Ben Pierce
State Director
Phone: 307-332-2971 FAX: 307-332-2974

Alaska Field Office
601 West Fifth Ave
Suite 550
Anchorage, AK 99501
Attn: Susan Ruddy
Vice President and State Director
Phone: 907-276-3133 FAX: 907-276-2584

Hawaii Field Office
1116 Smith St.
Suite 201
Honolulu, HI 96817
Attn: Kim Harris
Government Affairs Coordinator
Phone: 808-537-4508 FAX: 808-545-2019

NEW ENGLAND WILD FLOWER SOCIETY, INC.
"Garden in the Woods"
180 Hemenway
Framingham, MA 01701-2699
Attn: William Brumback
Conservation Director
Phone: 508-877-7630 FAX: 508-877-3658

OVERSEAS PRIVATE INVESTMENT CORPORATION
Investment Policy and Environmental Affairs
1100 New York Avenue, NW
Washington, DC 20527
Attn: Harvey Himberg
Director
Phone: 202-336-8614 FAX: 202-408-5145

PUBLIC CITIZEN
215 Pennsylvania Avenue, 3rd Floor
Washington, DC 20003
Attn: Bill Magavern
Phone: 202-546-4996 FAX: 202-547-7392

RADIOACTIVE WASTE CAMPAIGN
7 West St.
Warwick, NY 10990
Attn: Patrick Molloy
Phone: 914-764-8100

SAFE ENERGY COMMUNICATION COUNCIL
1717 Massachusetts Avenue, NW, Suite 805
Attn: Scott Denman
Phone: 202-483-8491 FAX: 202-234-9194

THE SIERRA CLUB

National Headquarters
730 Polk St.
San Francisco, CA 94109
Attn: Bruce Hamilton
Director of Conservation
Phone: 415-776-2211 FAX: 415-776-0350

Washington, DC Office
408 C St., NE
Washington, DC 20002
Attn: Ted Freeman
Associate Representative for
Global Warming and Energy Programs
Phone: 202-547-1141 FAX: 202-547-6009

Alaska Office
241 East 5th Ave., #205
Anchorage, AK 99501
Attn: Jack Hession
Alaska Regional Staff Director
Phone: 907-276-4048 FAX: 907-258-6807

Appalachian Office (DE, MD, WV, DC, VA, NC, SC, TN)
69 Franklin St.
Annapolis, MD 21401
Attn: Joy Oakes
Regional Staff Director
Phone: 410-268-7411 FAX: 410-268-1114

Midwest Office (MN, WI, MI, IA, IL, IN, OH, MO, KY)
214 North Henry St., #203
Madison, WI 53703
Attn: Carl Zichella
Staff Director
Phone: 608-257-4994 FAX: 608-257-3513

Military Impacts on the Environment Committee
Department of Biological Sciences
Stanford University
Stanford, California
Attn: Ann Ehrlich
Phone: 415-725-1853 FAX: 415-723-5920

Northern CA/NV/HI Office
4171 Piedmont Ave.
Suite 204
Oakland, CA 94611
Attn: Barbara Boyle
Regional Director
Phone: 510-654-7847 FAX: 510-654-4936

Northeast Office (NH, VT, RI, PA, MA, ME, CT, NY, NJ)
85 Washington St.
Saratoga Springs, NY 12866
Attn: Chris Ballantyne
Phone: 518-587-9166 FAX: 518-583-9062

Northern Plains Office (WY, ND, SD, NE, MT)
23 North Scott, Suite 27
Sheridan, WY 82801
Attn: Kirk Koepsel
Associate Representative
Phone: 307-672-0425 FAX: 307-674-6187

Northwest Office (WA, OR, ID)
1516 Melrose Ave.
Seattle, WA 98122
Attn: Bill Arthur
Regional Director
Phone: 206-621-1696 FAX: 206-621-9110

Southeast Office (GA, FL, AL, MS, LA)
1330 21st Way, South
Suite 100
Birmingham, AL 35205
Attn: Jim Price
Regional Director
Phone: 205-933-9111 FAX: 205-939-1020

Southern CA/NV Office
3345 Wilshire Blvd.
Suite 508
Los Angeles, CA 90010
Attn: Brent Scott
Associate Representative
Phone: 213-387-6528 FAX: 213-387-5383

Southern Plains Office (KS, OK, AR, TX)
7502 Greenville Ave., #670
Lock Box #47
Dallas, TX 75231
Attn: Beth Johnson
Field Staff Director
Phone: 214-369-8181 FAX: 214-369-8183

Southwest Office (CO, AZ, UT, NM)
516 East Portland St.
Phoenix, AZ 85004-1843
Attn: Rob Smith
Phone: 602-254-9330 FAX: 602-258-6533

Southwest Office, Colorado
2017 10th St.
Suite B
Boulder, CO 80302
Phone: 303-449-5595 FAX: 303-449-6520

Southwest Office, New Mexico
2800 Charleston Street, NE
Albuquerque, NM 87110
Attn: Jay Sorenson
Phone: 505-884-4314 FAX: 505-884-0114

Southwest Office, Utah
177 East 900 South
Suite 102
Salt Lake City, UT 84111
Attn: Lawson Le Gate
Phone: 801-467-9294 FAX: 801-467-9294

TROUT UNLIMITED
1600 Wilson Boulevard
Suite 310
Arlington, VA 22209-2310
Attn: Charles Gauvin
President
Phone: 703-522-0200 FAX: 703-284-9400

UNION OF CONCERNED SCIENTISTS
1616 P Street, NW Suite 310
Washington, DC 20036
Attn: Alden Meyer
Phone: 202-332-0900 FAX: 202-332-0905

U.S. PUBLIC INTEREST RESEARCH GROUP
215 Pennsylvania Avenue, SE
Washington, DC 20003
Attn: Anna Aurilio
Phone: 202-546-9707 FAX: 202-546-2461

THE WILDERNESS SOCIETY
900 17th St., NW
Washington, DC 20006-2596
Attn: Pat Harris
Resources, Planning, and Economics Assistant
Phone: 202-833-2300 FAX: 202-429-3958

THE WILDLIFE SOCIETY
5410 Grosvenor Ln.
Suite 200
Bethesda, MD 20814-2197
Attn: Thomas Franklin
Policy Director
Phone: 301-897-9770 FAX: 301-530-2471

WORLD WILDLIFE FUND
1250 24th St., NW
Washington, DC 20037
Phone: 202-293-4800 FAX: 202-293-9211

WORLDWATCH INSTITUTE
1776 Massachusetts Ave., NW
Washington, DC 20036
Attn: David Roodman
Research Assistant
Phone: 202-452-1999 FAX: 202-296-7365

DOE F 1325.8
(8-89)
EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: August 12, 1994

REPLY TO ATTN OF: Office of NEPA Oversight:Cohen:202-586-4600

SUBJECT: Lessons Learned in the Preparation of National Environmental Policy Act Documents

TO: Distribution

The Secretarial Policy Statement on the National Environmental Policy Act (NEPA), issued June 13, 1994, requires (Section VI.B) the Office of Environment, Safety and Health to solicit comments from the NEPA Document Manager, the NEPA Compliance Officer, and team members after completing each environmental impact statement and environmental assessment on lessons learned in the process and circulate a quarterly summary to all NEPA Compliance Officers and NEPA Document Managers.

The Office of NEPA Oversight is planning to solicit comments on lessons learned on a quarterly basis; attached is a proposed schedule for reporting lessons learned to us for the next year. We have prepared an interim/draft questionnaire (attached) to provide a uniform Department-wide framework for reporting lessons learned. We intend to update and modify the questionnaire based on comments received and to provide alternative reporting mechanisms (e.g., electronic systems). The questionnaire also solicits some information useful for meeting our responsibilities under Section III.B. and VI.E. of the Policy Statement to measure the progress of the Department's NEPA compliance program.

We request that, as soon as possible after the completion of the NEPA process, the NEPA Document Manager, NEPA Compliance Officer and members of the team that prepared the document each complete a questionnaire and forward it to the Office of NEPA Oversight. In any case, to support our reporting requirements under the NEPA Policy, completed questionnaires should be forwarded no later than the dates indicated on the attached schedule.

The Office of NEPA Oversight is planning to issue the first quarterly summary on December 1, 1994, covering the period from July 1 through September 30, 1994. Accordingly, we request that NEPA Document Managers, NEPA Compliance Officers and team members provide completed lessons learned questionnaires for the environmental impact statements and environmental assessments approved during the first reporting period no later than November 1, 1994. This will enable us to prepare and circulate the summary report by December 1, 1994. Because we do not yet know the identities of the NEPA Document Managers and team members, we are relying initially on NEPA Compliance Officers to ensure the timely distribution of the questionnaire to the appropriate people for action.

If you have any comments or suggestions regarding how we can best solicit and summarize lessons learned, please provide them to Eric Cohen, Office of NEPA Oversight, 202-586-4600 or 202-586-7031 (fax).

Robert H. Strickler for
Carol Borgstrom
Director
Office of NEPA Oversight

Attachments

Distribution:

NEPA Compliance Officers

Henry Garson, DP-34
Othalene Lawrence, EE-64
Randal S. Scott, EM-20
James K. Farley, ER-8.2
Jim Johnson, FE-6
Sondra Kevelier, FM-60
Rajendra Sharma, NE-47
Michael Mazaleski, NN-30
Christopher Kouts, RW-4
Alexandra Smith, BPA/AJ
Bill Karsell, WAPA
Constance L. Soden, AL
Susan D. Lacy, AL/KAO

Diana Webb, AL/LAAO
Bill White, CH
Ed Skintik, FN
Deborah Turner, GO
Roger Twitchell, ID
Donald R. Elle, NV
Anthony Adduci, OAK
Patricia W. Phillips, OR
Patricia Powell, RF
Paul Dunigan, Jr., RL
Karen Hooker, SR
John M. Taves, BPA/EFBG
Kenneth Kirkman, BPA/MMPH

Roy B. Fox, BPA/PGA
Charles C. Alton, BPA/RM
Robert Waldman, APA
Charles A. Truett, SEPA
Don Hayes, SWPA
John Ganz, METC
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David Brine, FE/SPR
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NEPA Contacts

James Felty, DP-11
Robert Jones, DP-11
Marty Schoenbauer, DP-12
Dan Youngberg, DP-13
Betty McLaughlin, DP-15
Edward Reynolds, DP-22
Jerry Rodgers, DP-22
Abdul Dasti, DP-24
Tracey Leslie, DP-24
Eric Schweitzer, DP-25
Arnold Epstein, DP-32
Karl E. Goodwin, DP-332
Tony Neglia, DP-34
Patricia Bean, DP-41
Lloyd Lewis, EE-121
Clifton Carwile, EE-222
Raymond Costello, EE-331
Barry Berlin, EE-43
Edna Jones, EE-531

Lee Stevens, EM-331
Lyle Harris, EM-431
Tom Evans, EM-50.1
Andy Szilagyi, EM-62
Sat Goel, ER-14
David Goodwin, ER-20
Steve Rossi, ER-54
William Osburn, ER-73
Jerry Pell, FE-22
W. H. Delaplane, FE-423
Lisa Megargle, NE-60
Randy Bell, NN-20
Michael Willingham, NN-40
David Crawford, NN-512.4
James Gilliam, NN-60
Wendy Dixon, RW-20
Gary D. Walker, FE/NPR
Nat Brown, FM/SSC
Dean Triebel, AL/AAO

Debra White, AL/
DAODavid Caughey, AL/KCAO
Sarah E. Hartson, AL/PAO
Albert Chernoff, AL/UMTRA
James Mewhinney, AL/WPO
Richard Sena, AL/ERPO
Yvette Collazo, CH/AR
Vicki Johnson, ID/MS-1120
Robert Jones, ID/MS-1133
Mary McKnight, ID/MS-1209
C. Ljungberg, ID/MS-1217
R. McKenzie, ID/MS-1220
Paul Martin, ID/MS-1223
E. Matthews, ID/WVPO
Carl Schwab, OAK/BSO
C. Holtzapple, OAK/LLNL
Sue Smiley, OH
Nancy Hendrix-Ward, OR/EW
Susan Morris, OR/Y-12

Field Counsel

Tom Jones, AL
Betty Hollowell, AL/AA
Alan Jones, AL/DA
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Beth Osheim, FN
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Bud Bornhoft, NV
Pete Bernard, OAK
Tyler Przybylek, OR
Dana Lindsay, RF
Bob Carosino, RL
Warren Bergholz, SR
Harvard Spigal, BPA
Mark Hacskaylo, WAPA
Charles Seehorn, METC

Curtis McBride, PETC
Joan Shands, BK
Ron O. Dixon, NPR
Henry Van Dyke, SNRO
Jocelyn Guarisco, SPRO
David G. Darugh, SSCPO
Jim Carey, PNRO

Others

William Dennison, GC-51

SCHEDULE OF QUARTERLY LESSONS LEARNED REPORTING

Period Covered	Questionnaires Due to EH-25	Summary Report to be Issued
July 1 - September 30, 1994	November 1, 1994	December 1, 1994
October 1 - December 31, 1994	February 1, 1995	March 1, 1995
January 1 - March 31, 1995	May 1, 1995	June 1, 1995
April 1 - June 30, 1995	August 1, 1995	September 1, 1995
July 1 - September 30, 1995	November 1, 1995	December 1, 1995

Lessons Learned Questionnaire

Preface

Your timely completion of this questionnaire will aid the Office of NEPA Oversight in meeting its responsibilities under the June 13, 1994, Secretarial Policy Statement on the National Environmental Policy Act (NEPA) to foster continuing improvement of the Department of Energy's NEPA process.

The questionnaire is designed to structure your responses, but you should report on any lessons learned that could benefit other Departmental personnel preparing NEPA documents. **Please attach extra pages as needed.**

Completed questionnaires should be returned as soon as possible after completion of the NEPA process. However, questionnaires may be returned at any time to share valuable lessons learned with others. Please return completed questionnaires to:

Carol Borgstrom, Director
U.S. Department of Energy
Office of NEPA Oversight (EH-25)
1000 Independence Ave, SW
Washington, DC 20585 or fax: (202) 586-7031

Interim/Draft
August 1994

Lessons Learned Questionnaire

Reporter's position: ☐ NEPA Compliance Officer ☐ Project Manager
☐ NEPA Document Manager ☐ Other:_____

Name : _____
Organization: _____
Date: _____

☐ DOE/EA- ___ Document Title: _____
☐ DOE/EIS-___

Would you like to have the source of this information kept confidential? ☐ Yes ☐ No

Please provide actual dates for the following. Do not include scheduled dates for actions not yet completed. **(To be provided by the NEPA Document Manager)**

For environmental impact statements:

_____ Notice of Intent published in Federal Register
_____ Scoping period closed
_____ Implementation Plan issued
_____ Draft EIS approved by _____(indicate EH-1 or other) for public comment
_____ Notice of Availability of Draft EIS published by EPA
_____ Draft EIS comment period closed
_____ Final EIS approved
_____ Notice of Availability of Final EIS published by EPA
_____ Record of Decision published in Federal Register

For environmental assessments:

_____ NEPA determination
_____ Sent to: (circle the ones that apply: State(s), tribes, other external stakeholders) for preapproval review
_____ EA approved
_____ NEPA decision (i.e., FONSI or need for EIS)
_____ EA distributed

For environmental impact statements and environmental assessments, describe:

SCHEDULE

Was the environmental assessment or environmental impact statement completed on schedule? ☐ Yes ☐ No

- Measures that facilitated timely completion.

  _____
  _____
  _____

- Circumstances or issues that made timely completion difficult.

  _____
  _____
  _____

- Any especially effective (or ineffective) procedures used to keep the document on schedule.

  _____
  _____
  _____

Did the NEPA review begin early enough to avoid being on the critical path?
☐ Yes ☐ No If no, please explain.

_____
_____
_____
_____

COST

Was the EA or EIS completed within budget? ☐ Yes ☐ No

(To be provided by the NEPA Document Manager)

- Amount of budget _____
- Estimated dollars expended $_____

Please describe any lessons learned regarding budget issues

_____
_____
_____

CONTENT

Describe any problems or innovative approaches used regarding:

- determining reasonable alternatives _____
_____
_____
_____

- data collection _____
_____
_____
_____

- impact analysis _____

PROCESS

What measures facilitated or inhibited effective DOE teamwork in the preparation of the EA/EIS?

What measures facilitated or inhibited effective teamwork between DOE and contractors?

Describe what aspects of the public involvement process you found to be:

Successful:

Not Successful:

Please briefly describe the public reaction(s).

What guidance needs were identified (e.g., as needed enhancements or additions to guidance provided in the "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements")?

Did resources availability hinder the NEPA document preparation? ☐ Yes ☐ No

If Yes, please explain:

Please list key milestone dates of the proposed project. Include milestone dates relating to Major System Acquisitions and Major Projects under DOE 4700.1 (e.g. Key Decision dates, procurement, conceptual design, detailed design and construction activities, or provide analogous milestones for projects not managed under DOE 4700.1.) **(To be provided by the NEPA Document Manager)**

Activity	Date

USEFULNESS

How was the NEPA process used in agency planning and decision making? Please explain:

On a scale of 0-5 (5 being total involvement, and 0 viewing the NEPA process as only "another permit" for a decision already made) what was the decision maker's (who may or may not be the Project Manager) involvement in the NEPA document preparation? _____(enter a number from 0 to 5)

Please add any other comments regarding lessons learned not covered by this questionnaire. (Attach material as appropriate.) Report anything that may be useful to others about what worked and what did not.

Federal Register

Tuesday
November 13, 1979

Part III

Department of State

Office of the Secretary

Unified Procedures Applicable to Major Federal Actions Relating to Nuclear Activities Subject to Executive Order 12114

DEPARTMENT OF STATE

[Public Notice 690]

Unified Procedures Applicable to Major Federal Actions Relating to Nuclear Activities Subject to Executive Order 12114

Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions," was signed by the President on January 4, 1979. The Order represents the exclusive and complete determination by the United States Government of the procedural and other actions to be taken by Federal agencies to further the purposes of the National Environmental Policy Act with respect to the environment outside the United State, its territories and possessions. The following unified procedures are established to satisfy the requirement of the Executive Order for implementing procedures concerning nuclear export activities of Federal agencies.

A Fact Sheet released on January 5, 1979, 44 FR 18723, by the Office of the White House Press Secretary states: "Nuclear reactors are subject to the environmental review requirements of the Order, but exports of nuclear fuel are not. The President has designated the Department of State as the lead agency to work with other relevant agencies to develop unified procedures for environmental reviews of nuclear exports covered by the Order. These procedures will provide for consideration of environmental issues without impairing U.S reliability as a nuclear supplier."

It should be noted that the time limitations established in section 9 and 10(b) are designed to result in the completion of environmental reviews within time limits set by the Nuclear Non-Proliferation Act of 1978 for Executive branch consideration of export license applications as well as within a time which will permit the Export-Import Bank to take into account the review and still make effective financing decisions for covered actions.

With respect to section 14(a), it is noted that since under Article XI E.3 of the Statute of the International Atomic Energy Agency IAEA has a special responsibility with respect to Agency projects, pertinent documentation will be prepared by the Agency for such projects.

Section 19(a) provides that these procedures do not apply retroactively. However, consistent with the second sentence of that paragraph, it is the Department of State's intention that an environmental document will be prepared and taken into account for any future Executive branch judgments concerning export license applications covered by these procedures.

The Order and these procedures are intended solely for the purpose of establishing internal guidance and are not intended to create or enlarge any procedural rights against any Federal agency. However, these procedures are not advisory; the Department of State, as lead agency, intends to ensure they are complied with.

Any comments on these procedures should be directed to the Director of the Office of Export and Import Control in the Nuclear Energy and Energy Technology Division of the Bureau of Oceans and International Environmental and Scientific Affairs, Department of State, Washington, D.C. 20520.

Dated: November 5, 1979.

Thomas R. Pickering,

Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs.

Part A, General Provisions

Section 1. *Purpose and Scope of Unified Procedures.*—a. These procedures are established jointly by the Department of State, the Department of Energy, the Export-Import Bank to implement Executive Order 12114 (44 FR 1957), with respect to the actions defined in section 3.

b. These procedures apply to all Federal agencies.

c. These procedures have been agreed to by the Departments of State, Energy, Defense and Commerce and the Arms Control and Disarmament Agency, and the Export-Import Bank. The Council on Environmental Quality has been consulted concerning these procedures.

Section 2. *Definitions.*—For the purposes of these procedures: a. "Environment" means the natural and physical environment and excludes social, economic, and other environments; an action significantly affects the environment if it does significant harm to the environment even though on balance the agency believes the action to be beneficial to the environment;

b. "Environmental document" means any of the types of documents described in section 4;

c. "Federal action" means an action that is implemented, funded or approved directly by the United States Government. It does not include actions in which the United States participates in an advisory, information-gathering, representational, or diplomatic capacity but does not implement, fund or approve;

d. "Foreign nation" means any territory (land, water, and airspace) that is under the jurisdiction of a foreign government and any area under military occupation by the United States alone or jointly with any other foreign government. "Foreign government" in this context includes authorities, regardless of whether recognized by the United States, that exercise governmental power outside the United States;

e. "Global commons" means any territory (land, water and airspace) that is outside the territorial jurisdiction of any nation, and includes the oceans outside the territorial limits of any nation and Antarctica;

f. "Office of Export and Import Control" means the Office of Export and Import Control in the Nuclear Energy and Energy Technology Division of the Bureau of Oceans and International Environmental and Scientific Affairs, Department of State;

g. "Physical project" means

(1) Any nuclear reactor capable of producing more than 15 thermal megawatts,

(2) Any nuclear steam supply system for such a reactor,

(3) Any production facility as defined in section 50.2(a) of title 10 of the Code of Federal Regulations, or

(4) Any separate nuclear waste management facility;

h. "United States" means all States, territories, and possessions of the United States, and all waters and airspace subject to the territorial jurisdiction of the United States.

Section 3. *Actions Included.*—Officers of Federal agencies who have ultimate responsibility for authorizing and approving actions in one of the following categories shall take into consideration in making decisions concerning such actions a document described in section 4:

a. Major Federal actions which provide to a foreign nation a physical project and which significantly affect the environment of that or any other foreign nation;

b. Major Federal actions which provide to a foreign nation a physical project and which significantly affect the global commons.

Section 4. *Environmental Document Required.*—a. For actions described in section 3(a), either of the following types of environmental documents shall be prepared and taken into consideration in accordance with these procedures in making decisions concerning such actions:

(1) A bilateral or multilateral environmental study, relevant or related to the proposed action, prepared by the

United States and the nation or group of nations that is the proposed recipient of the export or by an international body or organization in which the United States is a member or participant (such as the International Atomic Energy Agency); or

(2) A concise review of the environmental issues involved, i.e., an environmental assessment, a summary environmental analysis, or other appropriate document.

b. For actions described in section 3(b), the following type of environmental document shall be taken into consideration in accordance with these procedures in making decisions concerning such actions: an environmental impact statement (including, as appropriate, generic, program and specific statements).

Section 5. *Exemptions.*—Notwithstanding section 3 or any other provision of these procedures, the following actions are exempt from these procedures:

a. Actions not having a significant effect on the environment outside the United States, as determined in accordance with these procedures;

b. Actions taken by the President;

c. Actions taken by or pursuant to the direction of the President or a Cabinet officer when the national security or interest is involved or when the action occurs in the course of an armed conflict;

d. Intelligence activities and arms transfer;

e. Export licenses or permits or export approvals (for the purposes of these procedures, "export approval" does not mean or include (i) direct loans to finance exports or (ii) the action of the Department of State of submitting to the Nuclear Regulatory Commission an Executive branch judgment under section 126a(1) of the Atomic Energy Act of 1954, as amended);

f. Votes and other actions in international conferences and organizations;

g. Disaster and emergency relief action;

h. Actions taken under sections 54, 55, 57, 64, 82, 123, 161t and 161v of the Atomic Energy Act of 1954, as amended, and sections 104, 402(a) and 404(a) of the Nuclear Non-Proliferation Act of 1978;

i. Actions taken under section 131 of the Atomic Energy Act of 1954, as amended, except those which provide to a foreign nation a physical project which would significantly affect the environment of a foreign nation;

j. Actions of the Executive branch relating to any export subject to licensing by the Nuclear Regulatory Commission under any authority other than section 103 or 104 of the Atomic Energy Act of 1954, as amended;

k. Approval of United States participation in international agreements for cooperation in nuclear energy research, development and demonstration which do not commit the United States to any specific projects or activities;

l. Approval of technical exchange arrangements for information, data or personnel with foreign nations or international organizations;

m. Approval of arrangements to assist other countries in identifying and analyzing their energy resources, needs and options; and

n. Any particular action for which the appropriate official of that agency determines that an exemption is necessary with respect to that agency to meet emergency circumstances, situations involving exceptional foreign policy and national security sensitivities, or other such special circumstances. In making such an exemption, the official shall, as soon as feasible, consult with the Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs and the Council on Environmental Quality.

PART B—ENVIRONMENTAL PROCEDURES

Section 6. *Initiating the Process.*—Unless not required pursuant to section 11 or 14(a), the Office of Export and Import Control shall promptly arrange for the preparation of an appropriate environmental document upon the earliest of any of the following:

a. Notice from the Export-Import Bank of an application for a preliminary commitment under the Bank's direct lending program for the financing of a physical project. However, if at the time the application is received, the Office of Export and Import Control and the Export-Import Bank consider that there is insufficient likelihood that the preliminary commitment will be converted into a final commitment, the Office shall only initiate preparation of the document (i) when the Office and the Bank determine there is sufficient likelihood of conversion, or (ii) when the Office determines preparation of the document should be initiated in order that it may be ready in time to be taken into account with respect to an anticipated action of an agency other than the Export-Import Bank of the kind specified in section 3, whichever is earlier. If no preliminary commitment has been issued and preparation of the document has not otherwise been initiated, the Office shall initiate preparation of the document upon notice from the Export-Import Bank of an application for a final commitment under the Bank's direct lending program for the financing of a physical project;

b. Receipt from the Nuclear Regulatory Commission of an export license application for the export of a physical project; or

c. Notice from any Federal agency of a proposed agency action involving funding or approval for which environmental review is required under section 3.

Section 7. *Determination of Whether the Action is Included.*—Each Federal agency shall determine in writing whether a proposed action by that agency would require environmental review because:

a. The action provides to a foreign nation a physical project and significantly affects the environment of that or any other foreign nation;

b. The action provides to a foreign nation a physical project and significantly effects the environment of the global commons; or

c. The action provides to a foreign nation a physical project and significantly effects the environment of the United States.

For purposes of making this determination, the following factors shall be taken into account as appropriate: the percentage that any financing or funding represents of the total cost of such project, the percentage that any such support represents of the total financing for the United States goods and services that are being purchased, the likelihood that the project will go forward whether or not the action is taken, and the degree of control and responsibility which the agency has over the planning and execution of the project. Any agency that makes such a determination shall notify the Office of Import and Export Control as promptly as possible. Where an action is determined to fall under paragraph a or b, the Office shall record whether the environmental effects are being or have been reviewed in accordance with section 8, 11 or 14 of these procedures. Where an action is determined to fall under paragraph c, the Office shall record whether these effects are being or have been reviewed in accordance with the National Environmental Policy Act.

Section 8. *Preparation of the Environmental Document.*—a. The Office of Import and Export Control shall be responsible for arranging for the preparation of an environmental document initiated pursuant to section 6.

It shall communicate, as appropriate, with concerned foreign governments and international organizations. Where Export-Import Bank financing is requested and a determination has been made by the Bank that such financing would constitute a major Federal action, the Bank shall, to the maximum extent feasible, assist in the preparation of the document by making available appropriate technical staff and by contributing to the cost of preparation. The Department of Energy shall, to the maximum extent feasible, assist in the preparation of the document by making available appropriate technical staff and by contributing to the cost of preparation. Where the appropriate environmental document is an environmental impact statement, responsibility for the preparation and processing of the document may be transferred from the Department of State to another agency by agreement of the concerned agencies.

b. An environmental document of the type described in section 4(a) shall concisely review the anticipated significant environmental effects of the physical project. In particular, it shall, to the extent to which the required information is available and as appropriate, include the following:

(1) A general description of the recipient country's overall energy program, including its current energy mix for power generation, projected power requirements and indigenous energy resources, if any;

(2) A description of the power level, type, purpose and location of the physical project;

(3) A description of any cooperative programs relating to regulatory or environmental matters between the recipient country and the United States, other countries or international organizations which relate to the physical project directly or indirectly;

(4) A discussion of the extent to which the recipient country has adopted a regulatory review mechanism or procedures that apply to the physical project;

(5) A discussion of the extent to which the recipient country has adopted environmental standards applicable to the physical project and their relationship to IAEA standards and recommended measures or to other internationally recognized standards and measures;

(6) Based on a summary review of the literature and any other technical information in the possession of the United States Government or otherwise readily available, in particular any environmental review that has been undertaken for the physical project—

(a) A discussion of the salient characteristics of the site (including any natural hazards) and an assessment of whether there are any special or unique considerations which could pose a significant threat to the environment;

(b) A discussion of significant radioactive, chemical or thermal effects on the environment that would normally be considered in United States environmental reviews; and

(c) A description of any plans for spent fuel disposition and any waste disposal plans;

(7) A discussion of whether the equipment to be exported from the United States is being or will be manufactured to quality assurance standards comparable to those used for a similar facility in the United States;

(8) A discussion of whether significant environmental effects in the recipient country of the kind normally considered in United States environmental reviews and which are identified under item (6) are being taken into account in the planning of the physical project; and

(9) A discussion of whether significant environmental effects on the environment of any foreign nation not participating or otherwise involved in the project with the United States and the recipient nation of the kind normally considered in United States environmental reviews and which are identified under item (6) are being taken into account in the planning of the physical project.

Section 9. *Completion of the Environmental Document.*—An environmental document prepared pursuant to these procedures shall be prepared and circulated no later than 80 days after its preparation is initiated pursuant to section 6: *Provided, however,* That the environmental document shall be prepared and circulated no later than 10 days prior to the time when any related Executive branch judgment must be completed under section 126a (1) of the Atomic Energy Act, as amended. Additional time may be authorized by the Deputy Assistant Secretary of State for Nuclear Energy and Energy Technology: *Provided,* That if the Export-Import Bank, the Department of Energy or another agency is involved, such additional time may be authorized only with the concurrence of the Bank, that Department or that agency. If additional time is authorized for consideration by the Executive branch of an application for a license for the export of a physical project in accordance with section 126 a (1) of the Atomic Energy Act of 1954, as amended, an appropriated period of additional time shall also be authorized for preparation and circulation of the environmental document relating to that physical project. Notwithstanding section 13, if time is extending pursuant to the previous sentence, the Export-Import Bank may make a decision on a final commitment, if such a decision is needed before the document is completed, taking into account the environmental documentation developed up to that time pursuant to these procedures.

Section 10. *Circulation of the Environmental Document.*—a. The Office of Import amd Export Control shall circulate the environmental document to the following offices:

(1) The Office of Nuclear Affairs, in the Office of International Affairs, Department of Energy;

(2) The Office of International Programs, Nuclear Regulatory Commission;

(3) The Engineering Division, Export-Import Bank;

(4) The Office of Environmental Affairs, Bureau of Oceans and International Environmental and Scientific Affairs, Department of State;

(5) Any agency that has provided notice to the Office of Import and Export Control pursuant to sections 6 and 7;

(6) The Office of International Activities, Environmental Protection Agency; and

(7) Any other agency involved in the proposed action or which has appropriate expertise.

b. These offices shall provide within 20 days of their receipt of the document any agency written views concerning the document to the Office of Export and Export Control and all agencies that have received the document under paragraph a: *Provided, however,* That such views shall be provided no later than the time when any related Executive branch judgment must be completed under section 126 a (1) of the Atomic Energy Act, as amended.

c. In addition to the requirements of paragraphs a and b, in the case of an environmental impact statement prepared pursuant to these procedures the Office of Export and Import Control shall make appropriate efforts to make the document available in draft form and to obtain views from the public and any other appropriate Federal agency.

Section 11. *Generic Documents.*—Generic documents of the types specified in section 4 may be prepared. If environmental issues involved in a particular action covered by these procedures are adequately addressed in such a document, that document shall satisfy all the requirements of these procedures.

Section 12. *Availability of the Environmental Document.*—a. The

Department of State shall, as appropriate, provide copies of an environmental document, as well as views related to it, to concerned nations or groups of nations.

b. An environmental document may be classified in whole or in part if classification is warrented under the criteria in Executive Order 12065. In this event, the Department of State shall, if possible, prepare an unclassified summary of any classified portions of the document.

Section 13. *Taking the Environmental Document into Account.*—Where any Federal agency has determined pursuant to section 7 that a proposed action by that agency requires environmental review, that agency shall, consistent with applicable law, take the environmental document prepared pursuant to these procedures and any related views into account in making its decision on that action. The Export-Import Bank may approve a preliminary commitment before receiving such document but shall not approve a final commitment without taking into account such document and related views.

Part C, Technical Provisions

Section 14. *Duplication of Resources.*—a. The Department of State shall not arrange for the preparation of an environmental document required by these procedures if an appropriate environmental document already exists that covers the proposed action. In any such case, the Department shall record this fact in its files.

b. When an environmental document is prepared in accordance with these procedures, it shall also address any related major Federal action for which an independent environmental review would otherwise be prepared by the agency contemplating such action pursuant to the procedures established by it to implement Executive Order 12114.

c. If a major Federal action having significant effect on the environment of the United States requires preparation of an environmental impact statement, and if the action also has significant effects upon the environment of a foreign nation or the global commons, the latter effects shall be addressed in accordance with these procedures.

Section 15. *Compliance with Executive Order 12114.*—The preparation and taking into account of an environmental document in accordance with these procedures shall constitute full compliance with Exective Order 12114 with respect to physical projects and any other export in connection with such projects.

Section 16. *Modifications.*—The content, timing and availability of documents may be modified by the Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs and the appropriate official of any other agency involved in the proposed action where necessary to:

a. Enable the Federal Government to decide and act promptly as and when required;

b. Avoid adverse impacts on foreign relations or infringement in fact or appearance of other nations' sovereign responsibilities; or

c. Ensure appropriate reflection of:

(1) Diplomatic factors;

(2) International commercial, competitive and export promotion factors;

(3) Needs for governmental or commercial confidentiality;

(4) National security considerations;

(5) Difficulties of obtaining information and agency ability to analyze meaningfully environmental effects of a proposed action; or

(6) The degree to which the agency is involved in or able to affect a decision to be made.

Section 17. *Right of Action.*—These procedures are solely for the purpose of establishing internal procedures for Federal agencies to consider significant effects of covered actions on the environment outside the United States, its territories and possessions, and nothing in these procedures shall be construed to create a cause of action.

Section 18. *Protection of Information.*—Nothing in these procedures shall affect the ability of any agency to protect classified or proprietary information pursuant to applicable law.

Section 19. *Pending Actions.*—a. These procedures do not apply to any Executive branch judgment or export financing for which the application was filed prior to the effective date of these procedures. Nevertheless, to the extent feasible and where this can be accomplished without undue delay, any applications for export licenses pending in the Executive branch shall be reviewed in a manner which accomplishes the objectives of these procedures.

b. Clearances obtained or matters resolved prior to the effective date of these procedures need not be reconsidered for the purpose of complying with these procedures.

c. Executive branch judgments pending in the Nuclear Regulatory Commission on the effective date of these procedures shall be processed in accordance with applicable law and regulations and shall not be returned to the Executive branch because of the entry into force of these procedures.

Section 20. *Consistency with Other Law.*—The provisions of sections 5 and 16 do not apply to actions described in section 3(b) unless permitted by law.

Section 21. *Effective Date.*—These procedures take effect on November 13, 1979.

Section 22. *Amendment.*—These procedures may be amended at any time subject to agreement and consultation of agencies as specified in section 1(c).

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POLICY AND PROCEDURES
For The
REVIEW OF FEDERAL ACTIONS IMPACTING THE ENVIRONMENT

U.S. Environmental Protection Agency
Office of External Affairs
Office of Federal Activities
Washington, D.C. 20460

EPA TRANSMITTAL

ADDRESSEE

CLASSIFICATION NO.: 1640 1984 Edition

APPROVAL DATE: October 3, 1984

POLICIES AND PROCEDURES FOR THE REVIEW OF FEDERAL ACTIONS IMPACTING THE ENVIRONMENT

1. PURPOSE. This Transmittal issues a new Policy and Procedures for the Review of Federal Actions Impacting the Environment.

2. EXPLANATION. This Manual establishes policies and procedures for carrying out the Environmental Protection Agency's responsibilities to review and comment on Federal actions affecting the quality of the environment. The Manual also contains policies and procedures for carrying out the Environmental Review Process. This Manual is supplemented by, and should be read in conjunction with the Office of Federal Activities Policies and Procedures Manual and the Environmental Review Process Data Management Manual.

3. SUPERSESSION. The Environmental Review Manual dated March 1, 1975.

4. FILING INSTRUCTIONS. Post receipt of Transmittal on Checklist in front of the Manual. Discard the Environmental Review Manual and file the attached.

Gary M. Katz, Director
Management and Organization Division

ORIGINATOR: Office of Federal Activities

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CHAPTER 1 - PURPOSE, POLICY, AND MANDATES

1. PURPOSE.

a. This Manual establishes policies and procedures for carrying out the Environmental Protection Agency's (EPA's) responsibilities to review and comment on Federal actions affecting the quality of the environment. EPA has general statutory authority under the National Environmental Policy Act of 1969 and the Council on Environmental Quality's implementing regulations, and has specific authority and responsibility under Section 309 of the Clean Air Act to conduct such reviews, comment in writing, and make those comments available to the public. These responsibilities have been combined into one process and are referred to throughout this Manual as the "Environmental Review Process."

b. This Manual contains EPA's policies and procedures for carrying out the Environmental Review Process, assigns specific responsibilities, and outlines mechanisms for resolving problems that arise in the Environmental Review Process. This Manual is supplemented by, and should be read in conjunction with, the following manuals, which are also prepared, distributed, and maintained by the Office of Federal Activities:

(1) Office of Federal Activities Policies and Procedures Manual. Contains current guidance and detailed information related to the Environmental Review Process; and

(2) Environmental Review Process Data Management Manual. Contains detailed guidance and reporting requirements for the national level computerized tracking system.

2. STATUTORY AUTHORITIES.

a. The National Environmental Policy Act of 1969 (NEPA), as amended, (42 U.S.C. 4321 et seq., Public Law 91-190, 83 Stat. 852), requires that all Federal agencies proposing legislation and other major actions significantly affecting the quality of the human environment consult with other agencies having jurisdiction by law or special expertise over such environmental considerations, and thereafter prepare a detailed statement of these environmental effects. The Council on Environmental Quality (CEQ) has published regulations and associated guidance to implement NEPA (40 CFR Parts 1500-1508).

b. Section 309 of the Clean Air Act, as amended, (42 U.S.C. 7609, Public Law 91-604 12(a), 84 Stat. 1709), requires the EPA to review and comment in writing on the environmental impact of any matter relating to the duties and responsibilities granted pursuant to the Act or other provisions of the authority of the Administrator, contained in any: (1) legislation proposed by a Federal department or agency; (2) newly authorized Federal projects for construction and any major Federal action, or actions, other than a project

for construction, to which Section 102(2)(C) of Public Law 91-190 applies; and (3) proposed regulations published by any department or agency of the Federal Government. Such written comments must be made public at the conclusion of any review. In the event such legislation, action, or regulation is determined to be unsatisfactory from the standpoint of public health, welfare, or environmental quality, the determination will be published and the matter referred to the CEQ.

c. Federal environmental laws require, in most circumstances, facilities of the Executive Branch of the Federal Government to comply with Federal, State, and local pollution control requirements promulgated pursuant to, or effective under, those statutes. The review of proposed Federal projects for compliance with these national environmental standards is the responsibility of the EPA through the Environmental Review Process and the Federal Facilities Compliance Program. In addition to these general statutory authorities, the reviews required under Section 1424(e) of the Safe Drinking Water Act (42 U.S.C. 300 h-3, Public Law 93-523, 88 Stat. 1678) and Section 404(r) of the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. 1344(r), Public Law 92-500, Public Law 95-217, 86 Stat. 884, 91 Stat 1600) are integrated into the Environmental Review Process.

3. POLICY.

a. The objective of the Environmental Review Process is to foster the goals of the NEPA process by ensuring that the EPA's environmental expertise, as expressed in its comments on Federal actions and other interagency liaison activity, is considered by agency decisionmakers. It is EPA's policy to carry out the Environmental Review Process in conjunction with EPA's other authorities to:

(1) Participate in interagency coordination early in the planning process to identify significant environmental issues that should be addressed in completed documents;

(2) Conduct follow-up coordination on actions where EPA has identified significant environmental impacts to ensure a full understanding of the issues and to ensure implementation of appropriate corrective actions; and

(3) Identify environmentally unsatisfactory proposals and consult with other agencies, including the CEQ, to achieve timely resolution of the major issues and problems.

b. In implementing this policy, EPA will assist Federal agencies in:

(1) Achieving the goals set forth in the NEPA;

(2) Meeting the objectives and complying with the requirements of the laws and regulations administered by the EPA; and

(3) Developing concise, well-reasoned decision documents which identify project impacts, a range of project alternatives, and mitigation measures that will avoid or minimize adverse effects on the environment.

CHAPTER 2 - MANAGEMENT OF THE ENVIRONMENTAL REVIEW PROCESS

1. GENERAL RESPONSIBILITIES. The EPA Administrator has delegated responsibility for carrying out the Environmental Review Process to the Assistant Administrator for External Affairs and the Regional Administrators but has retained the responsibility to refer matters to the CEQ. The Assistant Administrator, Office of External Affairs, has in turn delegated program management to the Director, Office of Federal Activities, but has retained the responsibility for concurring on proposed comment letters that have the potential for referral to the CEQ.

2. OFFICE OF FEDERAL ACTIVITIES. The Office of Federal Activities (OFA) within the Office of External Affairs (OEA) is the program manager for the Environmental Review Process and for the overall coordination and policy development for activities associated with this process. To carry out these responsibilities, the OFA will maintain management support functions consisting of Federal Agency Liaison staff assigned to coordinate with the Headquarters offices of all Federal agencies and a Management Information Unit. The Director, Federal Agency Liaison Division, working through the Director, OFA, has overall policy development and management oversight responsibility for the Environmental Review Process.

a. Federal Agency Liaisons. Each Federal Agency Liaison (FAL), working through their Division Director and other appropriate elements within the OFA, has the following responsibilities:

(1) Conduct Headquarters-level liaison with other Federal agencies to identify those actions that should be reviewed and to provide information on how the EPA can most effectively review other agencies' proposed actions pursuant to the Environmental Review Process;

(2) Provide management oversight of regional review actions carried out under the requirements of this Manual, and provide policy guidance on the Environmental Review Process to Headquarters program offices and regional EIS reviewers;

(3) Ensure appropriate Headquarters involvement and support for actions that are elevated under these procedures; and

(4) Coordinate the EPA review of proposed regulations, national level Environmental Impact Statements (EIS's); and other national level activities and other national level actions.

b. Management Information Unit.

(1) The Management Information Unit (MIU) is responsible for the operation of a centralized data management and reporting system for the Environmental Review Process, and for the public availability of comments pursuant to Section 309 of the Clean Air Act. The procedures and requirements for this centralized data system are described in the Environmental Review

Process Data Management Manual. The MIU is also responsible for the official filing of all EIS's in accordance with 40 CFR Section 1506.9.

(2) The MIU is responsible for preparing the following reports to inform EPA officials and the public of EIS's and other Federal actions received by the EPA for review and comment.

(a) COMDATE. This weekly computerized report contains a list of all EIS's filed, pursuant to 40 CFR Section 1506.9, during the previous week. COMDATE lists, in part, the EIS title, official filing date, EPA control numbers, location, Federal Register notice date (40 CFR 1506.10(a)), date comments are due to the lead agency, and regional assignment. Other relevant information is also noted such as overall extensions of time granted by lead agencies and EPA ratings of previously filed draft EIS's.

(b) CEQ Notice of EIS Availability. A Notice of Availability is published in the Federal Register each Friday for EIS's filed during the previous week, pursuant to 40 CFR Section 1506.10(a). The minimum periods for review of the EIS's are calculated from the Federal Register date of this notice.

(c) Notice of Availability of EPA Comments. A notice will be published weekly announcing the availability of EPA comments on EISs, regulations, and any other action for which an unsatisfactory determination has been made. The notice will include, in part, the title, a summary of comments, and the rating (if applicable) of each review completed.

3. REGIONAL OFFICE. Each EPA regional office is responsible for carrying out the Environmental Review Process in accordance with the policies and procedures of this Manual for proposed Federal actions affecting its region. Each EPA regional office will designate a regional environmental review coordinator who has overall management responsibility for the Environmental Review Process in that region. It is the responsibility of the regional environmental review coordinator to:

a. Ensure that the region is maintaining effective liaison with other Federal agencies at the regional level;

b. Carry out lead responsibilities for the review of proposed EIS's and other Federal actions assigned to the coordinator's region or other actions for which it has lead responsibility (see paragraph 6 of this chapter); and

c. Ensure that the region is maintaining the official agency files and is properly tracking correspondence generated under the regional Environmental Review Process.

4. PROGRAM OFFICES. EPA program offices are responsible for providing technical assistance and policy guidance on review actions directly related to their areas of responsibility. When acting as principal or associate reviewer

in accordance with paragraph 5 of this chapter, program offices will follow the policies and procedures set forth in this Manual.

5. SPECIFIC REVIEW MANAGEMENT RESPONSIBILITIES.

a. Headquarters and Regional Environmental Review Coordinators. The term Environmental Review Coordinator (ERC) is used in this Manual to mean either a regional environmental review coordinator or the OFA Division Director managing FAL responsibilities for a particular action agency. It is the ERC's responsibility to manage the environmental review of actions to ensure EPA compliance with the procedures in this Manual and to:

(1) Ensure the timely receipt of all assigned EIS's listed in COMDATE, and ensure completion of MIU reporting requirements;

(2) Designate a principal reviewer for each assigned action;

(3) Coordinate determination of the level of participation in EIS scoping efforts and manage participation efforts;

(4) Coordinate determination of EPA's involvement as a cooperating agency under Section 1501.6 of the CEQ regulations;

(5) Determine the case-by-case need for reviewing the adequacy of the contents of draft EIS's;

(6) Determine the case-by-case need for preparation of comments on final EIS's;

(7) Determine the appropriate rating to be assigned to each draft EIS in the comment letter;

(8) Determine the need for preparation of comments on non-EIS actions;

(9) Ensure timely distribution and public availability of comments; and

(10) Initiate and manage agency follow-up efforts on comment letters identifying significant problem areas.

b. Principal Reviewer. The principal reviewer (PR) is a person designated by the ERC to coordinate the review of the action and to prepare the EPA comment letter on the proposed Federal action. The PR will be responsible for ensuring that the views of other EPA offices are adequately represented in the comment letter, and that the comment letter is consistent with agency policy and reflects all applicable EPA environmental responsibilities. In general,

the PR for Headquarters lead reviews will be the FAL assigned to the lead agency. The PR will have the responsibility to:

(1) Select associate reviewers (AR's) ensuring that all appropriate regional and Headquarters EPA offices are asked to participate;

(2) Set due dates for AR comments that will ensure adequate time for review by the signing official;

(3) Coordinate with AR's to ensure timely receipt of comments and timely resolution of disagreements or inconsistencies between reviewers;

(4) Review and assure the validity of all comments included in the final EPA response;

(5) Resolve and record the disposition of any disagreements with or between AR comments in accordance with subparagraph d, below;

(6) Ensure consistency of EPA comments with any previous comments on the action;

(7) Recommend the most appropriate rating of the environmental impacts of the proposal and/or the adequacy of the EIS, and include the rating in all draft EIS comment letters; and

(8) Ensure the distribution of copies of the signed comment letter to all AR's and other appropriate parties.

c. Associate Reviewer. The associate reviewer (AR) is a person designated by the PR to provide technical and policy advice in specific review areas and to provide the views of the office in which the AR is located. AR's will have the responsibility to:

(1) Review assigned actions within their areas of responsibility taking into account the policies and procedures of this Manual;

(2) Submit comments to the PR on actions in a timely manner;

(3) Obtain the appropriate level of concurrence on comments submitted;

(4) If significant issues are identified, assist the PR in determining the most appropriate rating for the proposed action; and

(5) Upon the request of the PR, and within the limits of available resources, provide liaison with, and technical assistance to, the agency that initiated the EIS or other Federal action.

d. Consolidation of Comments. The PR will consider all AR comments during preparation of the EPA comment letter. If the PR disagrees with substantive AR comments, the PR will attempt to resolve the differences directly with the

AR. If this is not possible, the ERC will be informed and will coordinate resolution of the issue. On comment letters where substantive changes are made to comments generated by an AR, the PR will obtain AR concurrence on the final letter. If major policy issues are involved, the ERC should be informed and policy level concurrence by the AR office should be obtained. All AR comments, with applicable PR notations on disposition of the specific issue, will be retained in the official project file.

6. ROUTING AND LEAD RESPONSIBILITY OF EIS'S AND OTHER FEDERAL ACTIONS.

a. Distribution of EIS's should be accomplished by lead agencies on or before the EIS filing date. To ensure that all EIS's are properly distributed, the ERC will check the weekly COMDATE report to make sure that all assigned EIS's have been received. If the ERC has not received an EIS identified in COMDATE, the ERC will inform the MIU immediately and work with the MIU to obtain the EIS. If appropriate, a request for a time extension due to lack of availability of the EIS will be coordinated by the MIU at that time. The following table represents the normal routing and lead responsibility assignment of review actions.

Action	Directed to
Legislation (not accompanied by EIS)	Office of Legislative Analysis
Policy statements, regulations, procedures, and legislation accompanied by an EIS	Office of Federal Activities
Actions that embody a high degree of national controversy or significance, or pioneer Agency policy	Office of Federal Activities
All other actions	Appropriate regional office

b. In general, a regional office will have the lead responsibility for reviewing all EIS's and other Federal actions it receives. Specific exceptions occur where:

(1) The EIS or other Federal action pertains to an action that is to take place in another region. In such cases, that regional office will have the lead, the MIU will be informed immediately, and the EIS will be forwarded to the lead region.

(2) The EIS pertains to more than one region. In this case, the affected regions should refer to COMDATE to determine which is the lead region and which is an AR. If there is a disagreement with the COMDATE assignments, the designated lead region will inform the MIU.

(3) The EIS or other Federal action pertains primarily to national EPA policy, regulations, or procedures, or to an action which does not have a

geographical focus (e.g., overlapping several regions), or to an action concerning areas in which the regional office does not have adequate expertise. If the ERC suspects this to be the case, the ERC will contact the appropriate FAL to determine lead responsibility. Unless otherwise agreed upon, such cases will be forwarded immediately to the MIU for reassignment of the action.

c. A regional or Headquarters office may at any time request that a particular EIS or other Federal action be evaluated by the OFA to determine lead responsibility.

CHAPTER 3 - PRE-EIS REVIEW ACTIVITIES

1. POLICY. It is EPA's policy to participate early in the NEPA compliance efforts of other Federal agencies to the fullest extent practicable in order to identify EPA matters of concern with proposed agency actions and to assist in resolving these concerns at the earliest possible stage of project development. The ERC will make a concerted effort to resolve project concerns through early coordination, where possible, rather than rely on submission of critical comments on completed documents.

2. GENERAL LIAISON.

a. The regional environmental review coordinator and the FAL's will establish and maintain contact at the appropriate levels of other agencies in order to foster an effective working relationship between agencies, to understand the agencies' programs and policies, and to be kept informed of projects of interest to the EPA.

b. To the fullest extent practicable, the ERC will assist the action agencies in:

(1) Early identification of potential project impacts and the need to prepare assessments or EIS's;

(2) Identification of appropriate environmental assessment techniques and methodologies; and

(3) Incorporation of all reasonable alternatives and impact mitigation measures in the planning and development of projects.

3. EPA'S PARTICIPATION IN SCOPING.

a. General. Scoping is the formal early coordination process required by CEQ's 1979 Regulations (40 CFR 1501.7) and is intended to ensure that problems are identified early and are properly studied, that issues of little significance do not consume time and effort, that the draft EIS is thorough and balanced, and that delays occasioned by an inadequate draft EIS are avoided. To help achieve these objectives, EPA will participate in scoping processes to the fullest extent practicable, emphasizing attendance at scoping meetings.

b. Responding to Scoping Requests.

(1) The ERC will review and respond by letter to all scoping requests specifically made to the EPA. Although Federal Register Notices of Intent to prepare an EIS are not considered specific, the ERC is responsible for being aware of all relevant scoping requests and for participating in those of special interest to the EPA. Responses to these non-EPA specific scoping requests may be made by telephone, but a record of the communication must be kept in the official project file.

(2) Scoping letters can be either a form letter of acknowledgment with a list of generic concerns (related to project type or project area), or a letter with detailed action-specific comments. A generic scoping letter or telephone response must define EPA's anticipated level of participation in the scoping process and include at least the following information:

(a) For the general type of project being proposed:

1 A list of all EPA permits that might be required;

2 Significant environmental issues that should be emphasized in preparation of the EIS; and

3 References to publications, including guidelines and current research, that would be useful in analyzing the environmental impacts of various alternatives.

(b) A statement regarding EPA's intention to carry out its independent environmental review responsibilities under Section 309 of the Clean Air Act; and

(c) The name, title, and telephone number of the appropriate working-level contact in the EPA.

(3) The level of EPA participation in scoping processes will be determined by the ERC on a case-by-case basis, taking into account the following factors:

(a) EPA's statutory responsibility;

(b) Severity of potential environmental impacts;

(c) Priority concerns identified in the Administrator's Agency Operating Guidance; and

(d) Available staff and travel resources.

c. Input to the Scoping Process. For those scoping requests where the ERC determines that more substantive EPA participation is warranted, the generic information listed in subparagraph 3b(2) should be supplemented with further detailed guidance to the lead agency. Such guidance will, to the extent possible, include:

(1) Specific environmental issues that should be analyzed;

(2) Specific information or data related to the area of interest;

(3) Specific assessment techniques and methodologies that EPA program offices use or have approved for use;

(4) Reasonable alternatives to the proposed action that may avoid potential adverse impacts, including suggestions for an environmentally preferred alternative; and

(5) Mitigation measures that should be considered to reduce or substantially eliminate adverse environmental impacts.

4. EPA AS A COOPERATING AGENCY.

a. General. Under 40 CFR 1501.6, the lead agency may request any other Federal agency to serve as a cooperating agency if it has jurisdiction or special expertise (statutory responsibility, agency mission, or related program experience) regarding any environmental issue that should be addressed in the statement. EPA may also request that the lead agency designate it as a cooperating agency. The ERC is responsible for determining whether the EPA will become a cooperating agency. The ERC is encouraged to accept cooperating agency status as often as possible, taking into account the criteria in subparagraph 3b(3).

b. Responding to Requests To Be a Cooperating Agency.

(1) If EPA determines in response to a formal request or makes an independent request to be a cooperating agency, the ERC must inform the lead agency of this decision in writing. The response must clearly state that every effort will be made to raise and resolve issues during scoping and EIS preparation, but that EPA has independent obligations under Section 309 of the Clean Air Act to review and comment on every draft EIS. EPA's response to a request to become a cooperating agency should clearly outline EPA's role in the preparation of the EIS. EPA's participation may range from participation in the scoping process and reviewing the scope of work, any preliminary drafts, or technical documents to assuming responsibility for developing information, preparing environmental analyses, and actually drafting portions of the EIS.

(2) If the ERC determines that resource limitations preclude any involvement in the preparation of another agency's EIS, or preclude the degree of involvement requested by the lead agency, it must inform the lead agency in writing (40 CFR 1501.6(c)). The letter should clearly state that EPA's status as a cooperating agency does not affect its independent responsibilities under Section 309 of the Clean Air Act to review and comment on other agencies' EIS's. A copy of this reply will be submitted to the CEQ.

c. Providing Guidance as a Cooperating Agency. Information and/or guidance should be given to the lead agency in those areas where the EPA has special expertise as related to EPA's duties and responsibilities and in those subject areas described in subparagraph 3c. Specific guidance will be given in those areas where the EPA intends to exercise regulatory responsibility.

5. EPA AS LEAD AGENCY.

a. Determining Lead Agency. When, in accordance with 40 CFR Part 6, EPA has an action which is subject to 102(2)(C) of NEPA and the action involves another Federal agency, the ERC and the other Federal agency will determine the lead agency status in accordance with the guidance contained in 40 CFR 1501.5(c), taking into account any relevant Memorandum of Understanding which EPA has executed with the Federal agency in question. Selection of the lead agency should be made at the earliest possible time. If the EPA is the lead agency, EPA will not review the EIS under the Environmental Review Process.

6. REPORTING AND CONTROL. All responses related to scoping, cooperating, or lead agency issues, together with follow-up correspondence must be made a part of the official project file. Copies of letters in which EPA declines an agency's request to become a cooperating agency must be sent to the CEQ.

CHAPTER 4 - REVIEW OF DRAFT ENVIRONMENTAL IMPACT STATEMENTS

1. POLICY. It is EPA's policy to review and comment in writing on all draft EIS's officially filed with the EPA, to provide a rating of the draft EIS which summarizes EPA's level of concern, and to meet with the lead agency to resolve significant issues. The EPA review will be primarily concerned with identifying and recommending corrective action for the significant environmental impacts associated with the proposal. Review of the adequacy of the information and analysis contained in the draft EIS's will be done as needed to support this objective.

2. DRAFT EIS REVIEW MANAGEMENT. Except as noted below, the review management procedures and responsibilities given in chapter 2 apply to the review of draft EIS's.

a. Establishing Deadlines and Time Extensions.

(1) Deadlines. Unless a different deadline is officially established for receiving comments, EPA will provide comments on a draft EIS to the lead agency within 45 days from the start of the official review period. The official EIS due dates are listed in COMDATE. The PR will set internal deadlines to ensure EPA's comments are received within the official comment period.

(2) Time Extensions. Requests for extensions of review periods on draft EIS's should be kept to a minimum. In general, review period extensions on draft EIS's should not be requested unless important environmental issues are involved, and detailed substantive comments are being prepared. Time extensions should normally not exceed 15 days.

b. Categorization and Agency Notification System for Draft EIS's.

(1) After completing the review of a draft EIS, the PR will categorize or "rate" the EIS according to the alpha numeric system described below and in paragraph 4 of this chapter, and include the designated rating in the comment letter. In general, the rating will be based on the lead agency's preferred alternative. If, however, a preferred alternative is not identified, or if the preferred alternative has significant environmental problems that could be avoided by selection of another alternative, or if there is reason to believe that the preferred alternative may be changed at a later stage, the reviewer should rate individual alternatives. The purpose of the rating system is to synthesize the level of EPA's overall concern with the proposal and to define the associated follow-up that will be conducted with the lead agency.

(2) The alphabetical categories LO, EC, EO, and EU signify EPA's evaluation of the environmental impacts of the proposal. Numerical categories 1, 2, and 3 signify an evaluation of the adequacy of the draft EIS. A summary of the rating definitions and the associated follow-up action is given in

figure 4-1 at the end of this chapter. This figure should be attached to draft EIS comment letters when the lead agency may be unfamiliar with the EPA rating system. To the maximum extent possible, assignments of the alphabetical rating will be based on the overall environmental impact of the proposed project or action, including those project impacts that are not adequately addressed in the draft EIS. When there is insufficient information in the draft EIS, the determination of potential project impact may be based on other documents, information, or on-site surveys. The comment letter should clearly identify the source of information used by the EPA in evaluating the proposal.

(3) The rating of a draft EIS will consist of one of the category combinations shown in the table below. As noted in the table and described in chapter 5, the ERC must follow up with the lead agency in those cases where significant problem areas are identified.

Category	Lead Agency Pre-Notification	Follow-up on Draft EIS Comment Letter
LO	None	None
EC-1, EC-2	None	Phone Call
EO-1, EO-2	Phone call	Meeting
EO-3, EU-1, EU-2, EU-3, 3	Meeting	Meeting

(4) For categories EO, EU, or 3, the ERC will ensure that the lead agency is notified of the general EPA concerns prior to receipt of EPA's comment letter. For categories EU and 3, the ERC must attempt to meet with the lead agency to discuss EPA's concerns prior to submission of the comment letter to the lead agency. The purposes of such a meeting are to describe the specific EPA concerns and discuss ways to resolve those concerns, to ensure that the EPA review has correctly interpreted the proposal and supporting information, and to become aware of any ongoing lead agency actions that might resolve the EPA concerns. To assure the objectivity and independence of the EPA review responsibility, the EPA comment letter itself and the assigned rating are not subject to negotiation and should not be changed on the basis of the meeting unless errors are discovered in EPA's understanding of the issues. However, the reviewer may add in the letter an acknowledgment of any relevant new lead agency activities that the reviewer believes could resolve the EPA concerns.

3. SCOPE OF COMMENTS ON THE DRAFT EIS.

a. General. In general, EPA's comments will focus on the proposal but will, if necessary, review the complete range of alternatives, identifying those that are environmentally unacceptable to EPA and identifying EPA's preferred alternative. EPA's comment letter on the draft EIS will reflect all of EPA's environmental responsibilities that may bear on the action. The review will include EPA's assessment of the expected environmental impacts of the action and, if substantive impacts are identified, an evaluation of the adequacy of the supporting information presented in the EIS with suggestions

for additional information that is needed. The EPA comment letter on draft EIS's will:

(1) Explicitly reference EPA's review responsibilities under NEPA/ Section 309;

(2) Acknowledge positive lead agency responses to EPA scoping suggestions or early coordination efforts;

(3) Provide a clear and concise description of EPA's substantive concerns and recommendations with supporting details given in attachments;

(4) Include a rating of the proposal and, if appropriate, the adequacy of the EIS in accordance with the criteria established in paragraphs 2 and 4 of this chapter; and

(5) Give the name and phone number of an appropriate EPA contact person.

b. Mitigation (40 CFR 1508.20). EPA's comments should include measures to avoid or minimize damage to the environment, or to protect, restore, and enhance the environment. Suggestions for mitigation should be oriented towards selection of mitigation measures that are technically feasible, of long-term effectiveness, and have a high likelihood of being implemented.

c. Statutory Authorities. Special efforts should be made to identify project impacts that may lead to possible violation of national environmental standards or that might preclude or bias future issuance of EPA related environmental permits. EPA comments regarding potential violations of standards must be clearly stated in the letter, and an offer should be made to work with the proposing agency to develop appropriate measures to reduce impacts.

d. Alternatives. If significant impacts are associated with the proposal and they cannot be adequately mitigated, EPA's comments should suggest an environmentally preferable alternative, including if necessary, a new alternative. The suggested alternatives should be both "reasonable" and "feasible." In this context, such an alternative is one that is practical in the technical, economic, and social sense, even if the alternative is outside the jurisdiction of the lead agency.

e. Purpose and Need. If a detailed review of alternatives is required, the reviewer may have to address the purpose of and need for the proposed action in order to determine to what degree an alternative would meet project objectives. In these cases, the reviewer may comment on the technical adequacy and accuracy of the EIS's methods for estimating the need for the proposed action in cases where this affects the definition of reasonable and feasible alternatives. Within the context of reviewing purpose and need, the EPA may also comment on the economic justification of the project, and the

relationship between the lead agency's economic analysis and any unquantifie environmental impacts, values, and amenities. The comments may also address the technical validity and adequacy of the supporting data for the EIS's economic analyses.

f. Projects Subject to Section 404(r) of the Clean Water Act. The Section 404 Coordinator will serve as an associate reviewer for those projects for which an agency is seeking an exemption under Section 404(r), and shall concur with the EPA comment letter. Section 404(r) provides that discharges of dredged or fill material which are part of Federal construction projects specifically authorized by Congress are not subject to regulation under Sections 301, 402, or 404 of the Clean Water Act if the information on the effects of such discharge including consideration of the Section 404(b)(1) Guidelines, is included in the EIS for the project, and the EIS has been submitted to Congress before the discharge occurs and before the authorization for the project occurs. In accordance with the CEQ's guidance of November 17, 1980, EPA's comments on the EIS will serve as the vehicle for informing the agency of EPA's determination whether the proposed Section 404(r) exemption will be in compliance with the requirements of the Section 404(b)(1) Guidelines. The comments should reference the CEQ Memorandum for Heads of Agencies, which provides guidance on applying Section 404(r) and should include EPA's determination regarding:

(1) Whether the EIS contains requisite information on the proposed discharges and other effects; and

(2) Whether the proposal is consistent with Section 404(b)(1) Guidelines.

g. Projects Potentially Affecting a Designated "Sole Source" Aquifer Subject to Section 1424(e) of the Safe Drinking Water Act.

(1) The regional office responsible for implementing the Safe Drinking Water Act (SDWA) will act as an AR on any EIS for a project potentially affecting a "sole source" aquifer designated under Section 1424(e) of the SDWA. EPA's comments on the draft EIS will serve as EPA's preliminary comments for the groundwater impact evaluation required under Section 1424(e), which stipulates that no commitment to a project of Federal financial assistance may be made, if the Administrator determines that a project has the potential to contaminate a designated aquifer, so as to create a significant hazard to public health. (Rules proposed to implement 1424(e) are found at 42 FR 51620, September 29, 1977.)

(2) If it is determined that a project may contaminate the aquifer through the recharge zone so as to create a significant hazard to public health, the ERC will, in consultation with the drinking water staff, prepare a briefing memorandum and comment letter for the Regional Administrator. Copies of the briefing memorandum and the proposed comment letter shall first be sent to the appropriate FAL, who will coordinate concurrence by the appropriate Headquarters offices. The comment letter should cite EPA's authorities under Section 309/

NEPA and Section 1424(e) of SDWA, and state that the project is a candidate for both referral to the CEQ and a Section 1424(e) determination.

4. RATING SYSTEM CRITERIA.

a. Rating the Environmental Impact of the Action.

(1) LO (Lack of Objections). The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

(2) EC (Environmental Concerns). The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

(3) EO (Environmental Objections). The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental objections can include situations:

(a) Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard;

(b) Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise;

(c) Where there is a violation of an EPA policy declaration;

(d) Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or

(e) Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.

(4) EU (Environmentally Unsatisfactory). The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of

environmentally objectionable impacts as defined above and one or more of the following conditions:

(a) The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis;

(b) There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention; or

(c) The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.

b. Adequacy of the Impact Statement.

(1) "1" (Adequate). The draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

(2) "2" (Insufficient Information). The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

(3) "3" (Inadequate). The draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS.

5. APPROVING AND DISTRIBUTING COMMENTS ON DRAFT EIS'S.

a. Categories LO, EC, EO, 1, or 2. For draft EIS's rated LO, EC, EO, 1, or 2 the comments will be signed by the appropriate regional or Headquarters official and the ERC will distribute EPA's comments in accordance with subparagraph 5c of this chapter.

b. Categories EU or 3. For draft EIS's where the ERC is proposing a rating of EU or 3, the EPA comment letter must be cleared by the Assistant Administrator for External Affairs prior to release. If the review is a regional action, the draft letter will be submitted through the OFA for clearance. The draft comment letter must be submitted at least 5 working days prior to the due date and the proposed rating must have been approved by the regional signing official. In every case where a draft statement has been rated EU or 3, the Assistant Administrator, OEA, will send a copy of the EPA comment letter to the CEQ. In addition, where the EPA has commented to a regional office of the originating agency, appropriate officials within the headquarters office of the originating agency will also be informed. If a communications strategy has been developed for the action, the release of information should follow that strategy.

c. Checklist for Distribution of Agency Comments on the Draft EIS.*

Addressee	Number of Copies
Agency submitting statement	Original
CEQ (if EU or 3) with transmittal letter	1 copy
Office of Public Affairs (if comments are rated EU or 3)	1 copy
EPA offices which served as associate reviewers	1 copy
Office of Federal Activities Attn: MIU	2 copies

6. REPORTING AND CONTROL. All draft EIS's under review, all time extensions, and all comment letters on draft EIS's will be entered in the MIU data management system. All EPA comment letters and associated correspondence on draft EIS's will be retained in the official project file.

*To the maximum extent practicable, the comment letter should not be distributed to parties outside of the EPA until after the original has been received by the lead agency.

SUMMARY OF RATING DEFINITIONS
AND FOLLOW-UP ACTION*

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alterna tive or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably avail able to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment.

Figure 4-1

CHAPTER 5 - POST-DRAFT EIS FOLLOW-UP

1. POLICY. It is EPA's policy to conduct follow-up discussions with the lead agency to ensure that EPA's concerns raised at the draft EIS stage are fully understood and considered by the lead agency. To the extent resources allow, follow-up efforts should exceed the minimum required by this chapter and paragraph 2b(3) of chapter 4.

2. POST-DRAFT CONSULTATIONS. In cases where a draft EIS is rated EO, EU, or 3, the ERC must initiate consultation with the lead agency. Agency consultation will continue at increasing levels of management, through the EPA Assistant Administrator level, as appropriate, until EPA's concerns are resolved or further negotiations are pointless. For those actions where the region is the PR, the ERC will work through the appropriate FAL to coordinate the consultation efforts at the regional and Headquarters levels. The ERC and/or FAL should be prepared to review the project in the field, to develop additional information, and/or to work with the agency to improve the proposed action and the supporting final EIS. When substantive consultation meetings are held, the ERC must document the outcome and, as appropriate, respond in writing to the lead agency to acknowledge any points of agreement, and to restate any unresolved issues.

3. STATUS REPORTS.

a. After consulting or meeting with the lead agency concerning draft EIS's rated EU or 3, the ERC will prepare a status memorandum for the Assistant Administrator, OEA, through the Director, OFA, and, if it is a regional action, for the Regional Administrator. This memorandum should summarize: (1) the progress of the consultations; (2) the remaining unresolved issues; (3) the positions of other affected Federal agencies; and (4) a prognosis for the resolution of remaining issues.

b. The ERC will periodically assess the lead agency's progress in responding to EPA's concerns on draft EIS's rated EU or 3. It is the ERC's responsibility to anticipate, and make early preparation for, those final EIS's which will be so unresponsive to EPA's concerns that a recommendation for referral of the final EIS to the CEQ will be required.

4. REPORTING AND CONTROL. All correspondence regarding post-draft consultations and agreements must be retained in the official project file. For all draft EIS's which have been rated EU or 3, the official file must also contain all material that may be needed for a formal referral package.

CHAPTER 6 - REVIEW OF FINAL EIS'S

1. POLICY. It is EPA's policy to conduct detailed reviews of those final EIS's which had significant issues raised by the EPA at the draft EIS stage. Each final EIS will be checked to determine whether the statement adequately resolves the problems identified in the EPA review of the draft EIS, or whether there has been a substantive change in the proposal. A detailed review and submission of comments on the final EIS will be done for those actions rated EO, EU, or 3 at the draft stage. A detailed review on other final EIS's may be done if the ERC determines that conditions warrant it.

2. FINAL EIS REVIEW MANAGEMENT. Except as noted below, the review management procedures and responsibilities given in chapter 2 apply to the review of final EIS's.

a. Designating Lead Responsibility and Principal and Associate Reviewers. Lead responsibility for the final EIS will be the same as for the draft EIS unless other arrangements have been made with the MIU. If possible, the same principal and associate reviewers who dealt with the draft EIS will be assigned to review the final EIS.

b. Establishing Deadlines and Time Extensions.

(1) Deadlines. Unless a different deadline is officially established for receiving comments, EPA will respond to a final EIS within 30 days from the start of the official review period. The official EIS due dates are listed in COMDATE. The PR will set internal deadlines to ensure EPA's comments are received within the official comment period. All final EIS's which are candidates for referral to the CEQ, will be given priority review in accordance with the internal deadlines specified in chapter 9.

(2) Time Extensions. Requests for extensions of review periods on final EIS's should be kept to a minimum. In general, review period extensions on final EIS's should not be requested unless important environmental issues are involved and detailed substantive comments are being prepared. Time extensions should normally not exceed 15 days. Time extensions for a referral deadline will be requested in accordance with the procedures in chapter 9.

c. Categorizing Final EIS's. The alpha numeric rating system used for draft EIS's will be applied to final EIS's for internal management purposes only (see chapter 4, paragraph 4). The EPA rating is not to be included in comment letters on final EIS's. Instead, the comments will rely wholly on narrative explanations to describe the environmental impact of the proposed action or the responsiveness or unresponsiveness of the EIS. The PR will include the assigned rating when entering the action into the MIU data management system.

3. SCOPE OF COMMENTS ON FINAL EIS'S.

a. General.

(1) Except in unusual circumstances, the review of final EIS's will be directed to the major unresolved issues, focusing on the impacts of the project rather than on the adequacy of the statement. Except in unusual circumstances, the scope of review will be limited to issues raised in EPA's comments on the draft EIS that have not been resolved in the final EIS, and any new, potentially significant impacts that have been identified as a result of information made available after publication of the draft EIS.

(2) Within 5 days after the start of the review period for the final EIS, the PR will make a preliminary determination as to whether the action meets the criteria for "environmentally unsatisfactory" as set forth in chapter 4, paragraph 4 of this Manual. If the action is determined to be environmentally unsatisfactory, the procedures set forth in chapter 9 of this Manual will be followed.

(3) For final EIS's which had drafts categorized as LO, the PR may decide that no formal comments on the final EIS will be submitted to the lead agency. Written comments will be prepared in other cases and when the agency has made substantive modifications in the proposed action in comparison to the draft EIS. In addition, written comments will be prepared for final EIS's that involve Section 404(r) or Section 1424(e) issues.

(4) In those cases involving significant mitigation requirements or where the proposed agency action is not clear, EPA's comments on the final EIS will also include a request for a copy of the Record of Decision.

b. Mitigation Measures. If a final EIS identifies for the first time, or modifies the agency's preferred alternative, EPA's review should include consideration of any additional specific mitigation measures necessary to reduce any adverse impacts of that alternative. When mitigation measures are recommended, the comment letter should suggest that the lead agency include these measures in their Record of Decision as specific conditions on their permits or grants. Where mitigation measures are directly related to the acceptability of the action, the comment letter should include a request that the lead agency keep EPA informed of progress in carrying out the mitigation measures proposed by the EPA.

c. Projects Under Section 404(r) of the Clean Water Act.

(1) The Section 404 Coordinator will serve as an associate reviewer on all final EIS's involving a potential 404 permit. In order to satisfy the provisions of Section 404(r), the EIS process must be completed before Congress approves requests for authorizations and appropriations. Pursuant to the CEQ Memorandum for Heads of Agencies, November 17, 1980, completion of the EIS process includes resolution of any pre-decision referrals.

(2) The comment letter on a final EIS seeking a 404(r) exemption will include EPA's determination regarding: (a) whether the EIS contains requisite information on the proposed discharges and other effects, and (b) whether the proposal is consistent with the 404(b)(1) Guidelines.

(3) If a negative determination on either (2)(a) or (b) is made, the appropriate FAL will be informed and will coordinate with the lead agency to ensure that the required statement of EPA's determination is included in the lead agency's congressional submission. The FAL will also ensure that EPA's views regarding an exemption are effectively represented in the Office of Management and Budget's (OMB's) legislative and budget processes.

d. Projects Subject to Groundwater Evaluation Under Section 1424(e) of the SDWA.

(1) The regional drinking water program staff will serve as an AR on the review of any EIS for a project potentially affecting a designated "sole source" aquifer and will be responsible for the preliminary determination of project compliance with the requirements of Section 1424(e) of the SDWA.

(2) If the regional drinking water program staff determines that a project may contaminate the aquifer through the recharge zone so as to create a significant hazard to public health, the ERC will, in consultation with the regional drinking water staff and appropriate Headquarters FAL, prepare a briefing memorandum and comment letter for the Regional Administrator. Upon approval, the Regional Administrator shall submit the package to the Director, OFA, who shall coordinate the appropriate Headquarters approval and submission to the Administrator for action.

4. UNRESPONSIVE FINAL EIS.

(1) If the lead agency prepares a final EIS rather than a supplement or revised draft EIS in response to an EPA "3" rating, or if there are significant new circumstances or information relevant to areas of significant environmental impact, the review should follow the procedures of chapter 4 to determine if the proposal is either "environmentally unsatisfactory" or "inadequate." If it is determined that either of these situations apply, the procedures of chapter 9 should be initiated to determine if a referral of the proposal to the CEQ is warranted.

(2) If a refferal is not warranted, but the EIS contains insufficient information to assess potentially significant environmental impacts of the proposed action, a request should be made for the agency to prepare a supplemental EIS. In such cases, the EPA comment letter must demonstrate that the final EIS is unresponsive to EPA's comments on the draft EIS and state EPA's belief that the final EIS is inadequate to meet the purposes of the NEPA and/or the EPA review, and therefore should be formally supplemented (40 CFR 1502.9(c)).

5. DISTRIBUTION OF THE FINAL EIS COMMENT LETTER. The ERC will coordinate distribution of the final EIS comment letter in accordance with chapter 4, paragraph 5 of this Manual (or in the case of a referral, chapter 9, paragraph 5) and any applicable communications strategy. To the maximum extent practicable, the comment letter will not be distributed externally until after the lead agency has received the original.

6. REPORTING AND CONTROL. All final EIS's, comment letters, no comment memoranda, and correspondence related to time extensions will be entered in the MIU data management system and retained in the official project file. The final EIS rating must also be entered into the MIU system (even if no comment letter was sent).

CHAPTER 7 - MONITORING AND FOLLOW-UP

1. POLICY. It is EPA's policy to conduct, on a selected basis, follow-up activities on comments on final EIS's to ensure that: (1) the EPA participates as fully as possible in any post-EIS efforts designed to assist agency decisionmaking; (2) agreed upon mitigation measures are identified in the Record of Decision; and (3) the agreed upon mitigation measures are fully implemented (e.g., permit conditions, operating plan stipulations, etc.).

2. MONITORING AND FOLLOW-UP.

a. After transmittal of EPA's comments on the final EIS, the PR will, as appropriate, ensure that:

(1) EPA receives a copy of the Record of Decision;

(2) The lead agency has incorporated into the Record of Decision all agreed upon mitigation and other impact reduction measures; and

(3) The lead agency has included all agreed upon measures as conditions in grants, permits, or other approvals, where appropriate.

b. Officials who could be subsequently involved in the proposed action should be informed of the final EPA position on the EIS (e.g., regional or State enforcement officials for NPDES permitting, regional enforcement officials for Section 404 enforcement, regional air program or enforcement officials for transportation control strategy compliance and State implementation plan requirements).

c. Where resources allow, the ERC is encouraged to assess the level of compliance and effectiveness of Federal agency mitigation measures. The ERC is responsible for determining when and how EPA's final EIS follow-up and monitoring should be carried out.

3. REVIEW OF THE RECORD OF DECISION.

a. The PR should review the Record of Decision on all final EIS's on which the EPA has expressed environmental objections, and/or those where the EPA has negotiated mitigation measures or changes in project design.

b. The ERC will bring problems or discrepancies between the Record of Decision and agreed upon mitigation measures to the attention of the lead agency. Any unresolved issues should be coordinated with the appropriate FAL, and, through the FAL, with the lead agency's headquarters office, and if appropriate, with the CEQ.

4. REPORTING AND CONTROL. All correspondence regarding the Record of Decision will be recorded in the official project file.

CHAPTER 8 - REVIEW OF DOCUMENTS OTHER THAN EIS'S

1. POLICY. The Environmental Review Process will include review of those proposed Federal agency actions, legislation, regulations, and notices which may not be contained in an EIS, but which could lead to or have significant environmental impacts.

2. GENERAL REVIEW PROCEDURES.

a. Lead Responsibility for Review of Other Actions. Lead responsibilities for non-EIS actions are, in general, as defined below but may be adjusted in accordance with the procedures in chapter 2 of this Manual.

(1) The OFA will have lead responsibility on all regulation reviews and the appropriate FAL will determine which proposed regulations should be reviewed;

(2) The Office of Legislative Analysis (OLA), within the Office of External Affairs, will have lead responsibility on all non-EIS legislation reviews and will determine when the EPA will prepare formal comments on legislation; and

(3) Overall management of the review of non-EIS agency actions, including environmental assessments and Findings of No Significant Impact (FONSI's), license applications, etc., is the responsibility of the ERC managing the liaison activity that involves the action.

b. Conducting Reviews of Other Actions. The ERC will follow the review coordination procedures of chapter 2 to ensure that EPA's comments are coordinated and comprehensive and are received by the originating agency within its decisionmaking period. If the ERC believes that an EIS is needed on the proposed action, the procedures found in paragraph 6 of this chapter should be followed.

c. Rating Other Federal Actions. Except for the referral criteria, the rating system for draft impact statements pursuant to chapter 4 of this Manual will not be used for non-EIS actions. If the PR determines that a Federal agency action covered by this chapter is environmentally unsatisfactory in accordance with the criteria listed in chapter 4, thus warranting a referral to the CEQ, then the procedures found in paragraph 7 of this chapter will apply.

3. LEGISLATION REVIEWS. The OLA has lead responsibility on all proposed legislation not accompanied by an EIS. The OLA is responsible for coordinating with other EPA program and regional offices, and for preparing EPA's comments on all legislation. Any ERC receiving proposed legislation from another Federal agency should forward it directly to the OLA for action.

4. REGULATION REVIEWS. The FAL's will monitor the Federal Register regularly to determine which environmental regulations proposed by their assigned Federal agencies are significant and should be reviewed. FAL's will normally act as PR's for regulations proposed by the agencies assigned to them. The Director, OFA, will be the signatory official for comments on these regulations. The FAL will be responsible for ensuring that the regions and EPA program offices impacted by the regulations will be designated as AR's.

5. OTHER AGENCY ACTION REVIEWS. The ERC may determine that other non-EIS Federal actions such as environmental assessments (40 CFR 1508.9), FONSI's (40 CFR 1508.13), issue papers, or technical support documents should be reviewed. The ERC's decision to review these actions will take into account the relationship of the proposed action to other Federal actions and how the document fits into the overall decisionmaking process.

6. DETERMINING THE NEED FOR AN EIS. Whenever the ERC determines on the basis of investigating a public inquiry, reviewing a regulation or environmental assessment/FONSI, or by other means, that a Federal agency has not or does not intend to prepare an EIS on an action that the EPA believes could significantly affect the quality of the human environment, the following procedures pertain.

a. If it is a regional action, the ERC will immediately contact the appropriate FAL and develop a coordinated regional/headquarters approach for working with the lead agency.

b. The ERC will initiate consultation with the Federal agency responsible for the major action to explore the necessity for EIS preparation. Discussions with the agency will be couched in terms of suggested action for the Federal agency's consideration rather than as an EPA requirement. It is the lead agency's responsibility to decide if an EIS will be prepared.

c. If, after such consultation, the ERC believes that the requirements of Section 102(2)(C) of NEPA are applicable, the PR will prepare a comment letter to the Federal agency responsible for the proposed action. The comment letter should include EPA's assessment of the action and reasons why the EPA believes the agency should prepare an EIS.

7. ENVIRONMENTALLY UNSATISFACTORY ACTIONS. If the ERC determines that a non-EIS action is environmentally unsatisfactory at the draft stage (in accordance with the EU criteria specified in chapter 4), the proposed comment letter must be cleared by the Assistant Administrator, OEA, prior to release. The procedures of chapter 4 must be followed in obtaining this clearance. At the time of the clearance request, or if the non-EIS action is a final action, the ERC and/or appropriate FAL will set up internal consultation and referral procedures similar to those outlined in chapter 9 of this Manual. The procedures will also consider the option of requesting an EIS. The procedures will ensure that the referral will take place no later than 5 days before the "final" lead agency action. For example, in the case of proposed regulations, the referral must occur prior to publication of the final rule.

8. REPORTING AND CONTROL. Regulations under review and the resulting comment letters, as well as comment letters on any other non-EIS action determined to be environmentally unsatisfactory, will be entered into the MIU data management system. All agency comment letters and official agency actions related to the Environmental Review Process will be retained in the official project file.

CHAPTER 9 - REFERRALS TO THE COUNCIL ON ENVIRONMENTAL QUALITY

1. POLICY. The EPA authority for referring proposed regulations or major Federal actions to the Council on Environmental Quality (40 CFR 1504 and Section 309 of the Clean Air Act) will be used only when significant environmental issues are involved and only after every effort to resolve these issues at the agency level has been exhausted.

2. CRITERIA FOR REFERRAL. In order to meet a determination of "unsatisfactory from the standpoint of public health or welfare or environmental quality," the proposed action must satisfy the "environmentally unsatisfactory" criteria given in chapter 4.

3. REFERRAL PROCEDURES.

a. The CEQ has established a 25-day time period, starting from the date of the Notice of Availability of the final EIS in the Federal Register, for referring final EIS's (40 CFR 1504.3(b)). Extensions of EIS referral periods can be granted only by the lead agency (40 CFR 1504.3(b)) and must be specific to the 25-day referral period rather than the overall comment period.

b. Since EPA has authority under Section 309 of the Clean Air Act to refer proposed regulations and major Federal actions for which no EIS has been prepared, the intent of the 25-day deadline is incorporated in the procedures of this section by requiring all EPA referrals to be made no later than 5 days before the end of the comment period or, in any case, 5 days before the final action takes place.

4. REFERRAL PACKAGE DEVELOPMENT SEQUENCE.

a. The objective of the referral package development sequence requirements in this section is to ensure that the referral package is ready within the rigid 25-day time limit and, simultaneously, allow for a final attempt to resolve EPA's concerns with the lead agency. The key elements in this sequence are:

(1) Early identification of the potential referral action by the PR/ERC;

(2) Approval of the referral action by the Regional Administrator (if a regional action) and the Assistant Administrator, OEA;

(3) An attempt to meet with the lead agency and work out EPA's concerns; and

(4) Preparation of the referral package to preserve the referral option if discussions with the lead agency do not resolve EPA's concerns.

b. Specific procedures for the referral development sequence are described below. To facilitate this description, it is assumed that the referral action

is taken by a region. The same procedures apply where Headquarters has the referral action except there would be no regional requirements.

(1) Within 5 days after the beginning of the review period the PR, in consultation with the ERC, will make a preliminary determination as to whether the action is unsatisfactory from the standpoint of public health, welfare, or environmental quality in accordance with the EU criteria in chapter 4. If a referral is indicated, the ERC will notify the appropriate FAL and proceed with development of the materials described below.

(2) Within 10 days from the start of the 25-day referral period, the ERC, in consultation with the FAL, will prepare and submit to the Regional Administrator and the Assistant Administrator, OEA, through the Director, OFA, a briefing memorandum and interim response to the lead agency. The interim response will state that the EPA is considering a referral to the CEQ and will request a meeting and time extension to allow for a resolution of EPA's concerns. The briefing memorandum will contain the following information:

(a) Brief description of the proposed action;

(b) Reason the action is environmentally unsatisfactory;

(c) Description of the attempts to resolve differences with the lead agency;

(d) Positions of other affected Federal agencies, groups, and public officials; and

(e) Recommended strategy for resolution of remaining issues.

(3) If the lead agency grants a time extension, EPA negotiations will take place and, if necessary, the referral package will be developed according to the extended referral time period. If the lead agency grants a time extension of the referral period by phone, the ERC will immediately prepare a letter to the lead agency documenting the agreement. If a time extension is not granted, the referral preparation will proceed on the basis of the original referral deadline.

(4) No later than 10 days before the referral deadline, the FAL will prepare a short information memorandum for the Administrator describing potential referral and the status of unresolved issues; a one-page "talking points" paper; and an outline of a communication strategy for notifying all interested groups of EPA's action. Development of the communication strategy is to be coordinated with the immediate Office of the Assistant Administrator for External Affairs.

(5) No later than 7 days before the referral deadline, the final referral package, prepared in accordance with paragraph 6 of this chapter and approved by the Regional Administrator, will be forwarded to the Director, OFA.

(6) No later than 5 days before the referral deadline, the Director, OFA, will ensure that the referral package is in final form with all letters and appropriate concurrences ready for the Administrator's signature, and working through the Assistant Administrator for OEA, to ensure that a briefing has been arranged for the Administrator.

5. CONTENT AND ORGANIZATION OF THE REFERRAL PACKAGES.

a. Administrator's Referral Package. The referral package for the Administrator will include the package to be submitted to the CEQ and the lead agency, and the following:

(1) An action memorandum to the Administrator (not to exceed two pages) briefly outlining the proposed action, EPA's concerns with the proposed action, and positions of other affected Federal agencies, public interest groups, and congressional delegations.

(2) A communications strategy for notifying all interested groups of the referral. This strategy will be coordinated with the immediate Office of the Assistant Administrator for External Affairs and will follow the established strategy development format.

b. CEQ Referral Package. The CEQ referral package will consist of a letter for the Administrator's signature to the Chairman of the CEQ setting forth the basis of EPA's determination and the lead agency referral package described below.

c. Lead Agency Referral Package. This package will consist of the following:

(1) A letter for the Administrator's signature to the head of the lead agency informing the lead agency of EPA's unsatisfactory determination, and of the referral of the matter to the CEQ. The letter should request that no action be taken on the proposed action until the CEQ acts on the matter.

(2) Detailed comments supporting EPA's conclusion that the matter is unsatisfactory from the standpoint of public health, welfare, or environmental quality. The detailed comments will include the following information:

(a) The unacceptable impacts related to EPA's areas of jurisdiction or expertise;

(b) The reasons EPA believes the matter is unsatisfactory;

(c) Description of those national resources or environmental policies that would be adversely affected;

(d) Identification of environmentally preferable alternatives;

(e) Identification of agreed upon facts;

(f) Identification of material facts in controversy; and

(g) Brief review of attempts by the EPA to resolve the concerns with the lead agency.

6. APPROVING AND DISTRIBUTING THE REFERRAL PACKAGE. After the Administrator signs the referral comment letters to the lead agency and to the CEQ, the letters will be hand-carried to the addressees. The appropriate FAL will then ensure follow-up distribution of the CEQ referral package as follows and/or in accordance with the communications strategy:

Addressee	Number of Copies
Lead agency	3 copies
CEQ	4 copies
EPA Administrator	2 copies
Assistant Administrator, OEA	2 copies
Headquarters Office of Public Affairs	2 copies
Appropriate regional office	3 copies
Appropriate regional Office of Public Affairs	2 copies
Director, OFA	1 copy
Management Information Unit, OFA	1 copy
EPA offices which served as associate reviewers	1 copy
Appropriate elected officials	Determined by the Office of Congressional Liaison

7. REPORTING AND CONTROL.

The referral package, all related correspondence, and documentation of time extensions will be retained in the official project file. Time extensions will be entered into the MIU data management system.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 15 1994

OFFICE OF ENFORCEMENT

Dear Sir or Madame:

The Council on Environmental Quality (CEQ) Regulations require the "filing" of Federal Environmental Impact Statements (EISs). These are filed at the Office of Federal (OFA) Activities, US Environmental Protection Agency (EPA). As manager of the filing process, OFA periodically recirculates the Filing System Guidance (dated March 7, 1989) to all federal agencies as a reminder of the procedures to be followed when filing an EIS and to help those who may be new to the process.

In addition to the enclosed Guidance document, you might be interested in the following commonly asked questions related to the timing for filing EISs.

Q: When can an EIS be filed?

A: §1506.9 states that an EIS cannot be filed with EPA any earlier than it is transmitted to commenting agencies and made available to the public. This will assure that the EIS is received by all interested parties by the time the EPA Notice of Availability (NOA) appears in the Federal Register, therefore allowing for the full minimum review periods prescribed in §1506.10.

Q: When does the review period start for an EIS?

A: The minimum time periods set forth in §1506.10(b), (c), and (d) are calculated from the date EPA publishes the NOA in the Federal Register. The review period for draft EISs is 45 calendar days and the review period for final EISs is 30 calendar days. The lead agency may

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extend the prescribed period. If the lead agency extends the review period past the prescribed time the extension is published in the Weekly Federal Register NOA. This extension is known as an overall extension which is open to commenting agencies and the public.

Q: How can an individual extension be obtained?

A: An individual extension can be obtained by commenting agencies or the public by contacting the agency which prepared the EIS. EPA only grants extensions and reductions in time when there are "compelling reasons of national policy".

Q: When does the NOA get published in the Federal Register when the publication date falls on a holiday?

A: The NOA will be published in the Federal Register the day before the holiday.

Q: Can we file photo copies of EISs?

A: We will accept photo copies if this is the type of document you are transmitting to commenting agencies and the public and they are bound. EPA will not accept unbound copies of EISs.

Please take a few moments and read over these procedures and share them with appropriate people within your organization. If you or your staff have any technical questions related to the filing process, please feel free to talk with my staff specialists Marilyn Henderson (202) 260-5075 or Pearl Young (202) 260-5076.

Sincerely,

Richard E. Sanderson
Director
Office of Federal Activities

Enclosure

federal register

Tuesday
March 7, 1989

Part II

Environmental Protection Agency

Filing System Guidance for Implementing 1506.9 and 1506.10 of the CEQ Regulations

ENVIRONMENTAL PROTECTION AGENCY

Filing System Guidance for the Implementation of 1506.9 and 1506.10 of the CEQ Regulations Implementing the Procedural Provisions of the NEPA

Preamble

In 1978, the Council of Environmental Quality (CEQ) and the Environmental Protection Agency (EPA) entered into a Memorandum of Agreement on the allocation of responsibilities of the two agencies for assuring the government-wide implementation of the National Environmental Policy Act of 1969 (NEPA). These responsibilities are consistent with the 1978 CEQ NEPA-Implementing Regulations (40 CFR Parts 1500–1508).

The Memorandum of Agreement transferred to EPA operational duties associated with the administrative aspects of the environmental impact statement (EIS) filing process. The Office of Federal Activities has been designated the official recipient in EPA of all EISs. It should be noted that the operational duties associated with the administrative aspects of the EIS process are totally separate from the substantive EPA reviews performed pursuant to both NEPA and section 309 of the Clean Air Act.

The purpose of the EPA Filing System paper is to provide guidance to federal agencies on filing EISs, including draft, final, and supplemental EISs. Information is provided on (1) Where to file; (2) number of copies required; (3) information required in the transmittal letter; (4) steps to follow when a federal agency is adopting an EIS or when an EIS is being withdrawn, delayed or reopened; (5) review periods; (6) notice of availability in the Federal Register; and, (7) retention of filed EISs.

On August 10, 1988, following consultation with CEQ, EPA sent the draft paper to 26 federal agencies for comment prior to its submission to the Federal Register for formal publication and implementation. EPA received comment letters from 16 agencies. Although this preamble does not respond to each comment individually all were carefully considered. A synopsis of the comments, other than editorial, and EPA's response follow:

Section 3—Filing an EIS-Draft, Final and Supplemental

As requested, clarification has been made that completion of the transmittal of an EIS is accomplished simultaneously with the filing with EPA. It was recommended that the cover letter include the official issuing agency number for the EIS being filed. EPA does not use an agency's number for the EIS being filed; therefore, it is not needed in the cover letter. An agency may, if it wishes, include the number because of internal requirements.

Information has been added to clarify that, in the case of filing an EIS that is not hand carried, the cover letter should state that transmittal has been completed. In addition, EPA will telephone the filing agency to verify that EPA has received the EIS.

At the recommendation of a commenter, EPA will now include a reference in the Notice of Availability when an agency adopts an EIS that does not require recirculation. This will not reopen the public comment period, but will complete the public record.

Several agencies commented on EPA's role in checking an EIS for "completeness and compliance." In response the specific subsection of the CEQ Regulations that recommends the standard format that an agency should follow unless the agency determines that there is a compelling reason to do otherwise has been identified—§ 1502.*10* of the CEQ Regulations—for clarification. EPA's review is to assure that the document meets certain minimum administrative requirements, i.e., there is a cover sheet, a summary of the statement, a table of contents, the name, address and telephone number of the agency is included, cooperating agencies are listed, etc. The format and explanation of each is found in § 1502.10 of the CEQ regulations. The review does *not* address the quality of the document's substance. Further, it is totally independent of EPA's review on environmental impacts under Section 309 of the Clean Air Act.

One commenting agency suggested deleting the sentence concerning reopening an EIS review period after a substantial amount of time has passed since the original review period closed. The commenting agency objected to the use of the word "substantial" without defining the term. EPA believes that the word substantial stands on its own merits and suggests that agencies use their best judgment in deciding what is reasonable. The intent is to keep the public informed. EISs reopened for review will be published in the Notice of Availability to inform all interested parties and to keep the public record current.

Section 4—Notice in the Federal Register

Language has been added to clarify that the Notice of Availability is published each Friday in the Federal Register for those EISs filed during the preceding week—e.g., the notice is published on January 13th for EISs filed between January 2nd and January 6th.

The last paragraph of this section has been deleted at the request of CEQ. CEQ will remain solely responsible for notification to the public of referral actions due to the process timeframes called for in the current CEQ Regulations.

Section 5—Time Periods

The section heading and opening paragraph have been edited to address many comments requesting clarification of time periods for draft and final EISs. The time period for review and comment on draft EISs shall not be less than 45 "calendar" days. CEQ Regulations do not address a review period for a final EIS. It is a 30 "calendar" day wait period during which no decision may be made to proceed with the proposed action.

Additional information has been added to address the question concerning calculated time periods ending on non-work days. When a calculated time period ends on a non-working day, the assigned time period will be the next working day.

Section 1506.10(b) of the CEQ Regulations allows for an exception to the rules of timing. Language has been included on exceptions relating to cases of an agency decision which is subject to a formal internal appeal. When exceptions are made by an agency, it is important to inform EPA so that it is accurately reflected in the Notice of Availability.

It was requested that the paper cite examples where both extensions and reductions of time periods have been granted by EPA and where CEQ has approved special cases. EPA appreciates the point but has declined to present examples since these are done on a case-by-case basis and each case is considered on its individual merits.

One commenting agency was concerned with having to request reductions and extensions of time periods in writing to EPA. The agency felt this put too much stress on a formal, and possibly time-consuming, process. Language has been added indicating EPA will accept these requests by telephone, but agencies should follow up in writing to ensure that EPA can maintain a complete record of the decision-making process.

One commenting agency requested that guidance be provided for filing of non-federal EISs, i.e., those prepared by state and local governments where

federal statutes specifically identify these governments as the "federal official for the purposes of NEPA compliance." EPA's position is that EISs prepared by state and local governments for these federal programs are considered "federal" EISs by virtue of the fact that they are prepared in response to a federal statute—NEPA. Therefore, the same filing procedures apply to the filing of these "non-federal EISs" as those that apply to filing of federal EISs.

General Comments

EPA appreciates the comment concerning the length of the guidance and that it "burdens rather than provides useful guidance." However, EPA believes that the narrative format is easier to follow and more useful as a reference than a step by step outline or flow diagram of the process.

As indicated by one commenter, it should be noted that this guidance is intended only to improve the internal management of the Executive branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officials, or any person.

Dated February 28, 1989.

Richard E. Sanderson,

Director, Office of Federal Activities.

EPA Filing System Guidance

1. Purpose.

These guidelines provide information on filing environmental impact statements (EISs) required by the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500–1508) for implementing the procedural provisions of NEPA. Sections 1506.9 and 1506.10 of the CEQ regulations set forward EPA's basic responsibilities for the filing process and authorize the Agency to issue guidelines to implement its responsibilities under these sections. The process of filing includes the following: (a) Reviewing and recording of the EISs so that information on them can be incorporated into EPA's computerized data base; (b) establishing the beginning and ending dates when draft and final EISs are officially available to the public; (c) publishing these dates in a "Notice of Availability" in the Federal Register; (d) retaining the EISs in a central repository; and (e) determining whether time periods can be lengthened or shortened for "compelling reasons of national policy."

EPA duties do not include responsibility for the distribution of EISs or for providing additional copies of already distributed EISs. These are the obligation of the lead agency preparing an EIS and are not addressed in this guidance. Nevertheless, EPA will assist the public and other federal agencies by providing agency contacts on, and information about, EISs.

2. Background

The official EIS filing system was transferred from the Council on Environmental Quality (CEQ) to the Environmental Protection Agency (EPA) effective December 5, 1977, as part of the reorganization of the Executive Office of the President. The functions of the filing system were further delineated by a Memorandum of Understanding between CEQ and EPA, dated March 29, 1978. CEQ promulgated its regulations for implementing the National Environmental Policy Act (NEPA) on November 29, 1978 (see 43 FR 55978).

The EPA filing system was created to provide an official log and public announcement of EISs received by EPA and to guarantee that the requirements of NEPA and the CEQ regulations are satisfied. It is a complete and separate filing system from the Environmental Review Process System which fulfills separate requirements under section 309 of the Clear Air Act for EPA to review and comment on EISs (and other actions) of federal agencies. 260-5076

3. Filing an EIS—draft, final and supplemental

Federal agencies are required to prepare EISs in accordance with section 1502 of the Regulations and to file the EISs with EPA as specified in § 1506.9. The EISs must be filed no earlier than they are transmitted to commenting agencies and made available to the public. If an EIS is hand carried to EPA, the person delivering the document must complete a form stating that transmittal to all agencies is being made simultaneously with the filing with EPA. This will assure that the EIS is received by all interested parties by the time the EPA Notice of Availability appears in the Federal Register, and therefore allows for the full minimum review periods prescribed in § 1506.10. EPA will acknowledge by a phone call to the sender that it has received an EIS forwarded by means other than hand carried.

If EPA receives a request to file an EIS and transmittal of that EIS is not complete, the EIS will not be filed until assurances have been given that the transmittal process is complete. Similarly, if EPA discovers that a filed EIS has not been transmitted, EPA will retract the EIS from filing and not re-file the EIS until the transmittal process is completed. Once the agency has fulfilled the requirements of § 1506.9 and has completed the transmittal process, EPA will reestablish the filing date and the minimum time period, and will publish this information in the next Notice of Availability. Requirements for circulation of EISs appear in § 1502.19 of the regulations.

Federal agencies file an EIS by providing EPA with five (5) copies, including appendices. Material which is incorporated into the EIS by reference is not required to be filed with EPA. The agency filing the EIS (usually the lead agency if more than one is involved) should prepare a letter of transmittal to accompany the five copies of the EIS. The letter should identify the name and telephone number of the official responsible for both the distribution and contents of the EIS; should state that the transmittal has been completed; and should be addressed to:

U.S. Environmental Protection Agency,
Attention, Office of Federal Activities,
EIS Filing Section (Mail Code A–104),
Room 2119 Waterside Mall, 401 M Street SW., Washington, DC 20460.

Telephone inquiries can be made to (202) ~~382–5076~~ or FTS ~~382–5076~~. 260-5076

EPA should be notified in writing of all situations where a federal agency is adopting an EIS, whether the document is recirculated and filed or adopted under the provisions of § 1506.3(c) of the regulations. If a federal agency chooses to adopt an EIS written by another agency and it was not a cooperating agency in the preparation of the original EIS, then the EIS must be re-transmitted and filed with EPA according to the requirements set forth in § 1506.3 of the CEQ regulations. In those cases where an agency can adopt an EIS without recirculating it, there is no necessity to file the EIS again with EPA. EPA should be notified, however, in order to ensure that the official log is accurate, and to include this information as a separate section within the Notice of Availability. This will not establish a comment period, but will complete the public record.

EPA also should be notified of all situations where an agency has decided to withdraw, delay or reopen a review period on an EIS. All such notices to EPA will be published in the Federal Register. In the case of reopening EIS review periods, the lead agency should notify EPA as to what measures will be taken to ensure that the EIS is available to all interested parties. This is especially important for EIS reviews that are being reopened after a

substantial amount of time has passed since the original review period closed.

Once received by EPA, each EIS is stamped with an official filing date and checked for completeness and compliance with § 1502.10 of the CEQ regulations. If the EIS is not "complete" (i.e., if the documents do not contain those elements outlined in § 1502.10 of the regulations), EPA will contact the lead agency to obtain the omitted information or to resolve any problems prior to publication of the Notice of Availability in the **Federal Register.**

Agencies often publish (either in their EISs or individual notices to the public) a date by which all comments on an EIS are to be received. Agencies should ensure that the date they use is based on the date of publication of the Notice of Availability in the **Federal Register.** If the published date gives reviewers less than the minimum review time computed by EPA, then EPA will send the agency contact a letter explaining how the review period is calculated and the correct date by which comments are due back to the lead agency. This letter also encourages agencies to notify all reviewers and interested parties of the corrected review periods.

4. Notice in the Federal Register

EPA will prepare a weekly report of all EISs filed during the preceding week for publication each Friday under a Notice of Availability in the **Federal Register.** At the time EPA sends its weekly report for publication in the **Federal Register,** the report will also be sent to the CEQ. Information included in the report for each EIS is the same as the data entered in EPA's computerized data file. This includes an EIS Accession number (created by EPA), EIS status (draft, final, supplemental), date filed with EPA, the agency or bureau that filed the EIS, the state and county of the action that prompted the EIS, the title of the EIS, the date comments are due and the agency contact. Amended notices may be added to the Notice of Availability to include corrections, changes in time periods of previously filed EISs, withdrawals of EISs by lead agencies, and recision of EISs by EPA. A recision including nullifying the date the EIS was filed can occur, as explained earlier, if, after a filed EIS is published in the **Federal Register,** EPA is subsequently informed that the EIS has not been made available to commenting agencies and the public by the lead agency.

5. Time Periods

The minimum time periods set forth in § 1506.10(b), (c), and (d) are calculated from the date EPA publishes the Notice of Availability in the **Federal Register.** Review periods for draft EISs, draft supplements, and revised draft EISs shall extend 45 calendar days unless the lead agency extends the prescribed period or a reduction of the period has been granted. The wait periods for final EISs and final supplements shall extend for 30 calendar days unless the lead agency extends the period or a reduction or extension in the period has been granted. If a calculated time period would end on a non-working day, the assigned time period will be the next working day (i.e., time periods will not end on weekends or federal holidays).

It should be noted that § 1506.10(b) allows for an exception to the rules of timing. An exception may be made in the case of an agency decision which is subject to a formal internal appeal. Agencies should assure that EPA is informed so that the situation is accurately reflected in the Notice of Availability.

Under § 1506.10(d) EPA has the authority to both extend and reduce the time periods on draft and final EISs based on a demonstration of "compelling reasons of national policy." A lead agency request to EPA to reduce time periods or another federal agency request to formally extend a time period normally takes the form of a letter to the Director, Office of Federal Activities (OFA), EPA, outlining the reasons for the request. EPA will accept telephone requests; however, agencies should follow up such requests in writing so that the documentation supporting the decision is complete. A meeting to discuss the consequences for the project and any decision to change time periods may be necessary. For this reason EPA asks that it be made aware of any intent to submit requests of this type as early as possible in the NEPA process. This is to prevent the possibility of the time frame for the decision on the time period modification from interfering with the lead agency's schedule for the EIS. EPA will notify CEQ of any reduction or extension granted.

CEQ has the authority under section 1502.9(c)(4) to approve alternative procedures for preparing, circulating and filing supplemental draft and final EISs. The council will notify EPA of any such alternative procedures that are granted.

6. Retention

Filed EISs are retained in the EPA/OFA office for a period of two years and are made available for reviewing only. After two years the EISs are sent to the National Records Center. However, the EPA Library, Room 2904 Waterside Mall, 401 M Street, SW., Washington, DC 20460, houses a microfiche collection of final EISs issued from 1970 through 1977 and all draft, final and supplemental EISs filed from 1978 to the present time. Facilities for limited reproduction of the EISs are available.

A comprehensive collection of EISs is available for viewing and individual EISs are available on a loan basis at:

Northwestern University, Transportation Library–NEPA, 1935 North Sheridan Road, Evanston, Illinois 60201, Telephone: (312) ~~492-~~2913. 491-2913

Final EISs prepared from 1970 through 1977, and any draft, final or supplemental EIS prepared from 1978 to the present time may be purchased in either microfiche or hardback copy from:

~~Information Resources Press, Herner and Company, 1700 North Moore Street, Arlington, Virginia 22209, Telephone: (703) 558-8275.~~

Cambridge Information Group
7200 Wisconsin Avenue
Bethesda, MD 20481
Telephone: (301) 961-6744

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 24 1993

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Environmental Protection Agency Office of Federal Activities' Guidance on Incorporating EPA's Pollution Prevention Strategy into the Environmental Review Process

FROM: Richard E. Sanderson
Director
Office of Federal Activities

TO: Federal Agency NEPA Liaisons
Federal Agency Environmental Roundtable Members
(see Attachment 1 for lists of addressees)

The Office of Federal Activities (OFA) has issued pollution prevention guidance for Environmental Protection Agency (EPA) reviewers (Attachment 2) to promote a clearer understanding of how pollution prevention can be incorporated into the National Environmental Policy Act (NEPA) and the Clean Air Act Section 309 environmental review processes. We welcome your comments and suggestions on the guidance and will consider revising this guidance to address any substantive concerns you may raise.

The guidance discusses: the EPA definition of pollution prevention; how to incorporate pollution prevention into the EPA environmental review process and interagency liaison functions; and federal pollution prevention awards programs. Specific examples of pollution prevention and mitigation measures for various types of projects and agency actions are given that distinguish between source reduction and treatment technologies.

OFA's guidance is consistent with the Council on Environmental Quality's (CEQ) guidance memorandum to federal agencies that discusses how to incorporate pollution prevention principles, techniques, and mechanisms into agencies' planning processes and NEPA documents. The CEQ memorandum was published in the Federal Register on January 29, 1993.

Any comments should be submitted by April 16, 1993, to Susan Offerdal, U.S. Environmental Protection Agency, Office of Federal Activities (A-104), 401 M Street, S.W., Washington, DC 20460, telephone: (202) 260-5059/FAX (202) 260-0129. If you have any questions on the document, please contact me at (202) 260-5053, or have your staff contact Susan Offerdal.

Attachments [NOTE: Attachment 1 not included in *NEPA Compliance Guide, Volume II*]

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ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF FEDERAL ACTIVITIES

Guidance on Incorporating EPA's Pollution Prevention Strategy into EPA's Environmental Review Process

The Office of Federal Activities (OFA) is issuing guidance which incorporates the Environmental Protection Agency (EPA) Pollution Prevention Strategy into the Agency's National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act review processes. To implement the Pollution Prevention Act of 1990, this guidance focuses primarily upon influencing federal agencies' policies, practices, and regulatory functions to incorporate pollution prevention into their planning and decision-making.

Background

The EPA is embarking on the implementation of its 1990's pollution prevention initiative to integrate pollution prevention throughout the Agency's activities. During the 1970s and 1980s, EPA focused on regulatory requirements to reduce or eliminate the sources of existing pollution. This approach has been effective. EPA is continuing its efforts to reduce or eliminate pollution by also focusing on pollution from diffuse sources and cross-media transfers.

Congress, recognizing the national and global implications of this initiative, passed the Pollution Prevention Act of 1990. The Act establishes an environmental protection hierarchy, with pollution prevention/source reduction as the most desirable environmental management option. If pollution cannot be prevented then, in descending order of preference, environmentally sound recycling, treatment, and disposal are listed as alternative waste management options.

In January 1991, EPA issued a national Pollution Prevention Strategy describing its goals and objectives and providing broad guidance to the Agency's headquarters and regional offices to institutionalize pollution prevention. The Strategy furthers the voluntary industrial toxics reduction project and discusses future actions. The EPA strategy requires that separate EPA pollution prevention strategies be developed for sectors of society having potential environmental impacts and opportunities for pollution prevention. These sectors include: the federal government, agriculture, energy/transportation, and consumers.

The draft Federal Sector Strategy dated June 5, 1992, calls for federal agencies to lead the Nation, by implementing pollution prevention policies and practices across all federal government sector missions, activities, and functions in order to promote the sustainable use of natural resources and to protect human health and the environment.

Attachment 2

The Federal Sector Strategy states that one of the ways EPA addresses pollution prevention is through the environmental review process, pursuant to the NEPA and Section 309 of the Clean Air Act. The NEPA incorporates pollution prevention language into its regulations (see 40 CFR Part 1500.2 (f)):

> *"Federal agencies shall to the fullest extent possible... use all practicable means, consistent with the requirement of [NEPA] and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment." (Emphasis added).*

The following guidance provides: the EPA definition of pollution prevention; discusses how to incorporate pollution prevention into the EPA environmental review process, and interagency liaison functions; and addresses federal pollution prevention awards programs.

<u>What is pollution prevention?</u>

On May 28, 1992, in a memorandum from the Deputy Administrator, EPA issued its Pollution Prevention: EPA Statement of Definition. The following description is given:

> *"Under Section 6602(b) of the Pollution Prevention Act of 1990, Congress established a national policy that:*
>
> - *pollution should be prevented or reduced at the source whenever feasible;*
> - *pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible;*
> - *pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and*
> - *disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.*
>
> *Pollution prevention means "source reduction," (emphasis added) as defined under the Pollution Prevention Act, and other practices that reduce or eliminate the creation of pollutants through:*
>
> *--increased efficiency in the use of raw materials, energy, water, or other resources, or*
> *--protection of natural resources by conservation.*

The Pollution Prevention Act defines "source reduction" to mean any practice which:

--reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and
--reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term [pollution prevention] includes: equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

Under the Pollution Prevention Act, recycling, energy recovery, treatment, and disposal are not included within the definition of pollution prevention (emphasis added). Some practices commonly described as "in-process recycling" may qualify as pollution prevention. Recycling that is conducted in an environmentally sound manner shares many of the advantages of prevention-- it can reduce the need for treatment or disposal, and conserve energy and resources.

Pollution prevention approaches can be applied to all pollution-generating activity, including those found in the energy, agriculture, federal, consumer, as well as industrial sectors. The impairment of wetlands, ground water sources, and other critical resources constitutes pollution, and prevention practices may be essential for preserving these resources. These practices may include conservation techniques and changes in management practices to prevent harm to sensitive ecosystems. Pollution prevention does not include practices that create new risks of concern."

EPA's efforts in environmental protection span a variety of activities, all aimed at averting environmental contamination and degradation. Each type of environmental protection activity may be seen as falling somewhere on a continuum, ranging from employing pollution prevention and source reduction (to anticipate and avoid the generation of pollutants and limit the cumulative impacts of pollution); to using control, treatment, and disposal (to stop already existing pollutants from contaminating the environment). Pollution prevention encompasses the human and the natural environment as a whole, since exposure to pollutants can occur through multiple, complex paths, in spite of stringent controls, through transfer from one medium to another -- air, water, land and the food chain.

Under the Pollution Prevention Act, recycling is second in the environmental protection hierarchy, when pollution cannot be prevented or reduced at the source. Recycling can play an important role in the federal sector. On October 31, 1991, the President issued Executive Order No. 12780, Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy. The purpose of this Order is to promote cost-

effective waste reduction and recycling, encourage market demand, develop and study policy options and procurement practices, integrate recycling and waste management programs throughout the federal government and contractor operated government facilities, and establish federal leadership for state and local governments.

Incorporation of Pollution Prevention into the Environmental Review Process

It is EPA's goal to encourage the incorporation of pollution prevention/source reduction into the practices of federal agencies. Environmental reviewers can raise awareness of pollution prevention initiatives identified in the NEPA and Section 309 review processes by:

- recognizing and giving written credit for pollution prevention measures incorporated into a proposal;

- identifying further pollution prevention measures that can be incorporated into the proposal; and,

- identifying actions that may have unintentional or previously unrecognized pollution prevention results.

For the purposes of this guidance, references to the identification of pollution prevention measures refer to any of these activities undertaken by the EPA environmental reviewer.

During all stages of the NEPA and 309 review processes, from early planning and scoping through final environmental impact statement review, EPA should seek opportunities to encourage agencies to incorporate pollution prevention into their programs. EPA should counsel federal agencies on the pollution likely to be generated by a proposed action and request that pollution prevention be included in all alternatives, whenever feasible. Where actual pollution prevention methods cannot be instituted, recycling, energy recovery, treatment and disposal actions should be employed as much as practicable.

While the pollution prevention initiative provides an exciting opportunity to help federal agencies consider and reduce pollution, this guidance should not be interpreted as taking precedence over the existing environmental review policies and procedures. Where a project has potential adverse environmental impacts but also has a good pollution prevention element, the reviewer can recognize the pollution prevention element but should not allow that element to override the other significant environmental issues. The formal rating of the project should be based on the use of the EPA Policy and Procedures for the Review of Federal Actions Impacting the Environment, dated October 3, 1984.

Appendix A provides specific examples of pollution prevention and mitigation measures for various types of projects and agency actions. The examples highlight the

distinction between source reduction and treatment technologies. This appendix will be periodically updated as more creative pollution prevention measures are identified. As users of this guidance become aware of any additional pollution prevention examples which could be added to the appendix, please inform the OFA Federal Agency Liaison Division Director.

The following list describes areas where pollution prevention opportunities may be appropriately addressed during the NEPA scoping and subsequent environmental review phases:

- the definition of the project's purpose and need (it should be clearly identified and not caveated to support the proponent's desires, which could limit pollution prevention options);

- the project design specifications and standards;

- the sizing of a project (e.g., a smaller dam may affect less habitat, have lesser impacts on soil erosion and water quality, and/or result in less induced growth);

- the location of a facility (e.g., away from sensitive habitats, close to centralized transportation or industry which can use the proposal's byproducts);

- the range of alternatives (e.g., whether pollution prevention opportunities are included);

- an agency's rejection of certain alternatives (e.g., because of an alternative's potential to cause pollution);

- an agency's approach or emphasis for meeting environmental requirements (whether the focus is on pollution prevention, source reduction, innovative technologies or traditional end-of-pipe, add-on controls);

- the capability of the proposed action to prevent pollution;

- the secondary effects of a proposed action which may discourage pollution prevention;

- The type of economic analysis being considered for the proposed action, and whether it calculates the full life-cycle costs of each option and adequately characterizes the benefits/damages of options (reference the EPA Regulation Development Pollution Prevention "Check List");

- the mitigation measures incorporated into the proposal (e.g., some mitigation measures may have more pollution prevention benefits than others, and significant pollution prevention may require a basic change in the project).

As a general policy, EPA should emphasize that pollution prevention analyses and pollution prevention measures be incorporated into all alternatives carried forward for detailed analysis in NEPA documents. **Wherever possible, reviewers should ask the action agency to incorporate the pollution prevention measures into the project as definite project features.** This will help ensure that the features are not dropped and definite pollution prevention commitments are made when the Record of Decision or Finding of No Significant Impact (FONSI) is developed, and the proposal implemented.

It is necessary to look beyond the direct effects of a potential pollution prevention option. Secondary and cumulative impacts and, particularly, cross-media transfers may convert a short-term, potentially attractive prevention measure into a long-term contributor to pollution. Therefore, reviewers should carefully reflect upon this issue and, where possible, suggest specific options and ask the action agency to evaluate the trade-offs in light of pollution prevention as well as other concerns (e.g., short- and long-term financial benefits, costs or liabilities). A decision tree for guiding the review of pollution prevention considerations during the NEPA and Section 309 review processes is provided in Appendix B, as an informal, optional guide to assist the reviewer.

Appendix C provides details on a future resource for pollution prevention information, the EPA Pollution Prevention Information Clearinghouse's (PPIC's) Federal Facilities Mini-Exchange database. Regions are requested to provide examples of federal facilities' pollution prevention, recycling, and waste minimization efforts. The information will be put into the Mini-Exchange database which will become a part of the PPIC's Pollution Prevention Information Exchange System (PIES). PIES is an easy-to-use, interactive, personal computer-based system which can be accessed by federal agencies and industry. People will be able to use personal computers to instantly access technical and programmatic information, order documents, locate expert assistance, and solve technical and policy questions.

Incorporating Pollution Prevention into Liaison Functions

Outreach/Education: Headquarters and regional NEPA coordinators should, in consultation with regional pollution prevention coordinators, schedule outreach meetings with all federal agencies to discuss the pollution prevention initiative (e.g., the Pollution Prevention Act of 1990, EPA's Pollution Prevention Strategy, the Federal Sector Strategy, OFA guidance, Council on Environmental Quality's pollution prevention guidance and the EPA awards programs).

The EPA environmental reviewer can suggest to agencies that they review current practices and technologies and compare them with historical practices and technologies to identify pollution prevention opportunities. Substitution of new practices at existing facilities or ongoing projects may be an excellent means of pollution prevention. EPA reviewers can: discuss the pollution prevention features they will want to find during the NEPA/309 reviews; describe incentives to adopt pollution prevention; and suggest open communications

and dialogue between agencies on ways to incorporate pollution prevention into planning and decision-making.

Pollution Prevention Awards Programs

There are two separate EPA awards programs which recognize achievements in pollution prevention.

The OFA annual Outstanding NEPA Compliance Recognition Program provides recognition to federal agencies at two levels. Both the EPA Regions and Headquarters Federal Agency Liaison Division will recognize exemplary projects in the categories of: pollution prevention; biodiversity and habitat protection; and long range planning and geographic analysis. Regional recognition will be announced and submitted to EPA headquarters in the month of November. National recognition will be made during the month of January.

The Pollution Prevention Act of 1990 requires EPA to establish an annual awards program to recognize a company or companies which operate outstanding or innovative source reduction programs. The Administrator's 1992 Awards Program focused on pollution prevention with award categories in: government; educational institutions, business, industry, trade/professional organizations; and individual citizens.

Attachments (Appendices A, B and C)

APPENDIX A OF GUIDANCE ON INCORPORATING EPA'S POLLUTION PREVENTION STRATEGY INTO THE ENVIRONMENTAL REVIEW PROCESS

The following two sections in Appendix A provide specific examples of pollution prevention and mitigation measures for various types of projects and agency actions. The first section provides specific mitigation examples which highlight the distinction between pollution prevention/source reduction and recycling/treatment technologies for various types of projects which may occur in more than one agency. The second section concentrates on agency specific mitigation guidance. During all EPA liaison activities it should be emphasized that the education of agency project managers and field personnel on awareness of pollution prevention opportunities in the environment is critical to institutionalizing pollution prevention.

SPECIFIC ILLUSTRATIVE EXAMPLES OF MITIGATION MEASURES FOR TWO CATEGORIES OF ACTIONS: POLLUTION PREVENTION/SOURCE REDUCTION AND RECYCLING/TREATMENT

(Federal agency reviewers are asked to submit any additional examples for the following categories:)

Project/Action types:

Agriculture/Land Management:

Source Reduction: During the planning stage, prevent or minimize land-disturbing activity; protect sensitive areas; minimize the use of water and chemical inputs; if pesticides are required, encourage agencies to use environmentally-sound alternatives in land management programs (e.g., cultivate crop strains with natural resistance to pests).

Treatment: Incorporate best management practices, anti-runoff techniques and other non-point source controls.

Airports:

Source Reduction: Encourage water/energy conservation programs, waste reduction plans (to include conservation devices in terminals and hangers), and the use of mass transit mechanisms for travelers to the airport. Encourage airport officials to examine flight tracks which minimize the noise impacts to local communities. Incorporate features to reduce exhaust emissions to the air by optimizing airplane and automobile engine operations.

Treatment: Ask if all sensitive noise receptor locations have been modeled and if there are industrial areas where night flights could be routed over.

Dredging Projects:

Source Reduction: Encourage ports/marinas to conduct audits to determine and stop potential sources of contaminated sediment.

Treatment: If appropriate during standard navigation dredging projects, encourage the Corps of Engineers, local sponsor, or permit applicant, to remove contaminated or polluted sediment from a waterway (i.e., that material beyond the original scope of the project) and assist the identification of appropriate treatment or disposal. Turbidity-control measures, such as screens, should be encouraged to contain contaminated sediments within the project area.

Energy and Water Supply Projects:

Source Reduction: Increase energy efficiency to reduce the use of fuels that release pollutants when they are consumed during extraction, processing, transport and combustion. Substitute environmentally benign fuel sources or less harmful fuel sources and supply systems (solar, wind, and hydro-generation projects when such projects are consistent with the pollution prevention goals). Implementation of conservation measures may reduce demand and therefore delay or negate the need for new dams or other facilities that may cause pollution.

The Federal Energy Management Executive Order 12759, dated April 17, 1991, directs agencies to implement strategies to: participate in demand side management services, establish energy efficiency goals and requirements, minimize use of petroleum in federal facilities, increase vehicle fuel efficiency, procure energy efficient goods and products and alternative fueled vehicles.

General Construction Activities:

Source Reduction: During the planning stages design the project to avoid environmental degradation. Review the project's design and siting specifications, standards, project sizing and the location of the facility.

Treatment: Reduce and mitigate fugitive dust! Encourage the use of recycled materials in the project and promote the recycling of construction debris.

Habitat Rehabilitation Projects:

Source Reduction: Encourage agencies to minimize the use of pesticides and use environmentally-sound alternatives in land management programs.

Treatment: If treatment is necessary, mimic natural processes and promote native species. Restore habitats through seedlings, plantings, and physical or chemical treatment to maintain foliage, fish and wildlife diversity. Disturbed areas may be regraded to contours for an optimal habitat or to restore the original condition. The rotation cycle and method of

timbering and the rest-rotation method of grazing can both be used to allow growth of degraded areas. Buffer zones may also be designated to protect highly damaged areas. It is crucial to minimize fragmentation of the environment and promote connectivity of natural areas.

Highways and Mass Transit:

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 gives state and local officials the flexibility to either spend highway funds for transit projects or vice versa. This new authority enables EPA staff to ask for greater analysis of multi-modal and inter-modal alternatives to highway projects.

Source Reduction: Recommend emission prevention measures for the project (e.g., parking freezes, ban on radial highway expansion, mass transportation alternatives to include high occupancy vehicle lanes, downsizing the road pavement or choosing an alignment that neither threatens the water supply nor has other environmental consequences). Encourage the use of plastic tapes and other alternatives to highway paints which are sources of volatile organic compounds. In addition to NEPA reviews, look for opportunities to become involved in the transportation planning process to broadly encourage source reduction policies, i.e., transportation demand management policies, at the state, metropolitan, and local levels.

Treatment: Review highway/roadway treatment programs -- assess how treatments are handled near reservoirs, lakes, wetlands, and other bodies of water, with devices to channel run-off away from water resources. Recommend replanting of native trees/shrubs/other plants lost to these projects. Reused materials should be recommended for use as road and railroad construction materials (e.g., the use of scrap tires in asphalt pavement, as required by the ISTEA). Used concrete and other demolition materials could be considered for such use (e.g., pavement recycling is a mature, closed-loop recycling practice). Include noise reduction features and features that result in smooth flow of traffic and thus minimize idling of engines.

Housing:

Source Reduction: Encourage HUD to incorporate pollution prevention criteria into future HUD-financed construction to:

- avoid lead and radon hazards;
- incorporate water/energy conservation programs and waste reduction plans to include water/energy conservation devices (e.g., insulation, use of solar energy to include solar water heaters where practical, low-flow shower heads and toilets, energy-efficient lighting systems to include bulbs and skylights);
- encourage the use of products made from recycled materials (e.g., park benches, waste receptacles, paper products) and from non-toxic/environmentally-sound materials (paint, stripper);

- minimize the use of water-consuming landscaping (e.g., lawns in arid climates) and recommend use of native plant material (hardy and climate adapted);
- community planning that minimizes the need for automobile transit.

Treatment: Existing housing should be retrofitted/rehabilitated to incorporate the above mentioned items and in addition:

- check water supply pipes for lead and check houses for radon;
- examine best management practices for anti-runoff techniques and other non-point source controls.

Hydropower Generation:

Source reduction: Pumped Storage Hydroelectric Projects can generate electricity from water in a closed loop system. (Warning: These projects can also have significant impacts on wetlands, anadromous fisheries and other habitats, therefore exercise caution when reviewing and commenting on their pollution prevention merits.)

Treatment: Maintain downstream flows that mimic the natural hydrologic regime. Regulate flows to maintain downstream dynamics (e.g., aggradation and scouring). Use bioengineering techniques on downstream banks and project site to prevent erosion. Use non-toxic chemicals to remove algae instead of algicides.

Mining:

Source Reduction: Design mine entrances and workings to minimize future mine drainage. Also during the initial mine design, closure may be planned to address hydrology, geochemical controls, and treatment, with subsequent restoration of surface water hydrology.

Treatment: Use mine water as process water. Treat neutral or acidic toxic metal-bearing drainage through lime neutralization or other techniques. Replenish surface waters and groundwater with treated effluent. Apply new mining techniques to improve conditions at older mines. Include remediation of existing hazardous materials and water problems as an integral part of the approval of the plan of operations for new mines.

Natural Gas Pipelines:

Source Reduction: Utilize excess transportation capacity in existing pipeline systems, rather than build new pipelines. Encourage conservation and energy efficiency measures to minimize the need for gas.

Treatment: Use of directional drilling under sensitive areas (e.g., stream crossings, wetlands, groundwater and drinking water sources) can minimize the effects on the impacted area. Urge implementation of measures to minimize spill potential and minimize spill impact. Line

waste and venting pits at compressor stations. Utilize environmentally safe treatment and disposal of PCB contaminated pipes.

Oil/Gas:

Source Reduction: Flaring of waste gases at high temperature may reduce emission of the products of incomplete combustion. Minimize the area disturbed by each activity and locate facilities at the edge rather than the center of habitat types as much as possible to protect sensitive areas.

Treatment: Construct diversion ditches and containment berms to reduce run-off volume leaving a site. Time activities to avoid disturbing plants and animals during crucial seasons in their life. Utilize spill prevention and minimization measures. Use of directional drilling under sensitive areas (e.g., stream crossings, wetlands, groundwater and drinking water sources) can minimize the effects on the impacted area. Design and site the facility and well pads to avoid or minimize impacts. Use of the sweetening process will lower the hydrogen sulfide and carbon dioxide content in natural gas emissions and will remove impurities to meet specifications for pipeline sales and requirements for field fuel use.

Rocketry and Missile Projects:

Source Reduction: During the planning stages design the project to avoid/minimize environmental degradation. Review the project's design specifications, standards, fuel source to eliminate or minimize toxic, hazardous and radioactive materials and wastes.

Treatment: Ask if all sensitive noise receptor locations have been modeled and minimize noise impacts to the public and wildlife.

Wetlands:

Source Reduction: Creation or restoration of wetlands may be a pollution prevention measure if the wetland is designed to perform water quality functions.

Treatment: Encourage the development of permanent buffers around wetlands.

AGENCY ACTIONS:

(Federal agency reviewers are asked to submit any additional information/examples for the following categories:)

Bureau of Reclamation: Identify whether efficient water delivery systems are in place or required by conservation plans. (Low energy application processes for irrigation not only

reduce water used for crops but also reduce pesticide application and non-point source pollution.)

Bureau of Land Management: Ask for the purpose and need of individual projects and how design parameters correspond to the standards and guidelines of applicable resource management plans. All areas under the control of the BLM have some form of best management practices (BMPs) for all activities requiring NEPA analysis. Review how the BMPs will be applied.

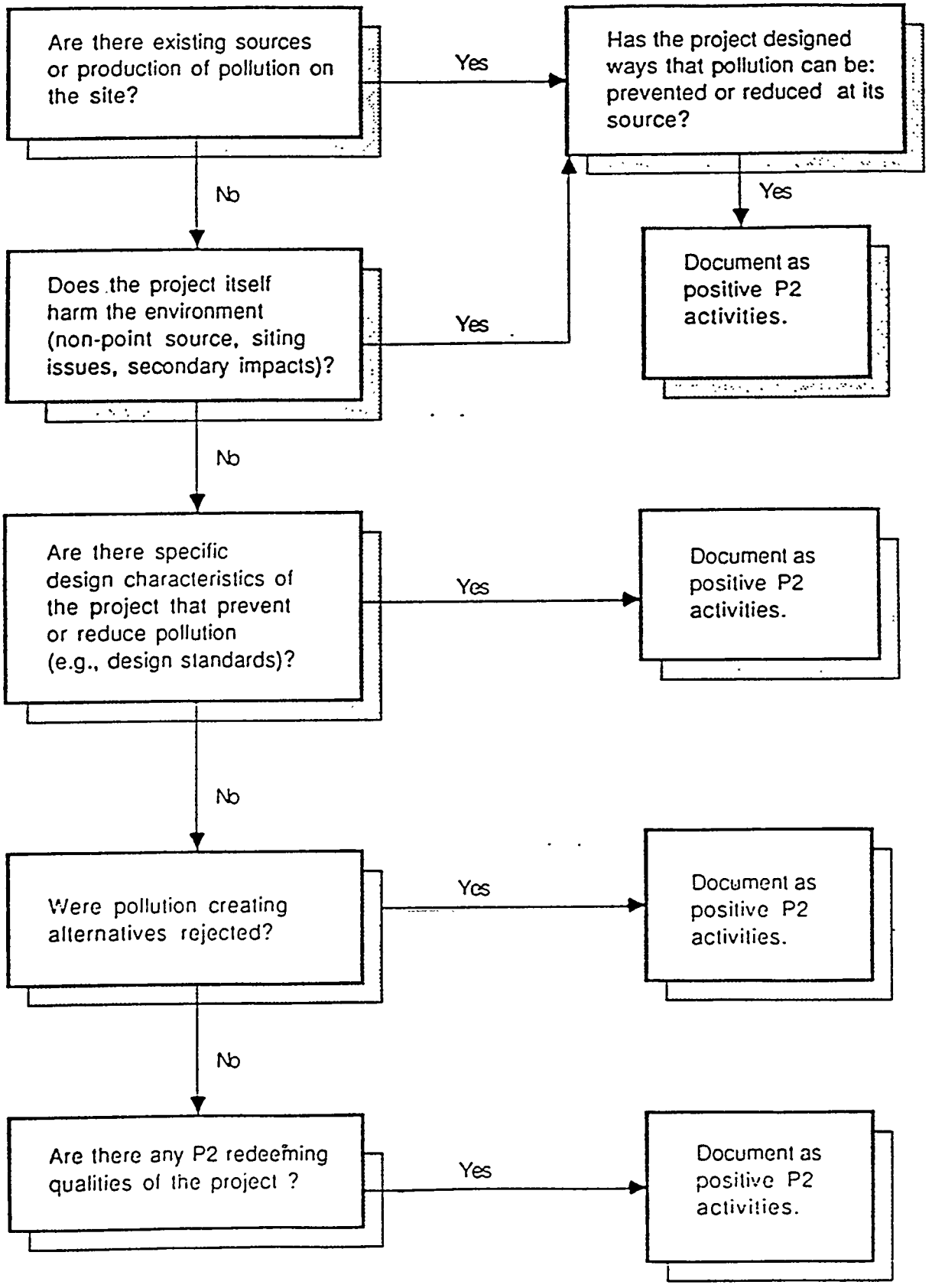
Corps of Engineers: During permitting actions, request permit applicants to identify erosion control methods under the description of construction practices. If feasible, recommend that demolition/construction waste material from one project site be considered for use as construction material for other Corps projects (e.g., highway repair or construction material could be used in other erosion or flood control projects). Implementation of non-structural measures to achieve flood protection can often be pollution preventing measures. Emphasize protection of the natural and beneficial values of floodplains.

Utilize the growing role of local cost-sharing sponsors. Urge local sponsors to commit to zoning and to mitigate induced growth in floodplains and other sensitive habitats. Urge the Corps to incorporate local mitigation commitments into their documents and to evaluate the feasibility and likelihood of implementation.

Federal Emergency Management Agency: If EPA is requested to participate on a Hazard Mitigation Team, look for measures that protect the natural and beneficial values of floodplains. Suggest changes in zoning ordinances and other measures that could result in habitat protection as well as other pollution prevention activities.

Forest Service: Ask for the purpose and need of individual projects and how design parameters correspond to the standards and guidelines of applicable forest plans. All national forests have some form of BMPs for all activities requiring NEPA analysis. Review how the BMPs will be applied.

DECISION TREE FOR REVIEWING POLLUTION PREVENTION (P2) CONSIDERATIONS



Clearinghouses and Associations

Pollution Prevention Information Clearinghouse

The Pollution Prevention Information Clearinghouse (PPIC) is dedicated to reducing or eliminating industrial pollutants through technology transfer, education, and public awareness. It is a free, nonregulatory service of the U.S. EPA, and consists of three components: a repository, a telephone hotline and computerized information exchange system.

PPIC Repository

Repository: The repository of the PPIC is a hard copy reference library, housed at the U.S. EPA Headquarters Library, containing the most current pollution prevention information. This information exists in the form of case studies, fact sheets, programmatic and legislative information, training materials and videos. The repository can be visited at the Headquarters Library, Room M2904 (401 M. Street, NW, Washington, D.C.). For use outside the Washington, DC area, the Library maintains cooperative agreements with many academic, public, and special libraries to borrow or lend books, journals, and other research materials through interlibrary loan. Abstracts and titles of holdings can be viewed by accessing PIES (see below).

Hotline: Telephone service is avaliable to answer or refer questions on pollution prevention or the PPIC and take orders for documents distributed by the PPIC.

Hotline

202-260-1023
202-260-0178 Fax

Mail

Pollution Prevention Information Clearinghouse
Environmental Protection Agency, PM 211-A
401 M Street, SW
Washington, D.C. 20460

Pollution Prevention Information Exchange System (PIES)

Pollution Prevention Information Exchange System (PIES): A 24-hour electronic network consisting of technical databases, mini-exchanges that focus on specific pollution prevention issues, a calendar of events, hundreds of case study abstracts on pollution prevention, and message centers for interaction and exchange with participants. ICPIC and OzonAction are now also available by accessing PIES.

Users With a Personal Computer and a Modem

Anyone can access the PIES using either an IBM PC (or compatible), Apple, or a dumb terminal equipped with a modem (1200 or 2400 baud), and appropriate communications software. PIES is accessible through a regular telephone call, the SprintNet network and the EPA x.25 wide area network (for EPA employees only).The following communications software settings are required if you are calling the PIES on a regular telephone line:

Regular Phone Line

PHONE NUMBER:	703-506-1025
SPEED:	1200 or 2400
DATA BITS:	8
PARITY:	None
STOP BITS:	1

Note: Additional steps may be needed if you are accessing the PIES through a local area network (LAN) or a port selector. Consult your computer support personnel if you have one of these configurations. Contact the PIES Technical Support Office for information on how government employees can access PIES toll-free.

Upon first calling the PIES, you must answer some brief questions, and then select and enter a password (you must remember your password for subsequent calls to the system).

PIES Technical Support Office

703-821-4800
703-821-4775 Fax

SprintNet℠

SprintNet℠ is a data network subscription service that enables you to access PIES in most major metropolitan areas using a local telephone call. Users are billed for connect time through U.S. Sprint, thus saving long distance telephone charges. To access PIES through SprintNet℠ you must first obtain a SprintNet℠ account. If you already subscribe to this service, dial your local SprintNet℠ access number. At the @ prompt, type: c 202561311 (your SprintNet℠ account number)(your personal SprintNet℠ password to access the PIES). If you would like to receive information about how to subscribe to SprintNet℠, contact the PIES Technical Support Office. Note: SprintNet℠ is not affiliated with the U.S. EPA or the PPIC.

PIES User Guide

A PIES User Guide is available and may be obtained free of charge by leaving a message on the system addressed to "Sysop", or by writing or calling the Clearinghouse.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 8 1993

OFFICE OF ENFORCEMENT

Dear NEPA Contact:

Enclosed for your use is a document that has been prepared to support NEPA documentation of ecological resources and biodiversity. The document "Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents" was prepared for the Office of Federal Activities to assist NEPA reviewers in evaluating the ecological risks associated with the impacts of federal activities.

The publication of this document is important to our work here at EPA. The Agency has been elevating the importance of protecting aquatic and terrestrial ecological systems in following with the recommendation made by EPA's Science Advisory Board to attach as much importance to reducing ecological risk as it does to reducing human health risk. EPA believes that reducing risks to ecological quality offers the Agency one of its greatest opportunities to protect the environment. The role of NEPA will play an integral part in this ecological protection.

I hope you will find the document useful in considering ecological issues in your agency's NEPA documentation. Please feel free to make additional copies of the Habitat Evaluation document to give to other offices within your Agency. If you have any questions about the document or other ecological issues, please call Jim Serfis at (202)260-7072.

Sincerely,

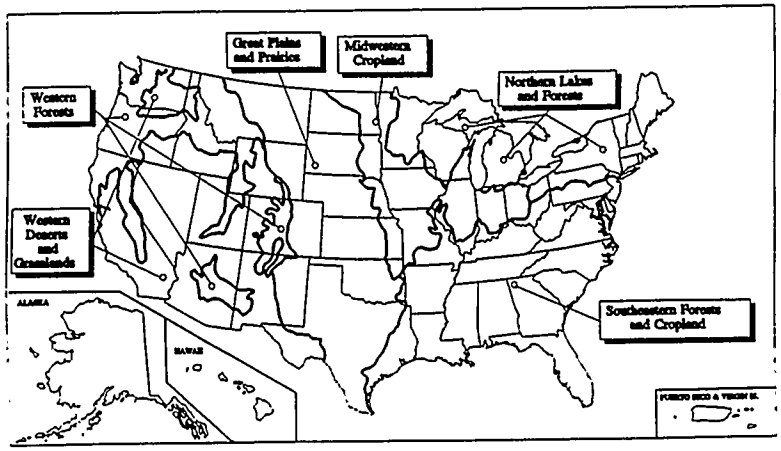
Richard E. Sanderson
Director
Office of Federal Activities

Enclosure

HABITAT EVALUATION:

GUIDANCE FOR THE REVIEW OF ENVIRONMENTAL IMPACT ASSESSMENT DOCUMENTS

January 1993



Office of Federal Activities
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

HABITAT EVALUATION:
GUIDANCE FOR THE REVIEW OF
ENVIRONMENTAL IMPACT ASSESSMENT DOCUMENTS

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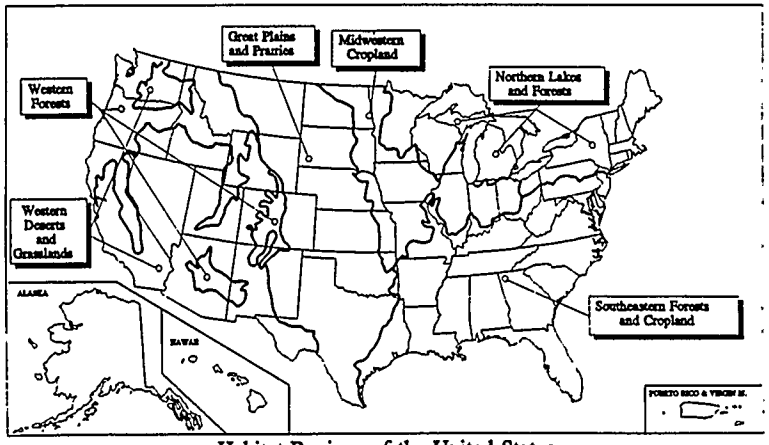
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INTRODUCTION

Based on the recent Science Advisory Board (SAB) report *Reducing Risk*, the U.S. Environmental Protection Agency (EPA) has concluded that habitat alteration and destruction are among the greatest risks to ecological and human welfare. The SAB specifically recommends that EPA consider reducing ecological risk to be as important as reducing human health risk. The recommendation states that EPA should protect ecosystems because they are essential to human health and a sustainable economy, and because they have intrinsic value.

This document is designed to assist NEPA reviewers in evaluating the ecological risks associated with the impacts of federal activities. The information provided will assist NEPA reviewers in developing informed comments for project scoping, EIS review, and section 309 analyses related to the issues of habitat loss and degradation. In particular, this document is designed to help reviewers recommend mitigations to prevent the loss of habitats. This document also should be useful to other EPA program offices and other federal agencies.

The first part of this document is a general discussion of habitat issues relevant to environmental analysis review; it should be read before the regional discussions. This section provides a basic description of habitat and its values, and of the degrading activities, impacts, and mitigations relevant to habitats in general. Eight *Regional Habitat Evaluation* sections, representing the six major habitat regions of the conterminous United States plus Alaska and Hawaii (see figure below), provide more specific



Habitat Regions of the United States

information on habitats of concern, values and trends, degrading activities and impacts, and potential mitigations. Specifically, each regional discussion includes a list of habitats of concern, a table of activities impacting habitats, and recommended mitigations for habitat conservation. Because each regional section considers only the major impacts affecting habitats in that region, reviewers should refer to different regions for discussions of other impacts that may be relevant to their specific project reviews. At the end of each section, basic guidelines are provided to aid in the environmental project reviewer's consideration of the full range of habitat impacts.

This document is not intended to serve as complete guidance or as a simplified checklist for environmental project review. In particular, this document focuses on activities occurring in the terrestrial environment, although impacts of these activities on wetlands and aquatic systems are also considered. Additional information on activities directly degrading aquatic systems should be reviewed where appropriate. It is expected that specific habitat issues relevant to the project site will be addressed, and that appropriate information on the ecology of the project site will be obtained. A list of useful institutional contacts is included with each regional discussion.

Habitat Conservation

Habitats are those environments or ecosystems that provide substantial ecological values and services such as fish and wildlife populations, nutrient cycling, water purification, and climate control. All natural areas contain definable units that can be called either ecosystems or habitats. In this document, the term habitat is equivalent to ecosystem and includes both the physical and biological components of the environment. All habitats are important for the conservation of ecological values at their specific location. However, certain habitats, and types of habitat, can be designated as "of special concern." For the purpose of this document, habitats of concern are defined as those sensitive environments whose degradation or loss results in significant diminution of ecosystem integrity or ecological values. The habitats of concern listed in this document represent the most obvious cases of loss of ecological values and services on a regional scale.

The following general discussion of habitat conservation begins with a summary of the important issues and steps involved in assessing habitats, follows with a working definition of habitats of concern, and continues with discussions of the values and services provided by habitats, the activities affecting habitats, the types of impacts caused by these activities, and potential mitigation measures to address these impacts on habitats.

Habitat Evaluation Methodology

The definition of habitat in this document is based on ecosystem values and functions. Therefore, it is necessary to present habitats as classes of similar ecosystems that contain a known set of ecological values and functions. The habitats discussed in this report are broad vegetation-based categories that include a range of more specific ecosystem types. While this document will categorize habitats and identify individual impacts, it must be remembered that each habitat is unique. An individual habitat must be evaluated in the context of its specific geographic location to determine its true value. At the same time, the effect of alterations to a habitat by degrading activities must be considered in terms of the impact on the entire landscape. Therefore, an ecological perspective is essential for the adequate consideration of habitat issues. This approach requires that the interactions of ecological components be

considered, and that the unique characteristics of each ecosystem be evaluated. The following considerations should be central to any process of habitat evaluation:

- Apply an **ecosystem-level perspective** that considers the full range of interactions among habitat components.
- Assess the **cumulative effects** that arise from the additive and synergistic impacts of several degrading activities occurring over time or space.
- Analyze the true **effectiveness of mitigation** measures in conserving natural habitats and their ecological values.

It is common for habitat considerations to be neglected within environmental analysis because of the difficulties of individual site-specific assessments. To better address the consideration of impacts to habitat in environmental analyses, regional information on the impacts to habitats of concern and their mitigation can be used. Therefore, the sections that follow describe general habitats that are threatened with loss or degradation from human activities. The condition of these habitats, the activities that affect them, and potential mitigations for the impacts that degrade them are discussed.

The application of this regional information should improve the quality of environmental analyses of all kinds. Along with an ecosystem perspective, attention to cumulative effects, and measures of mitigation effectiveness, the following steps can be used to incorporate landscape-scale considerations into both regional-level and site-level environmental analyses:

Step 1. Review the status and trends of habitats in the regions under consideration.

Step 2. Identify habitats of concern for the region that may occur at the site.

Step 3. Analyze the impacts of all activities on the functions and values of these habitats.

Step 4. Derive mitigation measures to eliminate or ameliorate the impacts on habitats of concern.

Habitats of Concern

Virtually all of the natural environments in the United States have been degraded to some extent by the impacts of human activities. Even relatively pristine ecosystems are affected by the loss of contiguous habitats and other changes to the landscape. Therefore, the most important criterion for designation of a natural area as a priority concern is the importance of a habitat to the ecological integrity (i.e., the health and natural functioning) of the larger landscape or eco-complex (*sensu* Polunin and Worthington 1990). In this way, a habitat may be thought of as analogous to a "keystone species" within a biotic community. For practical reasons, rarity is often the criterion by which a habitat's value is determined. However, in assessing the value of a habitat, rarity, ecological functioning, regional diversity, and other important attributes also should be considered.

Definition of Habitat

The standard definition of *habitat* is based in the environment of individual species; for example,

"Habitat is the environmental setting in which an animal or plant normally lives, grows, and reproduces" (NRC 1982);

and

"Habitat is the area which provides direct support for a given species, population, or community. It includes all environmental features that comprise an area such as air quality, water quality, vegetation and soil characteristics and water supply (including both surface and ground water)" (Fish and Wildlife Service, FR 46(15):7662-7663).

Although this definition has been important to the management and preservation of many individual species, it is inadequate for regional or global biodiversity protection efforts. Indeed, national inventories of species-specific habitat are not practical for most species, and in fact have been accomplished only for the critical habitats of endangered species (Flather and Hoekstra 1989). The need to address the conditions of a wide range of species, and biological diversity in general, requires an ecosystem approach to habitat inventory. For the purpose of this document, the following definition is used:

> Habitat - a natural environment composed of both living organisms and physical components that function together as an ecological unit.

In many contexts, this definition is synonymous with *ecosystem* or *sensitive environment*. It assumes that the natural condition of an environment is preferred because it represents a system that through evolution is most likely to provide the desired values of biological diversity and ecosystem functioning. Although the difficulties in classifying habitats or ecosystems have prevented the completion of adequate national inventories, different classifications have been used for specific purposes or for restricted locations. The National Wetlands Inventory of the U.S. Fish and Wildlife Service uses the widely accepted Cowardin classification system for wetlands and deepwater habitats (Cowardin et al. 1979). The U.S. Forest Service has used a variety of classification systems including the Forest and Range Environmental System (FRES) (Garrison et al. 1977) based on Küchler Potential Natural Vegetation units (1964) and Bailey Ecoregions (1976). The U.S. EPA has recently defined general classes of ecological resources for all habitat types as part of its Environmental Monitoring and Assessment Program (EMAP) (Hunsaker and Carpenter 1990). Greater resolution in habitat classification has been obtained by state natural heritage programs in coordination with The Nature Conservancy. Extensive natural heritage databases that once consisted of only species element occurrences now include "community" elements. At present, each state has a community classification, and many are working toward regional classifications. If this is accomplished, there will someday be national coverage of community types from which to base a quantitative assessment of habitats (Larry Master, personal communication).

Given the mixture of classification systems, systematic status and trends information is not available for most habitats (Southerland and Hirsch 1989). However, considerable information on the status and trends of individual species is available and can be useful in characterizing habitat status and trends. In fact, the Fish and Wildlife Service (FR 46(15):7662-7663) has developed the concept of evaluation species upon which they base analyses of environmental impact. The evaluation species include species of high public interest and economic value, and species that provide broad ecological representation. Environmental analyses can use identification of such "species of concern" as a useful starting point for identifying habitats of concern. Throughout this document, species status and trends will be included to the extent they reflect habitat conditions, but it must be remembered that they represent only a few of the many species in each habitat, all of which are required to maintain a healthy ecosystem and a full range of values and services.

General Habitat Types

Before colonization by Europeans, North America was covered from the Atlantic Ocean to west of the Mississippi River with diverse eastern deciduous forests of large oak, chestnut, beech, and maple; farther west spread a lush tallgrass prairie; beyond that was a semi-arid shortgrass prairie with regional deserts, grasslands, and coniferous forests (Norse 1990b). A nearly unlimited number of unique habitats existed within these regions, varying with soil conditions and topographic differences. The exploitation and manipulation of land by human activities has since eliminated or modified many of these habitats. This document uses the major land types of *forests*, *rangelands*, and *wetlands* to facilitate the identification of more specific habitats of concern. It focuses on habitat types that are repeated across the region and does not consider individual plant communities that vary with exact geographic location. The scale of these habitat types varies, and although a medium scale is applied in this document, it is important to remember that the following additional classes of habitats of concern should be considered in individual environmental analyses:

- Individual plant communities (e.g., those compiled by state natural heritage programs).
- Transitional habitats and functional mosaics of habitat, e.g., the sandhill-scrub-lake complex of the natural upland hardwood forest of Florida (Noss 1987).
- Landscape-scale ecosystems, or eco-complexes (e.g., the Chesapeake Bay watershed).

Values and Services of Habitats

Habitats provide the full complement of ecological values and services contained in a naturally evolved ecosystem. These include many services that have economic benefits, as well as aesthetic and moral values. All individual species values, overall biodiversity values, and ecosystem services are encompassed in ecological integrity. Therefore, it should be the objective of habitat conservation efforts to preserve the ecological integrity of habitats.

Species Values

Individual species are the values most often associated with habitats. Historically, commercial

timber species and crop plants, and game animals and sport fish have been the most prized species; subsequently, noncommercial plants, nongame birds, endangered species, and other popular species have received attention. Those interested in species preservation are now viewing habitat conservation as a means of protecting species "wholesale" (Waller 1991). This is in contrast to the single-species approach required by the Endangered Species Act, often referred to as "emergency rescue operations" (as in the cases of the California condor and black-footed ferret). The best example of the habitat-based approach is the effort of The Nature Conservancy which has adopted a "coarse filter" approach to protecting species based on protecting the natural communities in which they reside. This approach provides protection for the majority of species, including unknown and undescribed ones.

The most visible values of any habitat are the many plant species that make it up. Plants are prized for their intrinsic value and for their roles in ecosystem functioning. Recently, previously ignored species are receiving attention for their contributions to genetic diversity. There is also ample evidence of the importance of habitat to animal populations. Among state wildlife and fish management agencies, habitat loss ranked first in national priority for all species, for big game, for small game, and for waterfowl (Flather and Hoekstra 1989). Habitat also ranked second to barriers to migration in importance for sustaining anadromous fish populations. Wildlife management efforts have had their greatest success with species (big game and some endangered species) for which habitat is abundant. Species whose habitat is declining in amount and quality are currently, and will continue to be, most threatened with extirpation (Thomas 1990).

Biological Diversity

The interest in preserving particular species has broadened in recent years to encompass a concern for all biotic resources under the general term "biological diversity." The Office of Technology Assessment (1987) defines biological diversity as

> "The variety and variability among living organisms and the ecological complexes in which they occur";

while the Keystone Dialogue on Biodiversity on Federal Lands (1990) defines biological diversity as

> "The variety of life and its processes."

Both of these definitions emphasize that biological diversity, or biodiversity, entails all ecosystem components and includes the myriad functions and values provided by the living organisms in each habitat. The number and relative frequency of items that make up biological diversity may be organized along the continuum from genes to species to ecosystems. The overall amount of genetic diversity is decreased when species diversity is lowered, as is species diversity when ecosystem diversity is lowered. For this reason, habitat loss and ecosystem degradation are the principal causes of reductions in biological diversity. Essentially, the conservation of habitat is the conservation of the ecological complexes that constitute biological diversity. In addition, the preservation of biological diversity may be the best means of protecting overall biological integrity and ecological health. Preserving biodiversity means maintaining the integrity of the genetic structure within populations, the richness of species within ecosystems, and the mosaic of ecosystems within the landscape (Norse 1990b).

Ecosystem Services

Although the conservation of individual species and overall biodiversity are essential to maintaining the ecological integrity of a habitat, a wide range of ecosystem functions must also be protected. Using a broad definition, habitat, like the ecosystem, is characterized by a particular energy flow, nutrient cycling, and capacity for self-perpetuation (given radiant energy from the sun). The services that ecosystems perform include serving as a store or sink for energy or materials, providing a pathway for nutrient transport, acting as a buffer against chemical changes, and producing the natural resources people use such as minerals, wood, food, water, and air (Hollis et al. 1988). A comprehensive list of ecosystem values is shown in the accompanying box.

Ecosystem Values[1]

Climate control:
- CO_2 sequestration
- evapotranspiration
- shading

Geomorphological control:
- wave and wind buffering
- erosion control
- sediment trapping
- soil building

Water supply:
- groundwater recharge
- floodflow alteration
- water supply

Energy and nutrient exchange:
- energy fixation
- carbon uptake
- nutrient uptake

Purification of resources:
- sediment/toxicant retention
- nutrient removal/transformation
- pollutant detoxification

Biotic resources:
- biotic productivity and food chain support
- genetic conservation of biodiversity
- fisheries
- wildlife diversity/abundance
- aquatic diversity/abundance
- aesthetics/cultural heritage

[1]Adapted from Race and Christie (1982), Adamus et al. (1987), Hinckley (1990), and Nash (1991).

Activities Impacting Habitats

After identifying the habitats of concern, the next important step is the linking of these habitats to the activities that cause their degradation or loss. The following major activities may cause the degradation or loss of habitats:

- Land conversion to industrial and residential land use.
- Land conversion to agriculture.
- Land conversion to transportation.
- Timber harvesting practices.
- Grazing practices.
- Mining practices.
- Water management practices.
- Military, recreational, and other activities.

Environmental analyses of these activities arise during both broad programmatic reviews and specific project environmental impact statements. The following common projects entail significant impacts to habitats and may require federal review:

- Community and public land use development, including planning, regulation, and federal funding for building construction and highway development.
- Renewable resource use and development (logging and grazing) on public lands or requiring permits.
- Energy production, including petroleum, natural gas, and coal development, extraction, generation, transmission, and use.
- Non-energy mineral resource development, processing, management, transport, and use.
- Water projects and permits for wetland modification.
- Natural resources conservation, including protection of environmentally critical areas.

This document focuses on the direct physical effects of the aforementioned activities on habitat extent and quality. However, another important source of impacts on habitat is the contamination of ecosystems from the pollution of the air, water, and land. Habitat pollution is addressed, in part, by the air quality, water quality, and hazardous substances programs of federal and state regulatory agencies. Therefore, habitat impacts from the generation of toxic and waste materials from manufacturing processes and fossil fuel combustion are not specifically addressed in this document. The following are examples of activities contributing to the contamination of habitats that should be added to the considerations in this document when a complete environmental analysis is prepared:

- Industrial and municipal discharges into water (e.g., toxic chemicals and conventional pollutants) and emissions into the air (e.g., acid deposition, gaseous

phytotoxicants such as ozone, and global ozone depleting and greenhouse gases).

- Industrial and municipal waste dumps and landfills (e.g., asbestos and plastics in the marine environment).
- Agricultural contamination (e.g., pesticide spraying and nutrient discharges from cultivated fields and livestock feedlots).
- Mining waste discharges (e.g., mercury, arsenic, cyanide, crude oil, drilling muds, and saline-produced waters).
- Military accidental releases (e.g., nerve gas and plutonium).

The following sections briefly discuss the history and impacts of the major activities on habitats.

Land Conversion

The conversion from one land use to another is the activity most severely affecting terrestrial environments. The type of land conversion depends on the end use of the land. In each case, the original natural characteristics of the land are eliminated, and the associated ecological values are modified to varying degrees. Urban conversions, as well as other large industrial and commercial development projects, severely alter natural conditions, seriously disrupting ecosystem functions and eliminating most ecological values. Residential development in suburban and rural areas usually maintains some plant and wildlife values while disrupting the natural ecosystem processes of the area. Similarly, conversion to traditional agriculture alters the natural vegetation and ecological processes while still providing some hedgerow areas for wildlife populations. Large-patch industrialized agriculture, however, usually removes all wildlife habitat. Conversions to industrial, residential, and agricultural uses occur on many scales, but often cover very large areas. In contrast, conversions to highways, railways, and power lines affect terrestrial environments more by fragmentation than by total area converted. Landfills and the development of recreational areas are other kinds of land use conversions, but ones that cover relatively small areas.

Land Conversion to Industrial and Residential Land Uses

Conversion of natural environments to industrial, commercial, and residential land use continues to increase with population and with the general suburbanization of many previously natural areas. The large urban areas of the east and west coasts continue to grow, reducing the natural areas in the corridors between them. Land conversion due to infrastructure construction and landfills also contributes to the development pressure on natural areas near urban centers. Urban growth is most rapid in the Sun Belt states.

Urban and suburban conversion of terrestrial environments is also occurring throughout the country as "spinoff development" following new road construction. Even in areas of relatively little or no overall population growth (such as the Northeast), spinoff development is a major cause of forest fragmentation and the decline of wildlife and bird populations. This effect is augmented by the increasing frequency of second home development in previously undeveloped regions.

Arid environments in the Southwest are rapidly being converted to urban and residential uses as a result of population growth. The Southern California region is a classic example of suburban sprawl where roadways, residential communities, and commercial development have expanded into previously pristine environments. Many underappreciated desert habitats are at risk because of this continued land conversion. Riparian areas are another environment at risk in the West from land conversion to industrial and residential development. Because of their proximity to water and their desirability for industrial and residential use, riparian areas are being disproportionately destroyed. Also because of their proximity to water, riparian areas are critical for many migratory bird and wildlife species.

Land Conversion to Agricultural Uses

The United States uses a large part of its available land area for livestock and crop production, an area totaling more than 900 million ac (U.S. EPA 1989). Over 400 million of these ac. are classified as cropland. More than 50% of this area is in the corn and wheat growing regions of the Midwest Cropland and Great Plains and Prairies Habitat Regions. Land conversion to agriculture has stabilized in recent years, and much of the conversion to urban uses is now occurring on old agricultural lands. Conversion to agriculture continues to be a regional problem depending on the pricing variability of specific crops. For example, bottomland hardwoods in the South have recently suffered from extensive conversion to soybeans.

Although total agricultural acreages are not changing, many important wildlife habitats are being lost as a result of large-patch agriculture, which causes the elimination of fence rows and ditch banks. Current agricultural practices, and certain "conservation" programs, provide incentives for cultivating previously uneconomical areas. For example, the construction of grass waterways in riparian areas is destroying wildlife habitat rather than conserving it.

The loss of riparian and bottomland hardwoods to agriculture in the Southeast represents one of the most significant losses of ecological values of terrestrial environments. Similarly, the conversion of wetlands and adjacent grasslands in the central and western United States is another impact that has had serious consequences for ecological values, in particular waterfowl populations in the Prairie Pothole Region and along the Pacific and Mississippi Flyways.

Land Conversion to Transportation Uses

Construction of highways, railways, and power line right-of-ways contributes to the degradation of terrestrial habitats, especially in less developed areas. Although the actual areas converted are small (27 million ac) the fragmentation of habitats is often severe (Frey and Hexem 1985). Powerlines and other transportation routes can be described as "disturbance corridors" that disrupt the natural, more homogeneous landscape (Barrett and Bohlen 1991). In forested environments, these disturbances cause (1) dramatic physical disruption to the continuous vegetative community; (2) disruption to the structure and function of wildlife habitat; and (3) impacts to resident wildlife, which must negotiate, tolerate, and cope with the habitat barriers. In addition, disturbance corridors created by forest fragmentation provide habitat for early successional plant and animal species. They replace forest trees with grasses and shrubs so that forest-interior species cannot nest. While they provide dispersal routes for small mammals such chipmunk and white-footed mice, they present barriers to many species.

The impacts of highway construction also represent an important problem in cumulative impact

assessment. Although individual road segments are usually evaluated for potential environmental impact, it is actually the combined effect of the entire highway system that most seriously degrades terrestrial and wetland environments. In addition, the cumulative impact of several highway systems can seriously disrupt migratory pathways. As mentioned above, the building of roads is invariably accompanied by additional land conversions to industrial or residential use.

Both forested and nonforested environments can be disrupted by fragmentation due to highway construction. However, the dense canopy structure of certain shrublands may be most severely impacted by fragmentation. An example is the fragmenting of pocosin wetlands and uplands in the Southeast. Because of the scale at which many pocosin inhabitants move, highway development can effectively isolate much of the pocosin fauna.

Timber Harvesting

Since the early 1600s, 20 to 40% of the nation's original forest cover has been converted to other land uses, and much of what remains has been substantially altered as a result of past logging. Regeneration of timbered areas is increasing forest acreages in the East, but these numbers are more than offset by timber harvests in the West. Many of the remaining forests of the United States are being altered by timber harvesting practices that fragment, simplify, and degrade natural forests. The combination of clear cut logging and road building increases forest fragmentation and soil erosion. The clear-cut natural stands are often replaced with fewer and different tree species resulting in the loss of old-growth trees and natural forest habitats essential to a wide variety of wildlife.

Forest habitats are the forum for the most acute biodiversity issues facing the nation, including (1) decreases in contiguous old-growth forest that support the spotted owl in the Northwest, (2) the loss of old pines needed by the red-cockaded woodpeckers in the Southeast, (3) increased habitat fragmentation and forest edge causing declines in forest-interior songbirds, and (4) increasing ungulate populations in the East and Midwest (Waller 1991). These problems are primarily the result of clear-cut logging and the institution of short-rotation single-species plantations. All timber harvesting activities affect forests in two ways (Cutter et al. 1991):

- Like natural fires, timber harvesting allows sunlight to reach the ground and stimulate new growth, while the slash (limbs too small to use) contributes to increased nutrient release. Thus, like fire, harvesting is a catastrophic but temporary disruption that removes large amounts of soil, nutrients, and biomass from the ecosystem, changes water yields, and increases stream temperatures.

- Unlike natural disturbances, timber harvesting involves road building and the use of heavy equipment on the land; this causes damage and compaction to the soil surface and accelerates soil erosion beyond the rates following fires. Especially along steep slopes, surface erosion and landsliding produce heavy sediment loads to streams, degrading aquatic habitats and damaging fish and invertebrate populations; the loss of biomass in the form of logs slows reestablishment of new growth, and the lack of fire may retard regrowth from fire-adapted seeds.

The major impacts of timber harvesting on forest degradation and loss include four major problem areas that can be addressed on a national or regional basis:

- Loss of old-growth forests.
- Effect on critical ecosystems (such as Greater Yellowstone).
- Decrease in roadless areas or wildlands.
- Impacts of silvicultural practices (such as clear cutting).

Grazing

Widespread devastation of rangelands resulted from uncontrolled overgrazing between 1880 and 1935, and the damage was amplified by the drought years of the 1930s (Branson 1985). The enactment of the Taylor Grazing Act of 1934 reduced grazing pressure at that time. With the advancement of range management science and the moist years following 1960, range vegetation improved considerably. However, the U.S. Forest Service (1989) reports that 21% of its rangelands were still in "unsatisfactory" condition. The Bureau of Land Management (1989) reports that BLM rangeland condition is 33% good or better, 38% fair, and 13% poor.

Although the total area of rangeland has remained relatively constant, the condition of the range ecosystems has varied considerably with competition by livestock for forage and other factors. Cattle, sheep, and wild horses and burros have contributed to reduced forage and to changes in vegetation composition on the majority of U.S. rangelands. Grazing and fire suppression have allowed brush species to replace many of the grass forage species on 200 million ac of the Southwest (National Association of Conservation Districts 1979). As with forest habitats, the fragmentation of rangeland vegetation can negatively affect native fauna and ecosystem health.

Unfortunately, traditional rangeland improvement measures often run counter to wildlife conservation. Herbicides reduce vegetation diversity, as do practices that till under sites and convert vegetation to nonnative species, usually replacing pinyon juniper with exotic grasses. Management of brush invasion in the southwestern deserts, savannas, and southern Great Plains is perhaps the greatest problem affecting rangeland wildlife. While deer and turkey populations have increased, native range forage is reduced by the invasion of mesquite, juniper, cacti, acacia, sand sagebrush, creosote bush, tarbush, whitebrush, yucca, and others. Mechanical or chemical reduction of these scrubs, as well as sagebrush in the Northern Plains, decreases forage for many species including prairie chicken, sage grouse, quail, and pronghorn.

Grazing is also detrimental to hardwood forests, riparian habitats, and areas where livestock compact root systems or increase erosion. In general, grazing reduces structural diversity of forest understory (by eliminating plants, altering species composition, modifying growth form, and shifting seral stages) and can negatively impact forest bird communities. Of particular concern are the impacts of grazing on forested riparian zones, which support the majority of species in the rangeland environment.

Mining

Millions of hectares of marginal and barren land can be found in the United States, much of it due to mining activity. These areas are a source of acid mine drainage, surface runoff, erosion, and sedimentation, which create water pollution and land degradation problems. Mining activities leave a harsh environment for vegetation because of the lack of nutrients and organic matter, low pH, low water-retaining capacity, toxic levels of trace metals, compaction, and poor physical conditions of spoil material (Sopper 1988).

It is important to note that mining often occurs on the mountain-plain ecotone, an area of special importance to wildlife. Nonetheless, mining disturbs relatively less land area than other activities affecting terrestrial environments. Only 5.7 million ac were disturbed between 1930 and 1980 by surface mine excavation, subsidence from underground workings, and disposal of mining wastes. Additional areas have been impacted by haulroads, reservoirs, and railroads and highways to mining properties. Stream habitats have been affected by acid drainage and sedimentation. The greatest potential for increased mining impacts exists in the area of exploration and extraction of fossil fuels.

Nearly half of all U.S. land used for mining is concentrated in the states of Pennsylvania, Kentucky, West Virginia (2% of each state) or in Ohio, Illinois, and Indiana (1% of each state). California and Florida have also mined more than 250,000 ac (Johnson and Paone 1982). Intense mining also occurs in the Arizona copper region and the northern Minnesota's Mesabi Iron Range. Among federal lands, 732 million ac are available for leasing to surface and subsurface mineral development, the majority in the west and Alaska; currently, 95 million ac are leased to oil and gas, 2 million to geothermal, and 1.3 million to coal (USDA Forest Service 1989).

Mining impacts are substantial but variable depending on the mining method, the mineral, the processing technology, and the ecological nature of the site. Impacts include destruction or impairment of fragile ecosystems and wildlife habitats, contamination of surface and subsurface water supplies and soils from toxic chemicals and radioactivity, and adverse effects on scenic values.

Water Management

Damming activities, impoundments, and water diversions for municipalities, industry, and agriculture severely affect the natural water supply, resulting in the destruction of terrestrial, wetland, and aquatic environments. In particular, the reduction of streamflow from diversions of water for other uses adversely affects riparian habitats in the Southwest. The Corps of Engineers stream channelization projects affect large areas of both terrestrial and aquatic environments. In fact, few streams or waterways still run free to the ocean without diversion or management that affects their natural flow. The inundation of large areas for flood control and water supply has decreased in recent years, but still constitutes a major impact on local environments. In the Mississippi Basin (mid-south Alabama, Tennessee, eastern Texas, and Oklahoma), considerable acreage of bottomland hardwoods was lost to reservoir development between 1962 and 1985 (Gosselink and Lee 1987).

Changes in water quality, flow, and dam passage affect the success of anadromous fish populations, including recreationally important game species. In addition to the intrinsic value of these species, the degradation of important aquatic resources has a detrimental effect on many terrestrial systems, including migratory birds and riparian forests. The importance of wildlife impacts from hydropower activities is evidenced by the provisions for wildlife habitat mitigation in the Columbia Basin under the Northwest Power Act (Brown 1988).

Recreational, Military, and Other Activities

Several other human activities can seriously affect terrestrial environments. The introduction of nonnative species into wild areas also has the potential for devastating alterations of terrestrial habitats. Even nonconsumptive human activity (e.g., recreational hiking and camping) can seriously affect natural ecosystems.

Recreational activities are the principal reason for human intrusion into natural environments. Hiking and camping have a minor but significant impact on natural forests, rangelands, and desert ecosystems. The amount of disturbance is proportional to the volume of activity and the proximity to population centers; access by roads is the determining factor. Cole (1989) has estimated vegetation loss as a result of camping, concluding that his sample campsites had absolute vegetation losses of 37 to 85%. Off-road vehicles (ORVs) can have even more severe impacts on local terrestrial habitats. In particular, ORV races can devastate fragile desert ecosystems. These environments are very slow to recover and often include rare endemic species. In addition to many rare plant species, the endangered desert tortoise is at risk. Skiing and other winter sports are examples of activities that impact relatively isolated mountain areas. These activities are often accompanied by the more deleterious effects of land use conversion into resort development.

Military maneuvers and other training or testing activities can also have significant impacts on terrestrial environments. Bird communities and certain small mammal populations were negatively affected by Army training maneuvers in the Mojave desert (Krzysik 1984). The management of military installations in the Southeast has serious implications on the survival of the endangered red-cockaded woodpecker. Both physical disturbance (especially from tracked vehicle activity) and noise contribute to habitat degradation from military activities.

Exotic species have been introduced into natural areas for game hunting, and as biological controls for other pest species. Accidental releases have also had major negative impacts on natural habitats and native species. Indeed, the entire eastern deciduous forest ecosystem has been permanently altered by the chestnut blight; the loss of tree mast likely precipitated the extinction of the common passenger pigeon. Similarly, the outbreak of dutch elm disease also contributed to the degradation of riparian habitats in the Midwest. Today, severe habitat impacts from exotic species are most prevalent in Hawaii.

The Hawaiian archipelago has lost more than 75% of its original endemic land bird fauna through prehistoric and historic extinctions; the comparable Galapagos archipelago as a whole is not known to have lost a single land bird species (Loope et al. 1988). The aboriginal Hawaiians converted most of the land below the 600-meter elevation to agriculture on the eight main islands. Subsequently introduced species and factors contributing to habitat destruction include herbivorous mammals (goats and pigs), predation by ants, frequent and intense fires, dogs, cats and mongoose, alien arthropods, mollusks, and alien plants. More than 80 vascular plant species in Hawaii currently pose threats to the native biota.

Types of Impact to Habitats

The degrees of impact caused by each of the aforementioned activities varies both within and among different kinds of activity. The level of impact is determined both by the intensity and extent of the activity, and by the specific type of impact on the habitat of concern. The impacts to habitats, and to their values and functions, from the activities discussed in the previous section fall into four general categories:

- Destruction of habitat.
- Fragmentation of habitat.
- Simplification of habitat.
- Degradation of habitat.

The nature of these impacts depends on the specific stress created by each activity. In most cases, a single activity will include several stressor processes that impact habitat. For example, the activity of logging a forest includes removal of the trees, associated drying of the forest floor, erosion and sedimentation of nearby streams, and disturbance from noise and human activity. The major stressor processes affecting habitats include the following:

- Vegetation removal.
- Dehydration and inundation.
- Erosion, sedimentation, and soil compaction.
- Eutrophication.
- Acidification.
- Salinization.
- Thermal warming.
- UV-B exposure.
- Contaminant toxicity.
- Noise and visual disturbance.
- Introduced species.

These stressor processes can result in the following effects on habitat:

- Direct mortality of resident species.
- Physiological stress and decreased reproduction.
- Disruption of normal behavior and activities.
- Segmentation of interbreeding populations.
- Modified species interactions and alien species invasion.

Although all of the stressors affecting habitat can have serious impacts, physical alteration of habitat has eclipsed intentional and incidental taking as the major cause of population reduction among species. At greatest risk are the following groups of species: large terrestrial mammals, bats, hole- and ground-nesting birds, amphibians, snails, conifers, herbs, grasslands, freshwater stream organisms, river fishes and mollusks, and estuarine vegetation (Norse 1990b).

Traditional impact analyses have concentrated on degradation of habitats from contamination. The focus of this analysis is on the loss and degradation of habitat through direct conversion and exploitation of the ecological resources. Although these stressors usually have a much greater impact, additional impacts from contamination should also be considered. In addition, it is important to consider the cumulative impact of multiple effects and the indirect effects of activities. The following sections discuss the different kinds of impacts on habitat.

Destruction

The ultimate form of habitat degradation is the destruction of a natural ecosystem through its "conversion" to another land use. In each conversion, the original natural characteristics of the land are eliminated, while the associated habitat values are modified to varying degrees. Occasionally, wildlands (providing ecosystem services and wildlife values) that have been converted to managed lands (providing harvestable timber or agricultural crops) can be restored to a similar, although not identical, natural state. In contrast, lands converted to urban or industrial uses virtually never recover their ecosystem integrity or habitat values.

Physical alterations of many kinds cause habitat destruction. In terrestrial environments, the clearing of vegetation (trees, shrubs, grasses) is the principal stressor. The greatest impacts occur when vegetation removal is accompanied by leveling operations (that destroy the original topography and soil profile) and building or road construction (covering the area with permanent structures). The burning of vegetation and the creation of landfills for waste disposal are other means of destroying terrestrial habitats. Clear-cut logging and severe overgrazing can also clear habitats of native vegetation.

In wetland environments, filling and draining operations destroy wetland habitats and create modified terrestrial habitat, while impoundments flood wetlands to create deepwater aquatic systems. As with terrestrial environments, the construction of buildings or roads can eliminate wetlands. The extraction of peat can also destroy wetlands. In aquatic environments, the inundation or diversion of water through flow alteration (via damming or channelization) is the principal means of eliminating habitat. Dredging, filling, and draining also destroy aquatic habitat.

Fragmentation

While all the activities mentioned in the previous section can result in the destruction of entire habitat types, they often only destroy part of a habitat, leaving other areas intact. Depending on the scale of concern, many instances of local habitat destruction are better thought of as habitat fragmentation. The interruption of a river with a reservoir, the clearcut logging of mature forest, and the building of a road through a salt marsh are all examples of habitat fragmentation (Norse 1990b).

Such fragmentation is the principal cause of loss of "area-sensitive" species (Harris 1985) and the most serious threat to biological diversity (Wilcox and Murphy 1985; Harris 1988). The consequences of habitat fragmentation (Harris and Atkins 1990) include the following:

- Amplification of mortality and inbreeding (i.e., risk to sedentary species from random variation in demographic and genetic variables when isolated).
- Extinction of wide-ranging species (e.g., wolves, black bears, panthers, manatees).
- Loss of interior or area-sensitive species (e.g., sharp-shinned hawk, Cooper's hawk, Swainson's warbler, red-cockaded woodpecker).
- Erosion of genetic diversity from within rare species.
- Increased abundance of weedy species (regionally distinct communities give way to globally homogeneous ones).

As an example, only 2 of 11 native large mammals in Florida (the raccoon and white-tailed deer) are doing well in the face of increasing fragmentation of natural habitats. Other examples of negative impacts from fragmentation include the spotted owl; the Spotted Owl Committee proposed that habitat conservation areas (HCAs) be linked by forests with a minimum canopy closure. Studies in Maryland, Michigan, and Oregon show that the occurrence of most forest-dependent species is correlated with forest

size; contiguous forests of 100 to 300 ac are needed by area-sensitive birds, primarily long-distance, insectivorous, neotropical migrants, such as flycatchers, vireos, and wood warblers (Jahn 1991).

Simplification

Habitat simplification includes the removal of ecosystem components such as standing dead trees, cover logs, or stream debris; the death of sensitive submerged plants from siltation; and the loss of microhabitats (such as nests and dens) that are rendered unusable by human intrusion. Universally, the removal of vertical habitat structure reduces the diversity of species. Structural diversity provides more microhabitats (e.g., nest sites) and allows for more complex species interactions (e.g., avoidance of predation and partitioning of foraging space).

While forest clearcutting is both a form of destruction (for the forest stand) and of fragmentation (for the forest watershed), selective logging of preferred tree species is a form of habitat simplification. This is in contrast to timber harvesting practices that are nonselective and often closely mimic natural stand conditions. During selective cutting, not only does the composition of tree species change, but logging creates more extreme microclimates that are usually hotter, colder, drier, and windier than in natural forests. The immediate impact on resident species is the desiccation of forest plants, fungi, slugs, and salamanders that require moist conditions (Norse 1990b).

Within rangeland systems, ecosystem integrity is maintained through the balance of native grass and shrub species. Grazing by domestic livestock can selectively remove species and facilitate the invasion of exotics. In most cases, the proliferation of nonnative species results in habitat simplification that is detrimental to native birds and other wildlife.

Degradation

Degradation of habitats can include the fragmentation or simplification of habitat structure, but more specifically refers to a decrease in the health or ecological integrity of the "intact" habitat. Chemical contamination resulting from air or water pollution is a significant cause of habitat degradation. Although toxic effects may be the most severe, conventional pollutants and other effects may exist in greater frequency and extent. For example, soils are degraded through erosion or soil compaction. Lakes are particularly sensitive to eutrophication and acidification. Rivers and streams can be degraded by nutrient enrichment, as well as siltation and turbidity. Salinization and salt water intrusion also degrade habitats, as do temperature modification and noise. Underground water sources and their contributions to ecosystem integrity can be degraded by activities, such as irrigation and mineral mining, that result in the draw down of aquifers. The invasion of exotic plants and animals can seriously degrade natural systems through modified species interactions. Global climate change, including increased temperatures and UV-B exposure, has the potential to degrade habitats of all kinds.

Vulnerability to Impacts

The impacts of degrading activities on habitat depend on the vulnerability of the habitat and the relative contributions of other cumulative and interactive impacts. A habitat's sensitivity is determined by its resistance to change (i.e., its ability to resist degradation) and its resilience (i.e., its ability to recover its original condition) (Westman 1978). Resistant habitats often have intrinsically stable and fertile soils, moderate rates of water movement, mild climate regimes, and food webs that are functionally

diverse and contain individuals or species preadapted to the particular stress. Resilient habitats are often topographically low and proximate to unstressed habitats containing highly mobile colonizers (Sedell et al. 1990).

Species are usually more vulnerable to anthropogenic impacts if they possess small effective population size, narrow geographic distributions, large area requirements, specialization, intolerance of disturbance, large size, slow reproductive rate, evolutionary naivete, or "amphibious" habits (Norse 1990b). Vulnerability characteristics of habitats or ecosystems (and the stressor to which they are vulnerable) are listed below:

- Impermanence (suppression of fire frequency).
- Oligotrophy (alteration of nutrient cycling).
- Undersaturation (biological invasion).
- Isolation (elimination of recolonization).
- Small size (impacts on edges).
- Proximity to human populations (disturbance).

The undersaturated naive biotas of the Hawaiian Islands and southern Florida are especially susceptible to many stressors, including invasion by exotic species. All habitat areas are vulnerable to unprecedented permanent major changes in environmental conditions. Unlike periodic natural disturbance (such as fires, windthrow, and flooding), global atmospheric change (e.g., warming and increased UV-B or CO_2) and the introduction of alien species pose challenges beyond the capabilities of most natural systems. Perhaps the greatest threat to biodiversity is the impending interaction between climate change and habitat fragmentation.

General Mitigation Procedures

Appropriate measures for the mitigation of habitat loss or degradation depend on both the habitat type and the specific degrading activities, stressor processes, and habitat impacts. Specific mitigation information is provided in the regional sections of this document. In this section, general considerations for habitat mitigation are discussed. For a mitigation to be successful, the ecological integrity of the habitat must be maintained. This can be accomplished directly by preservation measures that avoid impacts. In other cases, careful mitigation plans can reduce or eliminate impacts on the integrity of the habitat.

Habitat Integrity

Traditionally, mitigations have concentrated on species-specific habitat components such as the availability and appropriate interspersion of cover, food, and water. Other species requirements include protein-rich foods, den or nest sites, and territorial spacing or colonial clustering, and may vary seasonally, especially among migratory waterfowl and anadromous fish. Greatest attention has been paid to the diversity of habitat structure, both vertical layering and horizontal edge or transition zones, that provide for greater species and ecological diversity. While these considerations are appropriate for mitigations focusing on certain species or individual site diversity, they do not incorporate landscape-level concerns for regional diversity. For the purposes of this document, mitigations of habitat degradation will focus on the ecological integrity of the habitat of concern and not on the species or diversity components that may be desirable from a wildlife management point of view.

Recent research has indicated that floristic (plant species) diversity is superior to structural (number of vegetation layers and patches) diversity as an indicator of wildlife distribution. This emphasizes the need to avoid oversimplification in habitat analyses and to look at the detailed ecology of each habitat and define it in precise ecological terms. Natural habitats are dynamic ecological systems that require natural patterns of disturbances. Proper mitigation plans must provide for natural habitat heterogeneity in time and space. An important tool for providing natural disturbance patterns is fire management. Proper use of controlled fires can be an effective mitigation of the impact of fire suppression in managed areas.

Mitigation for habitat conservation must ensure that the cumulative impacts of all activities within the landscape (perhaps over areas of 10,000 to several 100,000 ac) are addressed to maintain ecosystem integrity and health. The preservation of individual habitat areas is often not sufficient to maintain the ecological integrity of the greater ecosystem. In addition, the size, diversity, and distribution of key habitat tracts must be conserved to provide for the natural diversity characteristic of the larger eco-complex or region. Finally, unique ecosystems (such as islands) may require unique mitigation solutions (Samson et al. 1991).

Mitigation Guidance

Mitigations to address the habitat impacts of destruction, fragmentation, simplification, and degradation include the following four measures (modified from Flather and Hoekstra 1989):

1. Preservation
   - Outright purchase or set aside of land
   - Partial purchase through conservation easements, long-term leases, or management agreements.

2. Management practices
   - Rotation and method of timber harvesting
   - Timing and extent of grazing
   - Control of pollution
   - Elimination of structures.

3. Restoration
   - Direct manipulation through seedings, plantings, physical or chemical treatment
   - Creation of wetlands
   - Control of pollution
   - Removal of barriers to fish migration
   - Control of livestock access to riparian areas.

4. Compensation
   - Purchase of lands of comparable habitat size and quality
   - Provision of financial restitution.

A more detailed set of Mitigation Means and Measures (in general priority order) has been devised by the Fish and Wildlife Service for mitigation development related to fish and wildlife and their habitats (FR 46(15):7660, 1981). This list is provided in the accompanying box.

U.S. Fish and Wildlife Service
Mitigation Means and Measures

A. Avoid impact
1. design project to avoid damage or loss including management practices such as
   - timing of activities or
   - structural features such as multiple outlets, passage or avoidance structures, and water pollution control facilities
2. use nonstructural alternative
3. cancel project

B. Minimize impact
1. include conservation of fish and wildlife as authorized purpose
2. locate at least environmentally damaging site
3. reduce the size of the project
4. schedule timing and control of construction and maintenance to minimize disruption of biological community structure and function
5. use selective tree clearing or other habitat manipulation
6. control water pollution through BMPs
7. time and control flow diversions and releases
8. maintain public access
9. control public access for recreational or commercial purposes
10. control domestic livestock use.

C. Rectify the impact
1. regrade disturbed areas to contours for optimal habitat or original condition
2. seed, fertilize, and treat areas to restore fish and wildlife
3. plant shrubs and trees and other vegetation to speed recovery
4. control pollution spoil areas
5. restock fish and wildlife in repaired areas

D. Reduce or eliminate the impact over time
1. periodically monitor to ensure continuous operation of mitigation
2. train personnel properly to preserve fish and wildlife
3. maintain or replace equipment or structures to prevent loss due to equipment/structure failure

E. Compensate for impacts
1. conduct wildlife management activities to increase habitat values; give priority to project lands and nearby public lands
2. construct habitat to fully restore and rehabilitate altered habitat, or to modify existing habitat suited "evaluation species" to completely offset habitat value losses
3. designate fish propagation facilities
4. designate legislative set-aside or protective designation for public lands
5. designate buffer zones
6. lease habitat
7. acquire wildlife easements
8. acquire water rights
9. acquire land in fee title

Mitigation Principles

The development of specific mitigation plans must be based on a thorough understanding of the site conditions and the activities impacting habitats. Nonetheless, certain basic principles of ecological management should be followed when specific mitigation measures are developed. The following seven general mitigation principles apply to all habitat conservation efforts:

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts from activities and revise mitigation plans as necessary.

A landscape or ecosystem-level perspective is central to these principles. R. Max Peterson (Emeritus Chief of the Forest Service and Executive Vice President of the International Association of Fish and Wildlife Agencies) stated that "when land is cleared, care must be taken to maintain the minimum size areas of sensitive habitats, with buffers and corridors as needed to ensure the integrity of the landscape ecosystem" (Giltmier 1991). The concept of providing for landscape integrity when habitats are fragmented is central to habitat mitigation in forest, rangeland, wetland, and aquatic systems. The two most important methods for maintaining the integrity of fragmented habitats are (1) the provision of buffer areas, and (2) the creation of habitat corridors. Buffers represent the principal method of avoiding impacts to sensitive areas, and habitat corridors provide the best means of mitigating habitat isolation. The most common means of creating both buffer areas and corridors is the preservation of natural habitat along streams, steep slopes, and other sensitive areas.

Habitat Buffers

The preservation of a habitat of concern includes both the avoidance of direct conversion of the area and the maintenance of adequate buffer areas so that edge effects and other negative impacts do not affect the sites. For example, powerline corridors through forests can be "feathered" to avoid some edge effects (Gates 1991). Additional areas adjacent to the corridor can be cut to create successional bands of vegetation parallel to the corridor opening; this reduces predation rates at the edge and minimizes the barrier effects. However, a wider edge results in less forest interior.

Mitigation procedures for many projects can be designed to reduce the effective width of a cleared area and thus decrease the barrier effect. These include creation of small lobes or peninsulas of dense

vegetation reaching into the open area, or the creation of entire breaches across the area, either by leaving the habitat intact or by staggered defoliation regimes. The establishment of a stable shrub community in a forest corridor can provide movement by less mobile animals with small home ranges (Niering and Goodwin 1974).

Research into the impacts on benthic invertebrate communities of streams indicates that buffer strips of at least 30 m are required to prevent alteration in invertebrate diversity and ecological structure (principally the increase in abundance of pollution-tolerant taxa such as chironomids). These buffer strips serve to maintain riparian canopy and stream channel stabilization. Failed road crossings also negatively impact stream ecosystems (Erman et al. 1977).

Habitat Corridors

Mitigation of habitat fragmentation involves the restoration of habitat "connectivity" (Norse 1990b). To address the effects of fragmentation, conservation biologists are calling for increased provision of habitat corridors. Unlike untested management plans based on island biogeography theory, corridors have been used successfully in wildlife management for 50 years (Harris and Atkins 1990). Corridors provide for the movement of animals, serve as a population source, contain whole communities, and withstand natural disturbance events, but they also provide for contamination transmission (Csuti 1991). Because edge effects reach 200 to 600 m into the forest, Pace (1990) recommends a minimum corridor width of 6.4 km to mitigate edge effects.

In a landmark court decision concerning the USDA Forest Service timber sales in the Klamath National Forest, federal agencies were required to consider an area's importance as a "biological corridor" linking wilderness areas before permitting logging. The resultant Klamath Corridors Proposal can serve as a model of habitat fragmentation mitigation (Pace 1990). It recommends connectivity as superior to isolation, continuity over fragmentation, and creation of larger rather than smaller corridors.

Mitigation Measures

The first priority in developing mitigation plans for habitat loss or degradation should be avoidance of the impact. This is usually a siting issue, where construction operations and degrading activities are located at a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern. Failing effective management, mitigation falls to the restoration of habitat, which is often problematic, or finally to compensation.

Restoration activities will not be discussed in this document, although they are receiving increased attention as mitigation measures, especially in wetland and aquatic systems. The recent volume produced by the National Research Council (1992) provides a comprehensive discussion of the science, technology, and public policy involved. Many of the principles espoused in this book also apply to terrestrial systems.

This document focuses on the general management practices that can be undertaken to mitigate habitat degradation and loss resulting from activities in forest and rangeland environments. A central tenet of the management approach to habitat mitigation is the control of pollution. This is especially true for wetland and aquatic systems where, after physical alteration, off-site impacts to hydrology and water quality pose the greatest threat. There is also a growing body of literature on best management practices

(BMPs) as mitigation measures for aquatic systems. Notably the nonpoint source, clean lakes, and national estuary programs of EPA are promoting BMPs to protect sensitive habitats. Many of these measures apply to wetlands and are being implemented under section 404 of the Clean Water Act and provisions of the Coastal Zone Management Act. The reader should refer to these programs for additional information on mitigating impacts to wetland and aquatic systems.

In contrast to aquatic systems, forests and rangelands are primarily threatened by direct exploitation of their resources (trees and forage grasses). Specific guidance on mitigation measures is provided in each regional habitat evaluation section. The following discussion addresses general mitigation issues for timber harvesting and grazing methods.

Timber Harvesting Mitigation Methods

At a minimum, the production of commercial wood products from an area must not exceed the sustainable level if the ecological integrity of a forested area is to be maintained. Where sensitive forest types exist, logging may be completely prohibited or constrained to specific methods to prevent habitat loss or degradation. In other areas, more extreme harvesting methods may be allowed or prescribed to establish or maintain desired forest conditions. Acceptable methods will vary according to local forest ecology and the desired future condition of the site. Analysis of harvesting techniques must be based upon an analysis of the structure and diversity of the forest canopy, midstory, and understory.

A recent directive of the Chief of the U.S. Forest Service acknowledges this fact and points out that clear cutting is acceptable only when needed to replicate natural ecological processes. Selective cutting can preserve forest structural diversity, the primary determinant of wildlife habitat (Harris et al. 1979). However, it can reduce horizontal diversity (NRC 1982). The harvesting technique employed must be based upon sound silvicultural prescriptions and demonstrate its capability to maintain vertical diversity (foliage height diversity), horizontal diversity (interspersion, edge, juxtaposition, patchiness), and a mixture of live and dead wood. Specific timber harvesting operations should be designed to preserve the structure and diversity of the natural forest habitat.

Grazing Mitigation Methods

The current degraded state of rangelands requires restoration as well as management plans. In both cases, the timing and extent of continued grazing will determine whether range conditions worsen or improve. Increased irrigation for agriculture may delay improvements by adversely affecting water tables and stream flow on rangelands. Rest-rotation grazing can improve range conditions, while intensified chemical use and mechanical brush removal will likely further degrade range habitats. The future management of riparian areas will have the greatest impact on rangeland wildlife and ecosystem health (NRC 1982).

In the past, range condition has been estimated by forage production or production of livestock. More recently, condition has been based on the deviation from an ideal range condition or ecological climax. More effective use of ecological analyses of range condition will improve the management of rangelands. In particular, range managers need the following tools (Wald and Alberswerth 1989):

- More data (range condition is unknown on many rangelands).

- Management plans for each site (these should be ecologically based and site specific).
- More management resources.
- Commitment from management to implement grazing reductions or riparian habitat improvement.

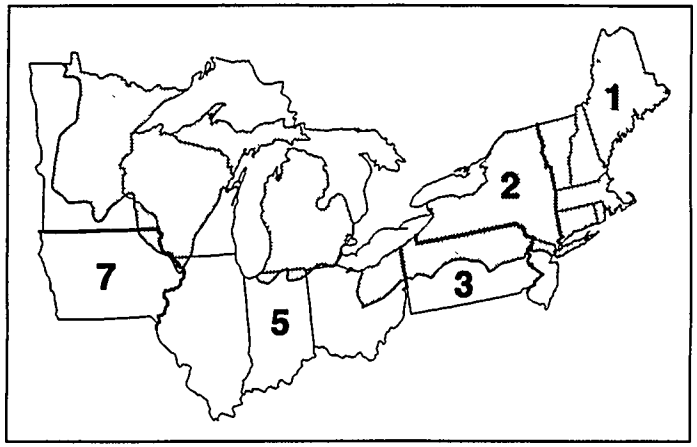
Monitoring for Mitigation Compliance

Successful mitigation of habitat impacts requires that the proposed mitigation measures are effectively implemented and maintained. However, the consideration of habitat effects is often hampered by information gaps and limits to predictive capability. Therefore, it is essential that all mitigation plans include adequate provisions for baseline and post-project monitoring of habitat conditions.

The fact that many restoration projects designated as mitigation have not achieved their desired objectives is well documented. It is also believed that mitigation measures for many projects are not adequately implemented or enforced. Therefore, determination of the true effectiveness of mitigation should be the goal of monitoring programs. The following ten-step process for monitoring mitigations for habitat impacts has been modified from Noss (1990):

- Establish objectives of the mitigation.
- Gather and integrate data.
- Establish baseline conditions.
- Identify elements at risk.
- Formulate specific questions to be addressed by monitoring.
- Select indicators.
- Identify control areas and treatments.
- Design and implement the sampling scheme.
- Validate relationships between indicators and endpoints.
- Analyze trends and recommended management actions.

North Habitat Region: *Northern Lakes and Forests*



Geographical Description of the Region

The North Habitat Region, *Northern Lakes and Forests*, contains all of eight states and parts of eight additional states. The region includes all of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Michigan, and parts of New Jersey, Pennsylvania, Ohio, Iowa, Indiana, Illinois, Wisconsin, and Minnesota. EPA Region 1 is included in its entirety; parts of EPA Regions 2, 3, 5, and 7 are also included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Northern Lakes and Forests* comprises eight ecoregions (Omernik 1987). The vegetation of this region includes northern hardwoods (maple, birch, beech, hemlock), elm, ash, Great Lakes spruce and fir, Great Lakes pine, conifer bogs (spruce, larch, arborvitae), maple, basswood, and oak savanna (oak and bluestem). The land use patterns include swamps, marshlands, forests and woodlands (mostly ungrazed), croplands, croplands with pastures, and urban.

Habitats of Concern

The *Northern Lakes and Forests* contains many habitats of concern, of which the most obvious fall into the three general categories of old-growth forest, barrens, and Great Lakes ecosystems. The principal habitats of concern most at risk in the *Northern Lakes and Forests* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *NORTHERN LAKES AND FORESTS*

1. Old-growth and mature forests
   - northeast conifer and hardwoods forests
   - central hardwoods forests
   - boreal forests of northern lake states
2. Barrens
   - pitch pine-scrub oak barrens
   - Appalachian shale barrens
   - other cliff and ridge talus, tundra, meadow, and heath communities
3. Great Lakes coastal habitats
   - barrier islands
   - dune systems
   - coastal wetlands
   - pannes or intradunal ponds
   - rocky shores along Lake Superior with arctic species
   - bluffs with oak savannas, jack pine woodlands, and beech-maple forests

Habitat Values and Trends

The *Northern Lakes and Forests* originally consisted of a vast forested area covering both New England and the northern Lake States. Once virgin forest, New England was cultivated on 75% of arable land by 1840, but is now primarily forested again (DeGraaf 1991). The White Mountains of New Hampshire and western Maine contain many forest cover types; northern hardwoods constitute approximately half of the area. Because of the glacial origin of soils in New England, many of the most fertile sites are on midslope and produce hardwood forests. The impervious layer (fragipan) underlying much of these till soils produces vernal pools, seeps, and wet ground during the spring even on upper slopes. Therefore, the forest landscape of New England is a mosaic of forest types and nonforest habitats that occur in relatively small patches, especially in the mountains. Among these isolated habitats are various forms of barrens that support numerous rare species. The vegetation of the northern lakes region

has a more recent history of timber harvesting and forest regrowth, but consists of a greater variety of habitats including many northern forest types, coastal habitats, and wetland types.

Northeastern Forests

Forests of seven northeastern states comprise 49.5 million ac or about 70% of the total regional land area (Barrett 1980). Major forest type groups are maple-birch-beech, white-red jack pine, spruce-fir, loblolly-shortleaf pine, and oak-hickory. By 1890, most of the northern spruce had been cut; the hardwood forests soon followed. Large fires swept over northern New England shortly after the turn of the century. Other forest losses have been due to the chestnut blight, diseases of birch and beech, and gypsy moth attacks on oak. Overcutting of commercially desirable species has resulted in the expansion of elm-ash-red maple at the expense of beech-birch-sugar maple. In the Northeast, substantial areal declines have occurred in oak-gum-cypress (53%), loblolly-shortleaf pine (49%), elm-ash-cottonwood (38%), aspen-birch (25%), oak-hickory (20%), and spruce-fir (14%) (Flather and Hoekstra 1989).

In the last 100 years, one-fifth of the region's total acreage has reverted from pasture and tillage to brush and forest (Hagenstein 1990). Since the 1950s, most of the increase in forest area is directly linked to the decrease in farm area, especially dairy farming. By the 1960s, the areal extent of suburban developed land surpassed that of agricultural land. Since that time, the development of recreational homes in the mountains and along coasts and lakeshores has resulted in large areas of fragmented, sensitive lands. This process has fragmented ownership in a region with the lowest ratio of publicly owned land of any forested region in the United States. The result of this long history of exploitation is that less than 1% of New England's total acreage is in pristine ecosystems (Giltmier 1991).

Extended wildfire protection and insect and disease control programs have greatly reduced the loss of forest trees to these factors. However, both mortality and lowered growth rates have resulted from air pollution in the Appalachians and eastern Canada. Projections indicate a decline throughout the North over the next 50 years. Urban area has doubled, and small forest parcels and low-value timber lands will likely be converted to other uses. However, several states in the North have adopted regulations to ensure the regeneration of logged areas and to protect water quality (Hagenstein 1990).

Northern Lakes Forests

Approximately 43% (52 million ac) of the total area of Michigan, Minnesota, and Wisconsin is forested (Barrett 1980). Replacement of forest with agriculture increases from the East to the West and from the North to the South. The Lake States forests are 75% hardwoods (principally aspen-birch) and 25% conifer (mostly spruce-fir). They include 15 northern forest cover types, 4 central hardwood cover types in the "big woods" area of Minnesota and the southern portions of Wisconsin and Michigan, and 8 boreal forest cover types.

In 1902, the region led the country in timber production; by 1910, the majority of commercially valuable white and red pine was gone. In later years, overexpansion of farming cleared vast areas of forest. Fires and swamp drainage also contributed to devastation of the forest area in the region. Substantial losses are still occurring in the forested areas in the northern Lake States. Logging is proceeding at a rapid rate in Michigan. In Wisconsin, oak forests are being intensively harvested for oak veneer, and aspens are declining as a result of forestry management practices. White pine and hemlock in southern Michigan, once dominant in the area, are today nearly absent. The elm-ash forest type in

Ohio, Indiana, and Michigan has been reduced by 90% as a result of conversion to agriculture and urbanization.

Forest Values

Forest ecosystems support 90% of the total bird, amphibian, and fish species and 80% of mammal and reptile species in the United States. In addition, the *Northern Lakes and Forests* contains an average 2.6 endangered and threatened species per county as of 1984 (Flather and Hoekstra 1989). Some of the ecological values of each of the regional forest types are listed below:

- Oak-hickory - supports southern bald eagle, red wolf, red-cockaded woodpecker and contains many diverse mesic environments.
- Maple-beech-birch - includes a wide variety of tree, shrub, and forb species that provide aesthetic, wildlife (e.g., moose), and recreational resources.
- Spruce-fir - contains many remote and pristine environments that support moose, great horned owl.
- Aspen-birch - represents a pioneer community that follows disturbance and supports ruffed grouse and moose.
- White-red-jack pine - supports threatened species such as eastern timber wolf, peregrine falcon, and Kirtland's warbler.
- Elm-ash-cottonwood - represents important riparian habitat along moist river and stream bottoms, and in and around swamps and depressions.

Old-Growth and Mature Forests

Old-growth forests are unique, vanishing environments that merit preservation for aesthetic, ecological, and scientific values (Society of American Foresters 1984). Although the *Northern Lakes and Forests* do not contain the acreages of virgin forest still found in other parts of the country, many mature forests greater than 100 years old do exist. These mature forests possess a variety of important ecosystem values and should be the focus of habitat conservation efforts.

As an example, the majority of remaining old-growth stands in Pennsylvania are on steep mountain slopes and deep, narrow, boulder-strewn ravines. This is a result of a long history of natural disturbance and anthropogenic degradation that has dramatically changed the composition of the present day oak forests of Pennsylvania. They differ dramatically from the original types that were present before settlement in early 1600s. Even with extensive clearing for agriculture and coal mining, the state was 75% forested in early 1900s. By 1850. however, Pennsylvania was the logging center of nation. Subsequent attacks by the American chestnut blight and beech bark fungus and severe vegetation destruction from growing white-tailed deer populations killed many trees. Most important, extensive clearcutting caused a shift in species composition with declines in white pine and eastern hemlock and increases in yellow birch, black cherry, and red maple. Remaining old growth in Pennsylvania can be classified into four types after Fuchler (1964): beech-maple; hemlock-northern hardwood forest (hemlock-

white pine-beech-black birch); Appalachian oak forest (chestnut oak-white oak-red oak-hickory); and mixed mesophytic forest (white oak-red oak-yellow poplar-basswood) (Smith 1989).

The old-growth forests of the northern Lake States are another important habitat type. Historically, pine and hemlock-northern hardwood forests were most extensive. Nontraditional old-growth ecosystems include northern white-cedar, speckled alder, northern pin oak, black ash, bigtooth aspen, and trembling aspen. The old-growth forest ecosystems of this region contain a greater regional and local diversity than has been generally appreciated (Barnes 1989). *Northern Lakes and Forests* habitats vary with the pattern of structurally (physiography, soil, vegetation) and functionally different landscape ecosystems.

Great Lakes Coastal Ecosystems

The many wetland and sand dune ecosystems of the Great Lakes coastal region are important in the *Northern Lakes and Forests* and vary according to physiography, associated soils, and other abiotic factors (Barnes 1989). Many of the ecosystems that have not been destroyed or highly modified are imminently threatened. Impacts include the lumbering of most Great Lakes forests in the late 1800s, destruction of over half of the wetlands, pollution from heavy industry, and the proliferation of lakefront residences and structural modifications to protect shoreline property. Degradation from recreational use and the accidental or purposeful introduction of alien species are also important (Hiebert 1990).

Wetlands and Aquatic Systems

Because the Great Lakes contains 54% of the nation's water area (a total of 58 million ac), wetlands and aquatic systems are especially important habitats in the *Northern Lakes and Forests*. Along the Great Lakes, large inland coastal marshes lie behind beach ridges and are often influenced by lake water levels and wind tides. Other wetlands are eutrophic or boglike and, although still common, are much reduced in size (e.g., 71% of Michigan marshes have decreased in area). In addition, many glacial wetlands occur within the northern forests. They are often surrounded and invaded by trees producing boglike edges with sedges and mosses and alder willow.

Many smaller lakes exist throughout the *Northern Lakes and Forests*. Acidification from atmospheric deposition has had a severe impact on lakes of the Northeast. Diverse marine environments exist along the northern Atlantic coast, including many glaciated estuaries and the modified Hudson River Valley.

Activities and Impacts Affecting Habitats

The major sources impacting habitats in the *Northern Lakes and Forests* include residential developments, industrial and commercial developments, dam construction, interstate highway or expressway construction, logging and silvicultural practices, solid waste disposal, and peat mining. These activities have had adverse impacts on species populations and their behavior, as well as on ecosystem processes such as energy flow and nutrient cycling. They have also contributed to the proliferation of nuisance plants and animals. In its comparative risk analysis, EPA Region 1 concluded that the highest risk to upland and aquatic habitats in New England is concentrated in rapidly growing areas (e.g., central Connecticut, southern Maine, and New Hampshire). Historical losses of terrestrial environments are greater toward the coast and the southern part of the region.

Agricultural conversion and grazing are relatively minor activities in the region, while timber harvesting practices and peat mining continue to degrade terrestrial environments throughout the region, especially in Maine and the northern Lake States. However, the conversion of land to industrial, residential (including second homes), and transportation uses is the most severe cause of terrestrial habitat loss in the *Northern Lakes and Forests*. The major metropolitan areas in this region are under enormous pressure from human populations, and the effects are degrading the remaining natural habitats in the area.

The following activities result in the major impacts on habitats of concern in the *Northern Lakes and Forests*.

IMPACTS ON HABITATS OF CONCERN IN THE *NORTHERN LAKES AND FORESTS*

	Land Conversion	Timber Harvesting	Grazing	Water Management	Other
Mature forest	Destruction from residential development	Simplification by replacement with plantation species	Minor	Minor	Degradation with increased recreation pressure
Barrens	Destruction from residential development	Degradation	Degradation	Minor	Degradation with increased recreation pressure
Great Lakes systems	Destruction from residential development	Moderate	Minor	Destruction of wetlands	Degradation with increased recreation pressure

Land Conversion

Historically, land conversion of both uplands and wetlands has profoundly affected the natural communities in the Northeast. The early clearing of eastern forest for small farms benefitted robins, woodchucks, and bobwhite quail, but negatively impacted wild turkeys, black bears, and moose. Since that time, the large population centers are primarily responsible for the conversion of natural areas, i.e., through industrial and residential development. Because cities concentrate on coastal areas, the unique environments of the Atlantic and Great Lakes shores have been most affected. Recent increases in second home and resort development are now contributing to construction in previously pristine areas. In many cases, rare barrens, dunes, and wetlands areas are being converted with the loss of many rare plant species. More generally, "spin-off development" associated with highway construction has facilitated the expansion of land use conversions into rural areas. This increased road construction is causing severe fragmentation of terrestrial habitats.

Timber Harvesting

Timber harvesting activities can fragment, simplify, and degrade forest habitats. The faunal communities inhabiting forests vary with the successional, or seral, stage such as grass/forb, shrub/seedling/sapling, medium tree, and large tree. Because the principal impact of timber harvesting practices is to convert forest stands from later to earlier seral stages, logging has a major impact on resident animal as well as plant species. Timber harvesting telescopes plant succession, shortens rotations, compresses seral stages; and decreases the proportion of old growth. For example, old-growth spruce, fir, and white cedar disappear with short rotations in Maine (i.e., reducing wintering grounds for deer). The conversion of hardwoods to conifers creates structurally simplified plantations that reduce structural diversity and wildlife. This has produced a trend away from declining habitat types and toward common habitat types. Management for monotypic even-aged stands causes increases in forest pest damage which often result in large-scale spraying and the accompanying impacts. Timber harvesting activities also impact nearby aquatic systems through erosion and sediment transport.

Second in concern to the decrease in old-growth forests is the general decline in neotropical migrants that breed in eastern hardwood forests. Although the situation is complicated by losses of wintering habitats for long-distance migrants in Latin America, results indicate that species still present in large blocks of forest are absent from small patches (Robbins et al. 1989). Fragmentation of forest habitat from timber harvesting and from land conversions, especially for transportation, appears to be the major cause of these declines (Terborgh 1989).

Recreational Activities

Forest habitats, and especially the many unique barrens, dunes, and wetland habitats in the *Northern Lakes and Forests*, can be negatively impacted by recreational activities. These impacts are usually localized, but can severely affect the hydrology and nutrient cycling regimes of vulnerable habitats. As an example, the annual Canaan Valley motorcross contributes to the degradation of sensitive wetland habitats through soil erosion.

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the *Northern Lakes and Forests*, the primary habitat impacts are caused by the following:

- Land conversion and timber harvesting of old growth and mature forests.
- Land conversion of barrens and other rare habitat types.
- Land conversion and pollution of Great Lakes ecosystems.

Land Conversion

Effective mitigation of land use conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located a distance from the habitats of concern. The habitat is adequately

preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure protection of the habitats of concern.

In the case of barrens habitats or unique Great Lakes ecosystems, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting off-site contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable (e.g., sand dunes), recreational access associated with nearby development may have to be limited.

Amelioration of impacts from land conversion to transportation uses requires special mitigation measures. As with all land conversion, the construction of highways and power-line corridors is primarily a siting issue. Avoidance of sensitive habitats may be accomplished by modifications to the route design, and the extent of disturbance can be limited by careful construction practices. However, fragmentation of the larger area is unavoidable in the case of land conversion to transportation corridors. Structural mitigations can be used to lessen the impact on animal movement across transportation routes. Primarily, these include the construction of fences and underpasses. The goal of these structural measures should be to mimic the natural movement and migration patterns of the affected species.

Timber Harvesting

At a minimum, the production of commercial wood products from an area must not exceed the sustainable level if the ecological integrity of a forested area is to be maintained. Where sensitive forest types exist, logging may be completely prohibited or constrained to specific methods to prevent habitat loss or degradation. In other areas, more extreme harvesting methods may be allowed or prescribed to establish or maintain desired forest conditions. Acceptable methods will vary according to local forest ecology and the desired future condition of the site. Analysis of harvesting techniques must be based upon an analysis of the structure and diversity of the forest canopy, midstory, and understory.

A recent directive of the Chief of the U.S. Forest Service acknowledges this fact and points out that clear cutting is acceptable only when needed to replicate natural ecological processes. Although, selective cutting can preserve forest structural diversity, it can reduce horizontal diversity (NRC 1982). The harvesting technique employed must be based upon sound silvicultural prescriptions and demonstrate its capability to maintain vertical diversity (foliage height diversity), horizontal diversity (interspersion, edge, juxtaposition, patchiness), and a mixture of live and dead wood. Specific timber harvesting operations should be designed to preserve the structure and diversity of the natural forest habitat.

An important component of selective cutting should be the preservation of standing dead trees. Northern hardwood forests contain 24 species of birds that nest, roost, or forage for invertebrates in standing trees with decayed wood. These cull trees are usually the first focus of forest-thinning operations, to the detriment of the birds. Breeding bird abundance declines rapidly following a clear cut, and the species composition continues to change for 10 to 15 years (DeGraaf 1991). However, if trees with cavities are saved, many of these species can successfully forage on sound boles. About one large cavity or den tree per 2 ha is required for populations of large species such as wood ducks; this requires harvest rotations of 100 to 125 years (although rotations of 65 years produce trees large enough for species nesting in smaller cavities).

Responding to the "biodiversity crisis," the U.S. Forest Service is moving toward an ecosystem approach to forest management (Bob Szaro, personal communication). Recent forest management plans have incorporated tenets of the "New Forestry" espoused by Jerry Franklin. These progressive plans require the rigorous implementation of ecological management practices to maintain forest productivity and to preserve the functioning of sensitive forest components such as old-growth or late-successional forests. Effective mitigations for habitat conservation in forest management require specific management measures at the site, watershed, and landscape levels. For example, the location and size of timber harvests should be planned to minimize reduction of the core area of mature forest (e.g., harvest only alternate basins until regrowth). Maintenance of mature-forest stands in managed landscape can be achieved by extending rotation (beyond 80) to 150 to 200 years, by leaving some stands unharvested for old growth, and by linking stands. Landscape-scale considerations include the provision of buffer zones and habitat corridors as discussed in the introduction of this document. The following management measures are recommended for conserving habitat within managed forests:

- Minimize the construction of new roads and close roads not in use either permanently or seasonally.
- Use best management practices (BMPs), such as filter strips, to minimize erosion during harvesting or road construction.
- Maintain 100-ft riparian zones with adjacent feathered transition zones to buffer edge effects.
- Restrict harvesting operations to periods when the ground is either dry or frozen.
- Maintain site productivity by retaining large woody material and minimizing mineral soil exposure and compaction during harvesting.
- Manage for natural disturbance patterns to maintain natural openings and successional-stage composition.
- Maintain connections between blocks of interior forest, especially old growth.
- Provide for the protection of special areas, including cliffs, caves, taluses, riparian areas, and old-growth stands.
- Maintain the structural integrity and the native variety of the forest by managing for the natural composition of the following components: vegetative types, seral stages, tree types and sizes, standing dead trees and down material, tree snags, and cavity trees.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer also should determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions such as those established for the New York Bight and the Great Lakes).

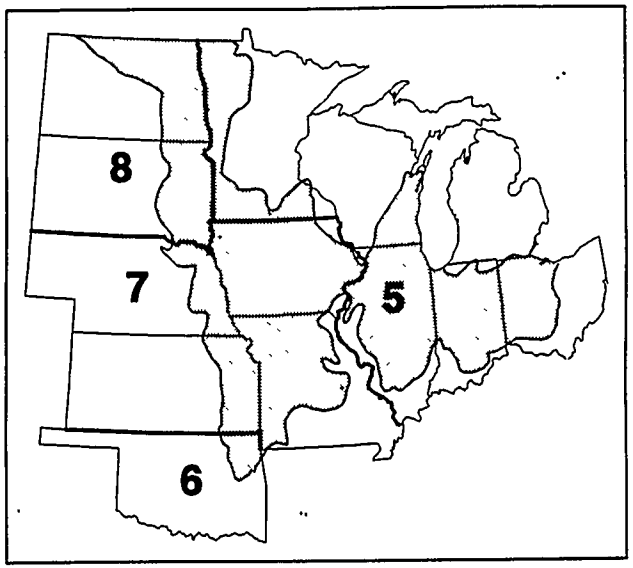
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Northern Lakes and Forests*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Lesley Sneddon, Regional Ecologist, The Nature Conservancy
Ralph Pisapia, Associate Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

Midwest Habitat Region: *Midwest Croplands*



Geographical Description of the Region

The Habitat Region, *Midwest Croplands*, contains parts of 13 states. The region includes parts of Ohio, Indiana, Illinois, Missouri, Iowa, Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, Nebraska, Kansas, and Oklahoma. Parts of EPA Regions 5, 6, 7, and 8 are included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Midwest Croplands* comprise eight ecoregions (Omernik 1987). The vegetation of the *Midwest Croplands* includes a range of mosaic of bluestem, prairie (bluestem and indiangrass), oak, hickory, wheatgrass, needlestem, oak savanna, maple, basswood, beech, elm, and ash. The land use patterns are croplands and croplands with grazing lands.

Habitats of Concern

The *Midwest Croplands* contains many habitats of concern; the most obvious fall into the four general categories of oak savannas, native prairie remnants, wetlands, and old-growth central hardwood forest. The principal habitats of concern most at risk in the *Midwest Croplands* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *MIDWEST CROPLANDS*

1. Oak savannas
2. Native prairie remnants
   - tallgrass
   - little bluestem prairie
   - hill prairie
3. Wetlands
   - bottomland hardwoods of the Mississippi and Platte Rivers
   - prairie potholes
   - riparian corridors (only a few remaining)
4. Remnant central hardwood forest (virtually none left)

Habitat Values and Trends

The Corn Belt States of the Midwest have sustained the greatest conversion of terrestrial environments to human land uses in the nation. The elm-ash forest type in Ohio, Indiana, and Michigan has been reduced by 88% as a result of conversion to agricultural and urban uses (Klopatek et al. 1979). Bluestem prairie and its transition zone with oak-hickory forest has declined by 85% and 78%, respectively, representing a loss of more than 41 million ha, primarily due to conversion to agriculture. The agricultural states of Iowa, Illinois, and Indiana have lost the highest amounts of their natural ecosystems (92, 89, and 82%, respectively).

As with forest habitats, the spatial pattern and fragmentation of prairie vegetation can negatively affect native fauna and ecosystem health. The loss of grassland habitat to agriculture is responsible for the decline in prairie birds, especially those requiring large continuous habitats, and is analogous to the reduction in old-growth forests and its obligate species. The upland sandpiper, bobolink, dickcissel, grasshopper sparrow, savannah sparrow, and Henslow's sparrow all declined by 90% between the 1950s and 1970s (Graber and Graber 1983). Based on 1984 maps (USDA Forest Service 1989), the average number of endangered and threatened species per county is 2.4 for the Midwest Habitat Region, the lowest in the nation. Many historical species, however, have been extirpated from the Midwest.

Therefore, the few remaining natural areas are the major contributors to the diversity of the region. These areas include isolated examples of savanna, grasslands, and forests.

Savanna

Oak savanna once covered between 11 and 13 million ha of the Midwest in the states of Minnesota, Iowa, Missouri, Illinois, Wisconsin, Michigan, Indiana, and Ohio (Nuzzo 1986). It is now the rarest major habitat type in the Midwest; in 1985, only 113 sites totaling 2,607 ha of high-quality oak savanna remained in the Midwest, representing 0.02% of its original extent. Oak savanna is dominated by oaks producing 10 to 80% canopy, with or without a shrub layer, and has a herbaceous, predominantly grassy ground layer of prairie or forest species. Because savanna is fire-dependent, it rapidly converts to forest without fire or severe droughts. This occurred over much of its range within 40 years of settlement. Fire was eliminated by plowing and grazing, and by the construction of roads and railroads, which act as firebreaks. Other than a few areas with the appropriate moderate grazing or occasional fires, existing savanna occurs only on droughty sandy or rocky soils.

Grasslands

Prairie habitats constitute another important regional habitat that is greatly reduced in area. Only minor remnants of the vast area of tallgrass prairie remain. Restoration activities, a major component of prairie conservation efforts, have been attempted (1) by upgrading existing degraded prairies, and (2) by establishing prairie communities on sites without existing prairie species (Kline and Howell 1987). In addition to planting and site preparation techniques, fire is an essential tool in prairie restoration. Unfortunately, most restored prairies contain unwanted species and require special management involving site preparation and fire to address exotic herbs and woody species, respectively.

Forests

Merritt (1980) described the forests of the central region of the United States as comprising 40 million ha of the originally greater than 140 million ha of hardwood forest, or about 15% of the total land area [however much of these forests occur outside the Midwest Habitat Region in the states of Kentucky and Arkansas]. These forests have a long history of disturbance from Indian and European slash and burn systems, plus livestock grazing and logging. Throughout the Midwest, both the hilly well-drained soils and the more fertile wetter, glaciated areas have been cleared for agriculture. Woodlands not cleared for farming were heavily timbered. By the 1930s, permanent clearing had created the most fragmented forest system in the United States.

The most extensive forest type, oak-hickory, makes up 72% of the forest acreage, while elm-ash-cottonwood occupies about 17%. Today, woodlands are limited in size, are widely dispersed, and occur primarily in the portions of the land that cannot be easily worked for row crops. Along the prairie fringes, wooded areas are located on steep bluffs and ravines and along poorly drained bottomlands. Elsewhere, they are found on rough and rocky land, on poorly drained uplands, along stream banks, and on bottomlands subject to overflow. These few remaining forests are especially important because of their role as riparian areas in the ecological functioning of the watershed. Nationwide 70% to 90% of riparian areas have been lost to human activities (Ohmart and Anderson 1986).

Even in the last 25 years, total Midwest forest has continued to decline. Only 100,000 ha or 0.07% of the original central hardwood old growth remains, mostly in protected areas that were once family farms. The long-term viability of this forest type is in question due, in part, to the "natural" change from oak-hickory to sugar maple (perhaps from reduced fire or climate change) occurring on mesic sites. Degradation is continuir from recreational overuse and vandalism, and from adjacent impacts such as urban construction, soil erosion, agricultural chemicals, land drainage, and strip mining for minerals (Parker 1989).

Wetlands

Prairie wetlands, located in the glaciated portion of the states of North Dakota, South Dakota, Minnesota, and Iowa, constitute the single most important breeding area for waterfowl in North America (Hubbard 1988). These wetlands support 50% to 80% of the continent's duck populations as well as many other wildlife species such as nongame birds, muskrat, and mink. These wetlands, or prairie potholes, are relatively shallow, water-holding depressions varying in size, water permanence, and water chemistry. Refilling usually occurs from spring precipitation and runoff, and water levels fluctuate widely due to climate variability (Poiani and Johnson 1991).

Other wetlands include diverse shallow wetlands, ponds, and lakes that were glacially formed, and bottomland hardwoods. The peak loss in bottomland hardwood habitat occurred in the 1970s and 1980s, and losses have declined since then for economic reasons.

Activities and Impacts Affecting Habitats

The following activities result in major impacts on habitats of concern in the *Midwest Croplands*:

- Conversion to agriculture and offsite impacts of cultivation practices (especially to aquatic systems).
- Urban development, both residential and commercial (particularly in large metropolitan areas such as Chicago, St. Louis, Cleveland, and Minneapolis-St. Paul).
- Forest loss and fragmentation (especially to highway development and channelization of riparian areas).

The major impacts of degrading activities on the principal habitats of concern are summarized in the table below.

IMPACTS ON HABITATS OF CONCERN IN THE *MIDWEST CROPLANDS*					
	Land Conversion	Timber Harvesting	Grazing	Water Management	Other
Oak savanna	Major conversion to agriculture	Moderate	Moderate	Minor	Succession to forest after fire suppression
Prairie	Major conversion to agriculture	None	Major	Minor	Invasion of exotic species
Wetlands	Major conversion to agriculture and urban uses	None	None	Drainage for land conversion	Minor
Remnant forests	Conversion to agriculture	Removed prior to agriculture	None	None	Minor

Land Conversion

Historically in the Midwest, conversion to agriculture has been a major factor affecting habitat loss. In Illinois and Indiana more than 80% of the natural ecosystems have been lost to agriculture. Conversion to agriculture is continuing on the fence rows and ditch banks that remain. Odd-dimensioned plots are now being converted as a result of monetary incentives in Wisconsin and other states (Todd Peterson, personal communication). During the Illinois state inventory of prairies, lands were disturbed for railroad maintenance or converted to agricultural fields faster than they could be identified. These conversions represent the loss of the only remaining wildlife habitats in many areas (Illinois Department of Conservation 1978). This is especially true of bottomland hardwoods, which were also affected by channelization and timber harvesting. Logging continues on the last large tracts of forest, including accelerated development via barge canal along the lower Kaskaskia River (the largest remaining tract of bottomland timber in Illinois). The loss of riparian areas has resulted in declines among the waterfowl of the Mississippi Flyway.

Approximately 60% of North Dakota's original 5 million ac of prairie pothole wetlands has been lost (Stromstad and Donovan, 1989). Agricultural development accounts for nearly 99% of prairie pothole losses. In northeastern Illinois, 20% of wetlands identified by aerial photos were filled for construction between 1970 and 1974. Instances of new wetland drainage appear to have dropped significantly; however, upland grasslands adjacent to wetlands are still significantly at risk. Approximately 50% of the grasslands in the Missouri Coteau of North Dakota were converted to cropland between 1965 and 1975. Loss of grasslands, hayed and grazed for livestock production, adversely affect many species, including the elimination of upland nesting cover for ducks. Some limestone glades are being quarried; hill prairies are being used for homesites; railroad prairies face new maintenance threats from herbicides and heavy machinery; and new lands are now being cultivated.

Agricultural Impacts

Both the extensive coverage and intensive use of agricultural land in the Midwest pose additional stresses to habitats through cultivation practices (NRC 1982). The use of fertilizers and pesticides, irrigation and drainage, double cropping and increased field size all contribute to increased pollutant loads and severe impacts on habitats. Agricultural chemicals are toxic to many species and can negatively affect population levels, community composition, and ecosystem dynamics. Other intensive cultivation practices directly reduce important hedgerow and riparian habitat and usually produce severe offsite impacts.

Impacts on Aquatic Systems

The intensive use of midwestern lands converted to human uses has resulted in a high level of pollution discharge and other negative impacts on aquatic systems. A historical example is the degradation of the Illinois River through intensive human use from Chicago, including sewage discharge, dredging, damming, barge traffic, and introduction of carp. As a result, half of the original 400,000 ac were drained, and the other half of the sand-bottom backwaters of the river were covered with mud.

Smaller streams throughout the Midwest have also been severely degraded through the impacts of agricultural practices and urban expansion. In particular, fish populations have been extirpated by the following factors (in order of relative importance):

- Siltation.
- Drainage of wetlands.
- Stream desiccation due to lowered water tables.
- Competition and hybridization due to habitat changes and introduction of exotic species.
- Pollution.
- Dams and impoundments.
- Raised water temperatures with removal of streamside vegetation.

Mitigation of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the Midwest Habitat Region, the primary habitat impacts are due to the following:

- Conversion to agriculture and offsite impacts of cultivation practices.
- Urban development, both residential and commercial.
- Forest loss and fragmentation.

In the Midwest, habitat conservation of oak savannas and prairie types is essentially a restoration and creation effort. Less habitat of high ecological integrity remains in the Midwest than in any other region except the central valley of California and parts of Florida (Steve Chaplin, TNC, personal communication). Restoration of grassland systems concentrates on revegetation and borrows largely from agriculture and horticulture (Jordan et al. 1988). The most commonly measured parameters at restoration sites are the survival and growth of planted vegetation for the first few growing seasons, generally too short a period to evaluate the ultimate species diversity or the presence of self-regeneration. More

successful has been the use of a "prairie matrix" (developed by Robert F. Betz) of a few aggressive and tolerant native species that survive weed competition too intense for many other native plants (Packard 1988). Restorationists follow this matrix with less aggressive species to effectively shorten the natural ecological succession of prairies.

Degradation of remnant forest is continuing from recreational overuse and vandalism and from adjacent land-use practices such as urban construction, soil erosion, agricultural chemicals, land drainage, and strip mining for minerals. Research is needed to determine whether important mitigation factors (e.g., adjacent harvest, increased access through new roads, different harvest systems, and width of buffers) can be applied (Parker 1989).

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located at a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique riparian or wetland habitats, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting offsite contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable, recreational access may have to be limited. These mitigations can be best implemented by creation of a regional land-use plan (through a coordinating council like the Waterfowl Flyway Council) and landowner incentives (like the Conservation Reserve Program).

Conversion to agricultural land is a special concern in the Midwest. Land conversion to agriculture can cause ground water overdraft, salinization of topsoil and water, reduction of surface water, high soil erosion, and destruction of native vegetation. Mitigations include more conservative irrigation techniques and improved drainage systems. Soil conservation techniques vary from windbreaks to contour plowing, stripcropping, rotation of crops, conversion to grass, and/or minimum tillage.

Agricultural Impacts

Maintenance of riparian areas and habitat corridors is effective mitigation for intensive agriculture. Implementation of integrated pest management (IPM) practices can reduce the load of toxic agricultural chemicals entering both terrestrial and aquatic systems. In general, institution of best management practices (BMPs) that address nonpoint source pollution are appropriate mitigations for impacts caused by cultivation practices.

Wetlands

Mitigation of wetlands destruction and degradation is the subject of a growing body of literature (Kusler and Kentula 1989). Restoration and mitigation banking concepts are still being evaluated as effective mitigation measures for direct wetlands alterations.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and species diversity, where appropriate, to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions).

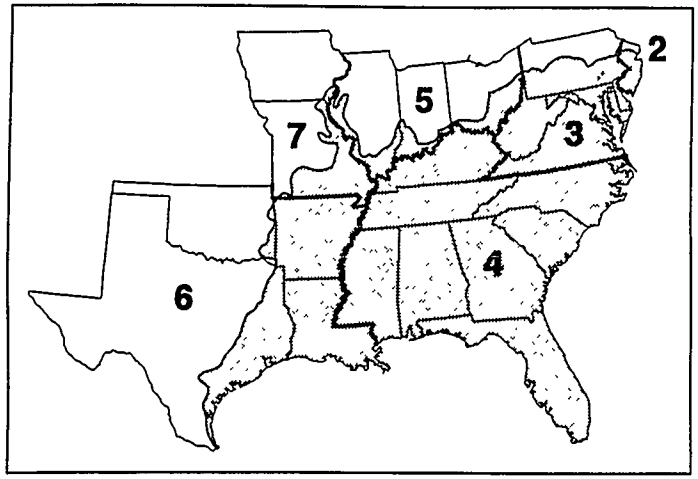
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Midwest Croplands*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Steve Chaplin, Regional Zoologist, The Nature Conservancy
Mamie Parker, Division of Federal Activities, U.S. Fish and Wildlife Service Region 3

Southeast Habitat Region: *Southeastern Forests and Croplands*



Geographical Description of the Region

The Southeast Habitat Region, *Southeastern Forests and Croplands*, contains all of 14 states (and the District of Columbia) and parts of 9 states. The region includes all of Maryland, Delaware, District of Columbia, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida, Louisiana, Arkansas, and parts of New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Iowa, Missouri, Oklahoma, and Texas. EPA Region 4 is included in its entirety, and parts of EPA Regions 2, 3, 5, 6, and 7 also are included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Southeastern Forests and Croplands* is perhaps the most diverse in the nation comprising 20 ecoregions (Omernik 1987). The vegetation of the region includes a wide range of forest types, including Appalachian oak, oak/hickory/pine, mixed mesophytic forest, southern mixed forest, southern floodplain forest, as well as palmetto prairie and everglades. Northern hardwoods and southern mixed and floodplain forests are also present. The land use pattern is mostly a mosaic of forest and cropland with substantial woodland, pasture, swampland, marshland, and urban components.

Habitats of Concern

The *Southern Forests and Croplands* contains many habitats of concern; the most obvious fall into eight general categories. The principal habitats of concern most at risk in the *Southern Forests and Croplands* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *SOUTHEASTERN FORESTS AND CROPLANDS*

1. Bottomland hardwoods
   - oak/gum/cypress
2. Scrub habitat
   - Florida sandpine scrub
   - southeastern savanna and bogs
3. Spruce-fir forest in the Appalachians
4. Old-growth pine forest
   - longleaf pine-wiregrass
   - New Jersey pine barrens
5. Everglades ecosystem
   - other wetlands
6. Maritime forest of coastal barriers
7. Contiguous upland hardwood forests
8. Mature mixed mesophytic Appalachian and Ozark forest
   - subalpine, barrens, and caves
   - old-growth forest

Ecosystems of concern include the Chesapeake Bay and major river systems, abundant freshwater and coastal wetlands, relict closed boreal subalpine forest communities, limestone barrens, remnant alpine peat bogs, and the Great Dismal Swamp. Also, the endemic communities in the Southern Appalachians, high-elevation spruce-fir forests (boreal subalpine), bottomland hardwood forests, coastal live oak forests, long-leaf pine wiregrass hardwood hammocks, and the Everglades. Oak-gum-cypress forests of the lower Mississippi drainage are important overwintering habitats for avian species.

Habitat Values and Trends

Two to three centuries ago, almost all of the land area in the South was forested. Since that time, agricultural land has become an increasingly prominent part of the landscape (USDA Forest Service 1989). The loss of forested area accelerated in the late 1800s with the harvesting of old-growth forests. However, after 1920 forest area began to increase with the abandonment of agricultural land, reduced timber harvesting, and efforts to regenerate forests. This trend continued until the 1960s, when abandonment slowed and new clearing for agriculture and pastureland began (at first among bottomland hardwoods and later more uniformly across the South). Concomitant increases in population and industry saw large areas converted to residential and commercial uses. Future economic conditions will likely determine whether high rates of conversion continue. Projections for the next 50 years show urban area increases of 14 million ac leading to losses of several million ac each in cropland and pastureland. These losses may stimulate forest conversions for additional agricultural land; in particular, forests of the Ozarks are expected to be converted to pasture (NRC 1982).

Forests

The Southeast contains 200 million ac of forest land with 62 million ac in pine forest (loblolly-shortleaf pine, longleaf-slash pine, and oak-pine), 71 million ac in oak-hickory, and 31 million ac in bottomland hardwood types (USDA Forest Service 1989). Since 1963, losses in the Southeast have occurred in longleaf-slash pine (40%), oak-gum-cypress (24%), and loblolly-shortleaf pine (15%). Bottomland hardwoods have been lost to agricultural clearing, and most remain only as strips along streams where the soil is too wet for cropping or grazing. They are further endangered by dams and drainage modifications. The loss of longleaf pine habitat can be attributed to the logging of nearly all original forest from the Atlantic coast to the Piney Woods of Texas and the replacement with loblolly and slash pine. Losses of other pine species are the result of poor pine regeneration and less farmland abandonment.

The forests of the *Southeastern Forests and Croplands* contain a particularly diverse fauna and flora. Many northern species complexes reach their most southern extent in the southern Appalachians, while many southern species reach their most northern extent at Cape Hatteras. Based on 1984 maps (Flather and Hoekstra 1989), the average number of endangered and threatened species per county is 5.7 for the *Southeastern Forests and Croplands*. The following listing of southeastern forest types illustrates some characteristic ecological values of the region:

- Loblolly-shortleaf pine - much of the ecosystem has been converted to pine plantations, often mixed with pasture or row crops.
- Longleaf-slash pine - covers the coastal region and has an extensive grassy understory that varies with site and geographic location; it supports many endemic plants and endangered animals including red-cockaded woodpecker and Florida panther; nearly eradicated in logging boom of the early 1900s, it was replanted in loblolly or shortleaf pines; slash pine now dominates this ecosystem.
- Oak pine - often occurs on cutover sites with poor pine regeneration; supports white-tailed deer and wild turkey.

- Oak hickory - supports southern bald eagle, red wolf, red-cockaded woodpecker; is widespread with at least six distinct associations.
- Bottomland hardwood - principally oak-gum-cypress and elm-ash-cottonwood ecosystems; mangrove swamps in Florida support Florida manatee, brown pelican, bald eagle, hawksbill sea turtle, and Atlantic Ridley sea turtle; cypress savanna has been mostly converted to pasture and cropland, but remaining areas support fox squirrel, ibises, cormorants, herons, egrets, kingfishers, Bachman's warbler, Florida panther, and bald eagle; elm-ash-cottonwood supports many waterfowl species.

Although the logging of mature forests may increase site diversity by creating forest edge, these timber harvesting activities usually increase the number of species that are not in need of protection (e.g., white-tailed deer, bobwhite quail, cottontail rabbit, gray squirrel, wild turkey) at the expense of species that are regionally, as well as locally, rare or vulnerable. As is the case with old-growth Douglas fir in the Northwest, the decline of subalpine Appalachian forests threatens the last remnants of historical ecosystems, the loss of which would dramatically lower regional and global diversity.

Of particular concern in the Southeast are (1) old-growth-dependent species (such as the red-cockaded woodpecker in coastal plain pine forests), and (2) forest-interior-dependent species (including many neotropical migrant songbirds in mixed deciduous forests). Because of their ecological complexity and relative isolation, southeastern forest ecosystems contain many rare and endangered species that require mature trees for nesting and foraging. Mature trees are at serious risk from logging in the *Southeastern Forests and Croplands*; though sustainable short-rotation plantation forestry dominates the region, remaining areas of mature forest are still being sought and exploited for short-term profits.

The habitat of the red-cockaded woodpecker, which exists in the southern pine forests ranging from Maryland to Texas, has been reduced and will continue to decline under current timber harvesting management practices (Roise et al. 1990). The causal factor in habitat loss is the cutting of loblolly pine-dominated stands greater than 75 years of age, and the cutting of all longleaf pine stands greater than 95 years of age. Lennartz et al. (1983) estimates that pines required by the red-cockaded woodpecker have declined by 13% in 25 years. In Texas, clear-cut logging has been restricted because of concerns for the red-cockaded woodpecker (Larmer 1989).

Species described as interior forest birds (Terborgh 1989) are of special concern in forest environments suffering from fragmentation. Songbirds, in particular, are declining in number because of the loss and fragmentation of forest habitat along their migratory path from New Hampshire to Mexico. Forest conversion and fragmentation leads to an increased likelihood of starvation and an increased likelihood of predation due to an increase in the numbers of songbird predators (Terborgh 1974). Robbins et al. (1989) summarized the breeding habitat losses and requirements of forest birds of the Middle Atlantic States in light of the negative effects occurring from forest fragmentation (due to suburban expansion) in that region (Lynch and Whitcomb 1978). They concluded that in relatively undisturbed mature forests, the degree of isolation and the area of forest were better predictors of relative abundance of bird species than were any habitat variables. Forest reserves of thousands of hectares are required to have the highest probability of providing for the least common species of forest birds in a region.

Bottomland hardwood forests represent a third important forest habitat of the Southeast, one that supports many bird species during the critical over-wintering period. The oak-gum-cypress ecosystem of the southern states also includes a diverse resident avifauna (Dickson 1988). For example, this habitat was the historical range of the ivory-billed woodpecker. The forests of the Appalachian and the Ozark regions also contain valuable habitats.

The Appalachian Plateau has special value because its cool, wet climate at 2,400 ft allows northern species to live at lower latitude. Encompassing more than 230 terrestrial vertebrate species, this region has the richest floral, breeding bird, mammal, and amphibian communities of any upland eastern U.S. forest type (Hinkle et al. 1989). More than 60% of the breeding birds are neotropical migrants. The mature mixed mesophytic forest contains many old-growth areas and unique habitats such as subalpine, montane grasslands, serpentine areas, shale barrens, mountain peatlands (supporting unusual plants and animals: larch, wild calla, cotton grass and northern water shrew), vernal ponds (rare amphibians and invertebrates), sandstone ridgecrests (rare plants), and caves (globally rare aquatic amphipods) (The Nature Conservancy, Maryland Chapter 1991.)

The forests of the Ozark region (encompassing southern Missouri and northern Arkansas) were once vast tracts of white oaks and shortleaf pines, but today they exist as a mosaic of relatively young vegetation in various stages of succession (Smith and Petit 1988). At the turn of the century, the region experienced perhaps the most extensive destruction of forest through clearcutting on the continent. This resulted in the loss of many bird species dependent on mature forest and the increase of species adapted to open environments. Of the forest birds that have survived the transformation to a mosaic of young forest, the broad-winged hawk and hooded warbler are at risk from increased habitat fragmentation and conversion of hardwood forest to pine plantations.

Grasslands, Barrens, and Scrub Habitats

In addition to mature forests, terrestrial habitats of significance in Maryland and other mid-Atlantic states are shale barrens, barrier islands, serpentine areas (rock outcrops), peat lands, floodplains, and sandstone glades. Serpentine sites represent the kind of unusual local environments that produce unique habitats throughout the region. A relatively high percentage of vascular species on state natural heritage program lists and on the candidate lists of threatened and endangered species of the United States are serpentine endemics. Currently, more than 400 communities are listed in the Maryland Natural Heritage Program database with another 200 species having been extirpated (Janet McKegg, Maryland Natural Heritage Program, personal communication). Many other important communities are aquatic or riparian (e.g., the Delmarva bays), but are often better protected by federal and state wetlands regulations. The New Jersey Pine Barrens is another region with many important local habitats. This pinelands ecosystem comprises a mosaic of upland, aquatic, and wetland environments covering more than 400,000 ha (McKenzie 1981).

Sandpine scrub is one of the nation's most threatened habitats; it is found only on scattered knolls of coastal and inland Florida and adjoining Alabama and Georgia (Bass 1988). It has been reduced to one-fifth of its original acreage by expanding agriculture and industry. Along with mahogany hammock, sandpine scrub is also the least recoverable of habitats in Florida. It has perhaps the highest concentration of endemic plants (including many that are endangered or threatened) of any place in the United States. Development is the principal threat, and landowners are bulldozing areas to prevent federal protection of undisturbed scrub. The scrub is already vulnerable because the natural burn cycle of the scrub has

been disrupted by fire suppression practices. This vegetation type requires burn cycles of 30 to 80 years to allow dominants to reproduce but at the same time to prevent canopy closure.

Savannas and bogs of the southeastern coastal plains are also habitats sensitive to fire management. Without fire they are invaded by fire-intolerant trees. These ecosystems are home to many endemics, such as carnivorous plants. Approximately 97% of southeastern savannas and bogs no longer exist, having been converted to pine plantations or pastures through drainage or to farm ponds in hillside bogs.

The only substantial rangelands in the Southeast (4 million ac or 13% of the total area) are the wet prairies and marshes along Atlantic and Gulf coasts that include the Everglades and palmettos prairie of southern Florida. Louisiana and Texas also possess significant portions of this ecosystem; unique species include the golden-cheeked warbler, Texas red wolf, Attwater's prairie chicken, Florida panther, Florida great white heron, Everglades kite, plus the more common collared peccary, coatimundi, and pronghorn antelope. Species of concern include subtropical natives suffering population declines due to the loss of habitat and invasion by exotic species. The region also contains many freshwater and marine habitats, and is unique in the number and diversity of its wetland habitats.

Wetlands

Specific southeastern wetland problem areas identified by Tiner (1984) include the following:

- Estuarine wetlands of the U.S. Coastal Zone.
- Louisiana's coastal marshes.
- Chesapeake Bay's submergent aquatic beds.
- South Florida's palustrine wetlands.
- Forested wetlands of the Lower Mississippi Alluvial Plain.
- North Carolina's pocosins.

In the Southeast, 86% of the forested wetlands are in the coastal plain (Tansey and Cost 1990). In the last 10 years, 16% of the area has been converted to nonwetlands through changes in species or hydrology, including harvesting. Large losses of forested wetlands in the Lower Mississippi Valley have occurred with the conversion of bottomland hardwood forests to cropland. Of the 11.8 million ac of bottomland hardwood forest in 1937, only 5.2 million ac remain, including 60% in seasonally flooded basins or flats and 40% in wooded and shrub swamps. These decreases in acreage were matched by increases in croplands, principally soybeans, and corresponded to the completion of major Corps of Engineers flood control projects and smaller watershed projects. Indirect effects of these projects (clearing by landowners in anticipation of flood protection) exceeded losses to direct construction. The rate of loss continues to increase in Louisiana.

Sh: .· wetland losses are greatest in North Carolina owing to the conversion of pocosins to cropland and pine plantations and their mining for peat. The drainage of inland marshes is greatest for the Florida Everglades. Indeed, the modifications to the water drainage patterns beginning in the headwaters of Kissimmee basin through Lake Okeechobee to the Everglades are some of the most extensive in the country. Additional losses of mucky bottomlands, marshes, and dunes across the coastal plain have decreased duck populations, flood control, and water supply. More than 50% of Texas wetlands (including bottomland hardwoods and coastal marshes) have been lost (Lortis 1991). In the Gulf

Prairies and Marshes region, much of cordgrass marshes are drained and barrier islands overgrazed resulting in severe soil erosion.

Aquatic Systems

Approximately 24 million ac of water area are contained in the lower Mississippi River and tributaries, the lakes and waterways of the Mississippi Delta, the large number of small and large lakes in Florida, the numerous large water impoundments, the small ponds and streams, and the Atlantic and Gulf coastal waters (one-fifth of this area) of the *Southeastern Forests and Croplands*. The many unique aquatic habitats make this region the most diverse in the nation.

The marine systems in the Southeast are exceptional and include the unique coral reefs of Florida. A 5-year study on the Florida Keys coral reef by University of Georgia and Florida Institute of Oceanography indicates a 10% per year decline in some parts of the reef and predicts possibly irreversible endangerment in the next decade (Keating 1991). Threats include pollution (especially nutrients from sewage and agriculture that stimulate algae overgrowing), sedimentation (from erosion via forest and shoreline conversion that smothers corals), diseases (possibly aggravated by water quality stresses), and weather (including global warming).

Activities and Impacts Affecting Habitats

The major sources impacting habitats in the *Southeastern Forests and Croplands* include residential, industrial, and commercial developments, logging and silviculture practices, agricultural activities, mining practices, and interstate highway or expressway construction. These activities have produced adverse impacts on species populations and their behavior, as well as on ecosystem processes such as energy flow and nutrient cycling. They have also contributed to the proliferation of nuisance plants and animals. In its comparative risk analysis for the mid-Atlantic states, EPA Region 3 (1988) ranked adverse effects on ecosystems as high from silviculture, coal mining, and conversion to urban uses through residential construction; as moderate from agriculture, mineral mining, second homes development, dam construction, and recreation; and as low from oil and gas development, bridge construction, and water use. In the more southern states, timber harvesting and agriculture have even greater impacts on habitats. In the Gulf Coast States, oil and gas production is a major activity degrading coastal environments.

The following activities result in the major impacts on habitats of concern in the *Southeast Forests and Croplands*.

IMPACTS ON HABITATS OF CONCERN IN THE *SOUTHEASTERN FORESTS AND CROPLANDS*

	Land Conversion	Timber Harvesting	Mining	Water Management	Other
Bottomland hardwoods	Conversion to agriculture	Moderate	None	Impacts of impoundments and siltation dams	Minor
Scrub habitat	Conversion and fragmentation for residential development	None	None	Minor	Minor
Spruce-fir forest	Conversion for resort development	Moderate	None	None	Acidification
Old-growth pine forest	Moderate	Conversion to short rotation plantations	None	Minor	Military activities
Everglades and wetlands	Urban and agricultural conversion	Minor	Peat mining of pocosin wetlands	Impacts of water diversions altering hydrology	Invasion of exotic species
Maritime habitats	Conversion for coastal development	Minor	None	Minor	Recreational activities
Contiguous forest	Fragmentation from urban sprawl and highway development	Fragmentation	Fragmentation	Minor	Minor
Appalachian and Ozark forests	Conversion to plantation silviculture	Major	Major impacts of coal mining	Minor	Minor

Land Conversion

Historically, land conversion of both uplands and wetlands has profoundly affected the natural communities in the Southeast. In recent years, the boom of population growth has caused increased conversion of natural areas to industrial and residential development. Rapidly growing areas in Florida and certain SunBelt cities are suffering intense "spin-off development" associated with highway development, a process that is rapidly expanding into previously rural areas. This increased road construction is causing severe fragmentation of sensitive environments such as the North Carolina pocosins and the Florida sandpine scrub. The sum of this massive habitat alteration in areas such as south Florida has been a dramatic reduction in not only large mammals and birds but also reptiles and

amphibians (Crowder 1974). Conversion of bottomland hardwoods to agriculture continues to be a significant cause of habitat loss that has detrimental effects on the waterfowl of the Mississippi Flyway.

Agricultural and Grazing Impacts

The use of agricultural land in the Southeast poses additional stresses to habitats through cultivation practices (NRC 1982). The use of fertilizers and pesticides, irrigation and drainage, double cropping, and increased field size all contribute to increased pollutant loads and severe impacts on habitats. Agricultural chemicals are toxic to many species and can negatively affect population levels, community composition, and ecosystem dynamics. Other intensive cultivation practices directly reduce important hedgerow and riparian habitat and usually produce severe offsite impacts. Grazing has a lesser impact on the region as a whole but is increasing in the south Florida prairies and oak hammocks west of the Everglades.

Timber Harvesting

Timber harvesting activities are another major cause of habitat loss in the *Southeastern Forests and Croplands*, affecting many sensitive forest types. For example, the southeastern mixed forest and the Ozark forests are being converted to pine monocultures. Logging also continues in the southern Appalachian subalpine forest and some bottomland hardwood forests. These impacts affect 90% of the total bird, amphibian, and fish species and 80% of mammal and reptile species that utilize forest ecosystems (U.S. Forest Service 1989).

In addition to the direct destruction of forests through land conversion, timber harvesting activities can fragment, simplify, and degrade forest habitats. The faunal communities inhabiting forests vary with the successional, or seral, stage. Because the principal impact of timbering practices is to convert forest stands from latter to earlier seral stages, logging has a major impact on resident animal as well as plant species. Timber harvesting telescopes plant succession, shortens rotations, compresses seral stages, and decreases the proportion of old growth. The conversion of hardwoods to conifers creates structurally simplified plantations that reduce structural diversity and wildlife. This has produced a trend away from declining habitat types and toward common habitat types. Management for monotypic even-aged stands causes increases in forest pest damage that can result in large-scale spraying and the accompanying impacts. Logging activities also impact nearby aquatic systems through erosion and sediment transport.

Logging in the national forests of Texas relied exclusively on clearcutting and its variations until 1988. The general practice was to convert the natural complex forest systems (tall pines with oak, ash, and hickory underneath in diverse groves of 100 broadleaf tree and shrub species) into single-species loblolly pine plantations. Site preparation (including the clearing of all vegetation, concomitant removal of topsoil, application of herbicides, and burning) was conducted to eliminate competition with planted species. This homogenization threatened the long-term health and productivity of the forest by reducing the quality of the gene pool. Because of the susceptibility of monocultures to insect infestation, additional clearcutting was conducted to provide buffer areas around the pine plantations. Between 1978 and 1988, the number of colonies of the endangered red-cockaded woodpecker fell from 455 to 174. Recent court decisions and enlightened foresters are moving away from clearcutting and instituting selective timber harvesting in national forests containing the red-cockaded woodpecker: Texas, Louisiana, Alabama, Mississippi, South Carolina, North Carolina, and Kentucky (Larmer 1989).

Unlike the Pacific Northwest, little research has been conducted on mature eastern hardwood forest (virtually no old growth remains). However, results do show correlations between older forest and the abundance of several species, including great horned and barred owls, pileated and red-cockaded woodpeckers, and common ravens. Declines in other species have been attributed to brood parasitism (by brown-headed cowbirds) and nest predation (by common crows, striped skunks, opossums, black racers, and rat snakes) that occurs along clear-cut edges and in thinned stands. These edge effects are a prominent impact of forest fragmentation. Fragmentation is second only to the decrease in old-growth species as a major impact of timber harvesting activities. The faunal significance of this fragmentation includes discrimination against large-bodied species (e.g., Florida panther, red wolves, mink), genetic swamping by invading species, inbreeding through isolation of populations, and ecological release of middle-sized omnivores.

In addition, there has been the general decline in neotropical migrants that breed in eastern hardwood forests. Although the situation is complicated by losses of wintering habitats for long-distance migrants in Latin America, results indicate that species still present in large blocks of forest are absent from small patches (Robbins et al. 1989). Fragmentation of forest habitat from timber harvesting and from land conversions, especially for transportation, appears to be the major cause of these declines (Terborgh 1989) and has been especially severe in southeastern bottomland forests.

Mining

The greatest single threat to terrestrial habitat in West Virginia and Kentucky is coal mining, projected to increase from 2.4 million ac to 3.4 million ac (4% of total land area) by the year 2000 (McComb et al. 1991). The profitability of timber harvesting will be increased by the transportation infrastructure built for coal mining and the fact that large acreages have reached sawtimber age. This transition sets the stage for an unprecedented combination of cumulative impacts in the central Appalachians in the next 20 to 30 years. Surface mining will be conducted on ridge tops and side slopes; development of single-family housing will occur in valley bottoms; and mature hardwood will be harvested in midslopes and coves. In addition to the direct destruction of forests, the potential for severe soil erosion and offsite impacts is great.

Oil and gas extraction is important on the Gulf coast but rare in other parts of this region. Gold mining is currently causing habitat degradation in South Carolina.

Water Management

Historically, water management activities such as damming and diversion of rivers have had a major impact on the habitats of the Tennessee Valley, the Mississippi River floodplain, and other regions of the Southeast. For example, man's efforts to control the Mississippi River's flooding regime, enhance its navigation, and extract its minerals have led to a rapid deterioration of Louisiana's coastal environment. Wetland loss in Louisiana is more than 400,000 ac since 1900; only 45% of the original forested wetlands in Louisiana remain. The primary causal factor in this loss is subsidence of wetlands that are receiving inadequate amounts of sediment from the Mississippi. An accretion deficit results when levee systems and control structures transport sediments to deep Gulf waters.

In the Mississippi Basin (mid-south Alabama, Tennessee, eastern Texas, and Oklahoma), considerable acreages of bottomland hardwoods were lost to reservoir development between 1962 and

1985 (Gosselink and Lee 1987). Dam construction in general changes water flow patterns, causes flooding, and changes salinity patterns; this kills tree seedlings and can convert forest to salt marsh. Water diversion, another activity degrading southeastern habitats, is severely impacting the Everglades. This diversion stems from the competition for water by agriculture and urban expansion.

Military Activities

The large number of military training areas located in the southeastern coastal plain results in significant impacts on old-growth pine forest. Both a reduction in vegetative ground cover and changes in species composition can result from routine operations and military training activities. Concerns for the impacts of tracked vehicle activity and artillery and aircraft noise on the red-cockaded woodpecker recently prompted a Department of Defense conference on the management of this endangered species (Doug Ripley, personal communication).

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the *Southeastern Forests and Croplands*, the primary habitat impacts are caused by the following:

- Timber harvesting of old-growth or mature forests.
- Land conversion of scrub, coastal, and wetland habitats.
- Fragmentation of contiguous forest.
- Mining and acidification of Appalachian forest.

Timber Harvesting

At a minimum, the production of commercial wood products from an area must not exceed the sustainable level if the ecological integrity of a forested area is to be maintained. Where sensitive forest types exist, logging may be completely prohibited or constrained to specific methods to prevent habitat loss or degradation. In other areas, more extreme harvesting methods may be allowed or prescribed to establish or maintain desired forest conditions. Acceptable methods will vary according to local forest ecology and the desired future condition of the site. Analysis of harvesting techniques must be based upon an analysis of the structure and diversity of the forest canopy, midstory, and understory.

A recent directive of the Chief of the U.S. Forest Service acknowledges this fact and points out that clear cutting is acceptable only when needed to replicate natural ecological processes. Selective cutting can preserve forest structural diversity, the primary determinant of wildlife habitat (Harris et al. 1979). However, it can reduce horizontal diversity (NRC 1982). The harvesting technique employed must be based upon sound silvicultural prescriptions and demonstrate its capability to maintain vertical diversity (foliage height diversity), horizontal diversity (interspersion, edge, juxtaposition, patchiness), and a mixture of live and dead wood. Specific timber harvesting operations should be designed to preserve the structure and diversity of the natural forest habitat.

An important component of selective cutting should be the preservation of standing dead trees. Many species of birds nest, roost, or forage for invertebrates in standing trees with decayed wood. These cull trees are usually the first focus of forest thinning operations to the detriment of the birds. Breeding

bird abundance declines rapidly following a clear cut, and the species composition continues to change for 10 to 15 years (DeGraaf 1991). However, if trees with cavities are saved, many of these species can successfully forage on sound boles. .About one large cavity or den tree per 2 ha is required for populations of large species such as wood ducks; this requires harvest rotations of 100 to 125 years (although rotations of 65 years produce trees large enough for smaller cavity species).

Timber harvesting practices modified to reduce the impacts of simplification must also address fragmentation. As an example, fragmentation has been especially severe in southeastern bottomland forests (Gosselink and Lee 1987). In this case, the setting aside of undisturbed tracts will not suffice to achieve viable populations of the larger, wider-ranging species. Not only do some species require specific habitat conditions (such as forest-interior species like Bachman's warbler), but others require particular arrangements of several communities. Therefore, a successful faunal conservation strategy must emphasize the landscape configuration, not just the structural content of the communities themselves.

Responding to the "biodiversity crisis," the U.S. Forest Service is moving toward an ecosystem approach to forest management (Bob Szaro, personal communication). Recent forest management plans have incorporated tenets of the "New Forestry" espoused by Jerry Franklin. These progressive plans require the rigorous implementation of ecological management practices to maintain forest productivity and preserve the functioning of sensitive forest components such as old-growth or late-successional forests. Effective mitigations for habitat conservation in forest management require specific management measures at the site, watershed, and landscape levels. For example, the location and size of timber harvests should be planned to minimize reduction of core area of mature forest (e.g., harvest only alternate basins until regrowth). Maintenance of mature-forest stands in managed landscape can be achieved by extending rotation (beyond 80) to 150 to 200 years, by leaving some stands unharvested for old growth, and by linking stands. Landscape-scale considerations include the provision of buffer zones and habitat corridors as discussed in the introduction of this document. Management measures recommended for conserving habitat within managed forests include the following:

- Minimize the construction of new roads and close roads not in use either permanently or seasonally.
- Use best management practices (BMPs) such as filter strips to minimize erosion during harvesting or road construction.
- Maintain 100-ft riparian zones with adjacent feathered transition zones to buffer edge effects.
- Restrict harvesting operations to periods when the ground is either dry or frozen.
- Maintain site productivity by retaining large woody material and minimizing mineral soil exposure and compaction during harvesting.
- Manage for natural disturbance patterns to maintain natural openings and successional-stage composition.
- Maintain connections between blocks of interior forest, especially old growth.

- Provide for the protection of special areas, including cliffs, caves, taluses, riparian areas, and old-growth stands.
- Maintain the structural integrity and the native variety of the forest by managing for the natural composition of the following components: vegetative types, seral stages, tree types and sizes, standing dead trees and down material, tree snags, and cavity trees.

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located at a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique scrub habitats or coastal systems, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting offsite contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable (e.g., bogs and sand dunes), recreational access associated with nearby development may have to be limited.

Amelioration of impacts from land conversion to transportation uses requires special mitigation measures. As with all land conversion, the construction of highways and power-line corridors is primarily a siting issue. Avoidance of sensitive habitats may be accomplished by modifications to the route design, and the extent of disturbance can be limited by careful construction practices. However, fragmentation of the larger area is unavoidable in the case of land conversion to transportation corridors. Many structural mitigation strategies can be used to lessen the impact on animal movement across transportation routes. Primarily, these include the construction of fences and underpasses. The goal of these structural measures should be to mimic the natural movement and migration patterns of the affected species.

Mining

Mitigation of mining impacts involves siting issues, technological solutions to eliminate contamination, and restoration programs. The major mitigations for oil and gas extraction and production are the proper sitings of rigs, reserve pits, processing facilities, and roads where they will have minimal impacts on habitats of concern. Most important for coal and mineral mining is the siting of mining operations and tailing ponds to avoid habitats of concern, wetlands, riparian areas, and recharge areas. Specific mitigation measures depend on the type of mining and the specific process causing impacts. It is generally best to minimize the area affected as it is unlikely that even the disrupted soils and sediments can be restored. In addition to minimizing the area disturbed, activities should be timed to avoid disturbing nearby plants and animals during crucial periods of their life cycle. Possible mitigation measures for mining operations include the following (SAIC 1991a, 1991b):

- Design of mine entrances and workings to minimize future mine drainage.
- Runon and runoff control measures such as berms and ditches.
- Adequate depth and lining of pits for containment of muds and leachate.
- Elimination of fluid migration through casings and dewatering.
- Separation of wastes and contaminated soils with proper disposal.
- Treatment of leach heaps and neutral or acidic wastewaters to reduce the load of cyanide, nitrates, and heavy metals.
- Closure planning that addresses hydrology, geochemical controls, treatment, and restoration.
- Nets or other covers over process ponds.
- Maintenance of an anaerobic environment in the tailing pile during periods of inactivity.
- Secondary containment of tanks and contingency plans for sudden or catastrophic releases.
- Backfilling and sealing of the mine workings during mine reclamation/closure.
- Recycling of process water, smelter slag, and air pollution control dust.
- Monitoring and elimination of discharges to surface water, groundwater, soils, and air.
- Replenishment of surface and ground waters with treated effluents.
- Road closure and reclamation (following recontouring) with revegetation of native species.

Although the reclamation of mined lands is often unsatisfactory for ecological habitat restoration, reforestation with native trees has been demonstrated (Plass 1973) and would serve to reduce the abundance of nest parasitic brown-headed cowbirds and restrict their access to mature forest.

Military Activities

Mitigation of the impacts of military activities on habitats has only recently received attention. The Army Corps of Engineers' Construction Engineering Research Laboratory in Champaign, IL, is developing a Land Condition-Trend Analysis (LCTA) Program (Diersing et al. 1992) as a comprehensive means of matching military training mission objectives with effective natural resource management. If such a plan is instituted, it is likely that careful coordination of the siting and timing of training operations will dramatically reduce habitat impacts. An awareness of the ecological consequences of specific

activities is essential to effective mitigation. The following general mitigation measures apply to the primary impacts of military activity:

- Timing and siting of operations - The noise and disturbance associated with aircraft flights and large troop maneuvers cannot be eliminated. However, sensitive environments can be avoided and operations can be timed to avoid critical nesting and migratory periods.

- Calculation of allowable use for tracked vehicles - Tracked vehicle movements are a major cause of habitat degradation. Vegetation destruction and soil erosion and compaction are the primary impacts. Precise equations can be developed that estimate sustained tracked vehicle use based on physical properties of the environment, vegetative cover, and changes in vegetative cover caused by the passage of tracked vehicles. For example, tracked vehicle use should be restricted to all-weather roads when possible.

- Fire suppression during artillery practice - Fires created by artillery pose a major problem in certain environments. Rapid identification and suppression by helicopter can virtually eliminate the spread of large-scale fires.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.

2. Identify the habitats of concern.

3. Link the activities involved with impacts to these habitats of concern.

4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.

2. Mimic natural processes and promote native species.

3. Protect rare and ecologically important species and communities.

4. Minimize fragmentation of habitat and promote connectivity of natural areas.

5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.

6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.

7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions such as those established for the Chesapeake Bay and the Gulf of Mexico).

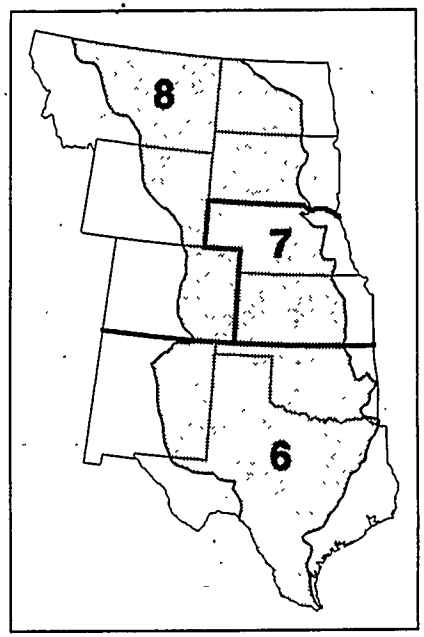
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Southeastern Forests and Croplands*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Dorothy Allard, Regional Ecologist, The Nature Conservancy
W.T. Olds, Associate Regional Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

Great Plains Habitat Region: *Great Plains and Prairies*



Geographical Description of the Region

The Great Plains Habitat Region, *Great Plains and Prairies*, contains parts of 10 states. The region includes parts of North Dakota, South Dakota, Montana, Wyoming, Colorado, Nebraska, Kansas, Oklahoma, New Mexico, and Texas. Parts of EPA Regions 6, 7, and 8 are included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Great Plains and Prairies* comprises 14 ecoregions (Omernik 1987). The vegetation of the region includes a range of grama, needlegrass, wheatgrass, Nebraska sand hills prairie, bluestem, buffalo grass, indiangrass, bluestem prairie (bluestem, panic, indiangrass), cross timbers (oak, bluestem), mosaic (bluestem, oak, hickory), Blackland prairies of wheatgrass, fescue, sandsage, juniper, oak savanna, mesquite acacia, and savanna bristlegrass. The land use patterns comprise croplands, croplands with grazing lands, cropland with pastures, subhumid grasslands, and semi-arid grazing lands, irrigated agriculture, woodlands, forests, and open woodlands grazed.

Habitats of Concern

The *Great Plains and Prairies* contains many habitats of concern, of which the most obvious fall into four general categories: riparian habitats, prairies, brushland, and wetlands The principal habitats of concern most at risk in the *Great Plains and Prairies* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *GREAT PLAINS AND PRAIRIES*

1. Riparian habitats
   - hardwood draws
2. Prairies
   - tallgrass prairie remnants in Kansas
   - short and midgrass prairie (North Dakota, South Dakota, Colorado, Nebraska, Kansas)
   - Texas blackland prairie and other types
3. South Texas brushlands
4. Wetlands
   - prairie potholes (Montana, North Dakota, South Dakota)

Habitat Values and Trends

The term "rangeland" describes the lands with climate or soil conditions unsuitable for tree growth. Rangeland comprises nearly a billion ac (34% of land area) in the United States, including some of the world's most productive rangeland (Box 1989).

Grasslands

The *Great Plains and Prairies* contain 78 million ac of rangeland (USDA Forest Service 1989), including both the true prairie (tallgrass) and plains grassland (shortgrass). Tallgrass prairie is dominated by bluestem grasses and includes prairie potholes important for waterfowl breeding. Most of the original tallgrass prairie was plowed under, and the remaining areas were invaded by trees following fire suppression. The largest existing area of tallgrass prairie (1.5 million ha) covers the Flints Hills of Kansas and the Osage Hill of Oklahoma. Plains grassland is dominated by short warm-season grasses of blue grama and buffalo grass and supports pronghorn, mule deer, white-tailed deer, jackrabbit, prairie dog, greater prairie chicken, and sharptailed grouse. The decline of the long-billed curlew is associated with the decrease in this habitat.

About 84% of mammal species and 74% of avian species are associated with rangeland ecosystems during at least part of the year. Thirty-eight percent of the nation's fish species and 58% of the amphibians are represented in the relatively arid rangeland ecosystems (Flather and Hoekstra 1979).

Based on 1984 maps, the average number of endangered and threatened species per county is 3.3 for the *Great Plains and Prairies*. Perhaps the most important habitat for animals in the *Great Plains and Prairies* are riparian areas where the juxtaposition of terrestrial and wetland or aquatic systems enhances the value of the habitat.

By the beginning of the 20th century, the American range was generally overgrazed and depleted. Severe droughts also contributed to the deterioration of rangeland. Although the total area of rangeland has remained relatively constant, the condition of the range ecosystems has varied considerably with competition by livestock for forage and other factors. Cattle, sheep, and wild horses and burros have contributed to reduced forage and to changes in vegetation composition on the majority of U.S. rangelands. Many native prairie types have been lost to overgrazing or agricultural conversion. The loss of grassland habitat has been responsible for declines in many bird populations. The mixed prairie or shortgrass prairie is subject to drought, grasshoppers and jackrabbit attacks, and cacti invasion. However, native shortgrasses are outstanding in their resistance to grazing (perhaps developed in response to grazing by bison) and have shown remarkable improvement in certain areas. An increase in rangeland area in the Great Plains of 11 million ac is predicted for the next 50 years as a result of the natural succession of agricultural land in the Conservation Reserve Program (Joyce 1989). Rangeland in Texas and Oklahoma will likely increase by 14 million ac or 11% during this period.

Texas Habitats

Within the *Great Plains and Prairies*, Texas contains a greater variety of habitats than any other state. However, virtually all of the blackland and tallgrass prairie, coastal bottomlands, and low hills in Texas have been converted to farms, cities, and suburbs (Loftis 1991). Less than 1% of blackland prairie remains in north-central Texas. In the Lower Rio Grande Valley, there remains less than 2% of the native scrubby, hot delta that once was nearly as rich in wildlife as the Everglades. In particular, duck populations have declined, bird variety in the valley has decreased, and the ancient gene pools of blackland prairie plants are being lost. Brushlands in south Texas still support endangered cats (jaguarundi and ocelot) and numerous subtropical bird species. Past brush clearing activities have greatly impacted this habitat, although the U.S. Fish and Wildlife Service is currently preserving and restoring brush habitat in the Lower Rio Grand Valley.

Within Texas the greatest loss of natural vegetation has occurred in the state's High Plains and Blackland Prairies regions. The following describes the status of the natural regions of Texas within the *Great Plains and Prairies* (Loftis 1991):

- High Plains - Lost the buffalo and pronghorn with conversion to cattle and crops. Damming of rivers has eliminated the willow and cottonwood and replaced them with the Old World exotics, salt cedar, and Russian olive.
- Rolling Plains - Low hills and broad flats with headwaters of major rivers. Native grasses have been cleared and replaced with mesquite, snakeweed, and prickly pear.
- Edwards Plateau - Limestone hills, springs, and rivers support endangered wildlife; ranches and big cities compete with wildlife for ground water.

- Cross-Timbers and Prairies - Strips of prairie crossed by oak forests have been changed by farming and urban development.
- Blackland Prairies - Originally 12 million ac, the tallgrasses, big bluestem, Indiangrass, little bluestem and gammagrass are near extinction at 5,000 ac.
- Post Oak Savannah - Nearly all of original grasslands have been plowed under or invaded by thickets.
- Rio Grande Plain - Open grasslands have been converted to thorn forest by overgrazing, and less than 1% of the natural habitat remains.

Riparian Areas

Riparian areas in the *Great Plains and Prairies* constitute perhaps the region's most important habitat type. Although they represent only 2% to 4% of the land area in the United States, they make up 80% of the wildlife habitat. It has been demonstrated that most endangered species require riparian areas (Johnson 1989). Many neotropical migrants also rely on western riparian areas as critical nesting sites. The value of riparian habitat extends at least 0.25 miles into adjacent areas and can support a density of pairs of breeding birds up to 1,000 per 100 ac (Carothers and Johnson 1975).

Riparian areas provide habitat for more species of birds than all other western rangeland vegetation types combined (Chaney et al. 1990). Although riparian areas cover less than 1% of the West, they also serve important ecosystem functions (Gillis 1991). They keep watersheds healthy by storing and releasing water from spring runoff of snowmelt and summer storms, and by providing watering holes for wildlife as well as cattle. They filter sediment and aid floodplain development, improve floodwater retention and groundwater recharge, develop plant root masses that stabilize streambanks, develop channel characteristics that provide appropriate habitat for fish, and support greater biodiversity.

The linear nature of riparian areas contributes to their value (Gregory et al. 1991). River valleys connect montane headwaters with lowland habitats, and provide for the transfer of water, nutrients, sediment, particulate organic matter, and organisms. Riparian areas transfer these materials laterally onto floodplains and create complex mosaics of landforms and heterogeneous ecosystems. Wildlife utilize riparian areas for food, cover, nesting, and rearing of young. Riparian habitats are frequently used by wildlife as migration routes (Thomas et al. 1978). The greater heterogeneity of vegetation in unaltered riparian habitat increases the available ecological niches and increases the number of species that can be supported.

Johnson (1978) estimates that only 10% of the original riparian habitat in United States remains, and that 6% is lost annually. In the Great Plains, less than 1% of land is riparian vegetation (Crouch 1978). Major losses resulted from drainage for conversion to agriculture; other causes include channelization for navigation and flood control, flooding caused by dam construction, and diversion of streamflow for irrigation. Alterations include grazing, timber harvesting, road construction, mining, and other impacts.

Wetlands

Specific national wetland problèm areas identified by Tiner (1984) in the *Great Plains and Prairies* include the following:

- The emergent wetlands of the Prairie Pothole Region.
- Wetlands of the Nebraska Sandhills and Rainwater Basin.

The drainage of inland marshes for range and agriculture has been the greatest in the prairies of the Dakotas and Minnesota, the sandhills of Nebraska, and the Florida Everglades. In Texas, wetlands covering 8.4 million ac or 52% of the original extent have been lost. One-third loss of this loss (296,132 ac) has been in the playa lake complexes that are especially important for waterfowl and migratory species. In general, emergent wetlands have high priority in this region owing to their functional importance and the constant threat of degradation.

Activities and Impacts Affecting Habitats

IMPACTS ON HABITATS OF CONCERN IN THE *GREAT PLAINS AND PRAIRIES*

	Land Conversion	Timber Harvesting	Grazing	Water Management
Riparian habitats	Residential development and construction of pipeline and transportation corridors	Minor	Sever overgrazing and physical habitat degradation	Impacts of damming and water diversions
Prairies	Conversion to agriculture	None	Severe overgrazing	Moderate
Brushlands	Conversion to urban uses	None	Minor	Minor
Wetlands	Conversion to agriculture and urban uses	None	Minor	Major

The *Great Plains and Prairies* rangeland areas are at risk principally from grazing and water management projects. Dam construction in the Platte River area has also been a major source of modification to terrestrial habitat in that area. Of special concern are the remnants of the tallgrass prairie ecosystem, which has suffered extensive conversion. The rarest of all North America's major biomes, only 10% of the original 142 million ac of tallgrass remains. Much of the 10% represents fragments of old railway rights-of-way, pioneer cemeteries, and various preserves. This prairie habitat is at risk from human encroachment and cattle grazing.

This region is experiencing rapid population growth as part of the westward migration. Highway construction, in particular, has expanded and is creating substantial cumulative impacts on natural areas. The Texas hill country is being rapidly converted to urban uses. Riparian areas are being degraded

through overgrazing, and prairie potholes are being converted to agriculture. Although the region has a relatively small population, urban areas such as Denver, CO, and central Texas are experiencing rapid growth while second-home and time-share development is occurring in previously pristine areas (e.g., Montana, Flathead Mountains in Wyoming, and Colorado prairie river systems).

Grazing and water projects especially threaten riparian environments throughout the region. For example, overgrazing and phreatophyte control are destroying riparian vegetation. Water diversions have caused major losses of riparian and wetland habitats and are contributing to the declines of waterfowl along the Mississippi Flyway.

Land Conversion

To date, the most fertile soils within the *Great Plains and Prairies* have been converted to croplands; these same areas have historically supported the greatest abundance of wildlife (Mayer and Laudenslayer 1988). In addition, urban development has been a major source of rangeland conversions. Pressure on local governments to convert open space to residential, commercial, and industrial uses to accommodate growth has been intense, and will continue to destroy rangeland habitats where population growth is most pronounced.

Conversion of rangelands to cropland will increase with the availability of ground water for irrigation (USDA Forest Service 1989). In particular, sandy rangeland in Texas, Colorado, New Mexico, and Nebraska has been converted to farmland (Sheridan 1981). Abandonment of these farms can lead to desertification if the ground water has been depleted. Areas of concern for desertification include Kiowa and Crowley Counties in Colorado. In these semiarid lands, land conversion to agriculture, grazing, and water management can cause groundwater overdraft, salinization of topsoil and water, reduction of surface water, high soil erosion, and destruction of native vegetation.

As with forest habitats, the spatial pattern and fragmentation of rangeland vegetation can negatively affect native fauna and ecosystem health. The loss of grassland habitat to agriculture is responsible for the decline in prairie birds, especially those requiring large continuous habitats, and is analogous to the reduction in old-growth forests and the decline in its obligate species. The upland sandpiper, bobolink, dickcissel, grasshopper sparrow, savannah sparrow, and Henslow's sparrow all declined by 90% between the 1950s and 1970s (Graber and Graber 1983).

Agricultural Impacts

The intensive use of agricultural land in certain areas of the *Great Plains and Prairies* pose additional stresses to habitats through cultivation and irrigation practices (NRC 1982). The use of fertilizers and pesticides, irrigation and drainage, double cropping and increased field size all contribute to increased pollutant loads and severe impacts on habitats. Agricultural chemicals are toxic to many species and can negatively affect population levels, community composition, and ecosystem dynamics. Other intensive cultivation practices directly reduce important hedgerow and riparian habitat and usually produce severe offsite impacts.

Grazing

Widespread devastation of rangeland resulted from uncontrolled overgrazing between 1880 and 1935, and the damage was amplified by the drought years of the 1930s (Branson 1985). The enactment of the Taylor Grazing Act of 1934 reduced grazing pressure at that time. With the advancement of range management science and the moist years following 1960, considerable improvement occurred in range vegetation. However, the USDA Forest Service (1989) reports that 21% of its rangelands are still in "unsatisfactory" condition. The Bureau of Land Management (1989) reports that BLM rangeland condition is 33% good or better, 38% fair, and 13% poor.

The management of public land grazing is shared between the land management agency and the grazing permittee. Grazing permits are issued, and allotments are inspected for use, condition, and compliance by the management agency; actual management of the livestock and maintenance of improvements is the responsibility of the permittee. Attempts to reduce grazing allotments in national forests to allow improvements on lands in poor or fair condition has caused resentment among graziers. However, federal permit fees are only one-fifth the rate for private lands. As private grasslands continue to decline in acreage as a result of urban and agricultural conversion, there will be increased pressure on public lands.

Grazing poses the following threats to rangeland habitats (Cooperrider 1990):

- Competition with ungulates and small herbivores (e.g., desert tortoise) and limits on the populations of free-roaming pronghorn antelope, mule deer, elk, and bighorn sheep.
- Transmission of disease (e.g., dramatic diebacks in bighorn sheep with domestic sheep grazing).
- Loss of cover for birds.
- Spread of exotics and noxious weeds.
- Desertification, or serious degradation.
- The conversion of lands with sagebrush and pinyon-juniper to reseeded grassland for more forage.

Riparian Areas

The most severe impact in terms of supporting healthy ecosystems and native faunas on rangelands has been the loss of 70% to 90% of riparian areas to human activities (Ohmart and Anderson 1986). Losses of riparian areas have caused the endangerment of habitat-dependent species and likely will cause the extirpation of many species if the last remaining areas of individual habitat types are lost (e.g., 10 species may go extinct if the cottonwood-willow association disappears). Johnson (1978) estimates that 6% of riparian areas continue to be lost annually through water management activity, grazing, sand and gravel extraction, and development activities.

On average, the riparian zone is only 2% of a grazing allotment, but it produces 20% of the forage, and the cattle consume 80% of their forage from these riparian areas. Stream bottoms are natural concentration areas for livestock seeking succulent forage, shade, reliable water supply, and favorable microclimate. Only when access is limited by steep slopes are livestock absent from unfenced riparian areas. Grazing impacts riparian areas both by removing vegetation and by trampling. By affecting the spacing of plants, width of the riparian corridor, seedling establishment, and species composition, floristic diversity is often lower in grazed areas. Trampling increases soil compaction, erodes streambanks, decreases water quality, widens and shallows channels, and physically destroys vegetation (Kauffman and Krueger 1984). Riparian degradation causes accelerated runoff and erosion of downcut streambeds, lowered water tables, and desertification of the land. It has a negative impact on wildlife habitats and leads to declines in willows and native grasses. In addition, degraded riparian areas are more susceptible to upland inputs as healthy riparian areas can filter out upland degradation. While the condition of all rangelands has improved since 1980, riparian areas are in their worst historical condition.

Although the values and functions of riparian areas have been widely and severely impacted by cultivation, road building, mining, urbanization, logging, and damming of rivers, grazing has caused the most geographically extensive impacts (Chaney et al. 1990). Impacts of grazing on riparian areas include the following:

- Little vegetation to stabilize streambank and shade stream.
- Lowered water table and subsurface water storage.
- Reduced or absent summer flow.
- Warm water in summer and icing in winter.
- Poor habitat for fish and aquatics.
- Poor habitat for wildlife.
- Reduced amount and quality of forage.

Water Management

The regulation and damming of streams are often performed to control flooding and drain land, resulting in the impoverishment of riparian vegetation (Szaro 1991). Dams and water diversion significantly change downstream flow regimes, levels of winter floodwater, dry-season flow rates, and riparian-zone soil moisture. Downstream areas lose pulse-stimulated responses, while upstream areas are affected by water impoundment and salt accumulation. Native riparian plants are usually unable to colonize the shore of reservoirs because of the altered hydrologic regime. For example, high water levels are maintained much longer in reservoirs than in rivers and streams; changes in the level are more drastic; and the large winter/spring floods required for alluvial seedbeds (e.g., cottonwood) are eliminated.

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the *Great Plains and Prairies*, the primary habitat impacts are caused by the following:

- Land conversion of riparian and wetland habitats.
- Grazing of riparian areas.
- Water management impacts of diversion and damming on riparian and wetland areas.

It is likely that certain areas will see additional conversions to cropland or pasture, and that more open ranges will be fenced and thus restrict winter grazing by native ungulates. Increased irrigation will likely follow higher demand for water and adversely affect water tables and stream flow on rangelands. These and other activities will pose a complex of interrelated effects on habitats of concern and will require a holistic, ecosystem-level approach to mitigation. The effects of future management and mitigations on riparian areas will have the greatest impact on wildlife and native ecosystem health (NRC 1982).

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique riparian or wetland habitats, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting offsite contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable, recreational access may have to be limited. These mitigations can be best implemented by creation of a regional land-use plan (through a coordinating council like the Waterfowl Flyway Council) and landowner incentives (like the Conservation Reserve Program).

Conversion to agricultural land is a special concern in rangelands with increasing irrigation potential. Land conversion to agriculture can cause groundwater overdraft, salinization of topsoil and water, reduction of surface water, high soil erosion, and destruction of native vegetation. Mitigations include more conservative irrigation techniques and improved drainage systems. Soil conservation techniques vary from windbreaks to contour plowing, stripcropping, rotation of crops, conversion to grass, and/or minimum tillage.

Grazing

Future management of grazing on rangelands will determine whether range conditions worsen or improve from their currently degraded state (NRC 1982). In the past, range condition has been estimated by (1) forage production relative to a mythical average, and (2) production of livestock. Recently, some range managers have begun to base condition estimates on deviation from an ideal range or ecological

climax. These and other improvements in range science provide for consideration of objectives beyond livestock production. For example, the widely used model of E.J. Dyksterhuis (1949) is based on reversible and gradual community change and is now viewed as inaccurate, as it does not incorporate threshold community shifts (Jahn 1991). The problem for habitat conservation is that the proportion of rangeland climax habitats has greatly decreased, similar to the case with old-growth forest. Although there remain disagreements over proper management methods, it is anticipated that more effective use of ecological analyses of range condition will improve the management of rangelands.

Specific methods of mitigating grazing impacts on rangelands include the following (Branson 1985):

- Proper intensity and season of grazing.
- Practices that improve livestock distribution.
- Control of undesirable species using fire or other appropriate methods.
- Land-surface modification to retain soil moisture for forage production.
- Ecologically based management plans for each site using adequate field data.

Proper grazing management can restore the long-term productivity of most rangelands, but obstacles are grazing tradition, the geographical extent of problem, and the difference between short-term costs and long-term benefits. Successful management requires that traditional intensive measures to increase forage be replaced by different management practices. For example, rest-rotation grazing can improve range conditions, while intensified chemical use and mechanical brush removal to improve forage will likely further degrade range habitats. Certainly, successful rangeland mitigation requires time, flexibility, commitment by graziers, and monitoring and evaluation.

Improvements in the condition of riparian areas will provide the greatest proportional benefit to rangeland integrity and functioning. Szaro (1991) argues strongly for an overall ecosystem approach to research and management of riparian areas. This includes the use of reference sites, a watershed (ecosystem) scale approach, and long time scale considerations (greater than 5 years). Mitigation must consider the following factors:

- Riparian floristic (plant species) diversity should take precedence over structural diversity (vegetation layers and patches) as descriptors of the habitat.
- Wildlife species depend both on floristic composition and on the relationship of riparian areas to animal movement patterns and migratory pathways.
- The distribution of riparian vegetative communities varies with topography and depends principally on elevation.
- Flooding and other natural disturbances are important to riparian systems. They contribute to their status as distinct and highly integrated pockets within other communities.

Successful riparian management requires unique solutions to the specific condition at each site (Chaney et al. 1990). However, general principles include the following:

- Include riparian areas in separate pastures with separate objectives and strategies.
- Fence or herd stock out of riparian areas to let vegetation recover.
- Control the timing of grazing (1) to keep the stock off streambanks that are most vulnerable to erosion, and (2) to coincide with the physiological needs of plants.
- Provide more rest to the grazing cycle to increase plant vigor or to encourage more desirable species.
- Limit grazing intensity.
- Change from cattle to sheep to get better animal distribution through herding.
- Permanently exclude livestock from high-risk and poor recovery areas.

Wetlands

Mitigation of wetlands destruction and degradation is the subject of a growing literature (Kusler and Kentula 1989). Restoration and mitigation banking concepts are still being evaluated as effective mitigation measures for direct wetlands alterations.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions).

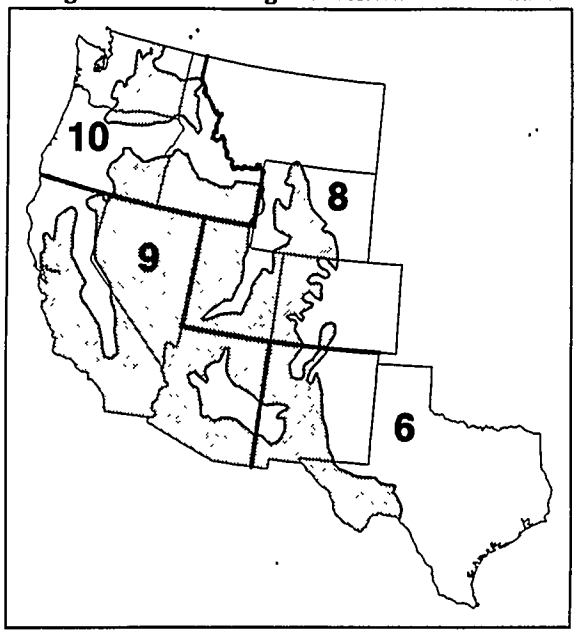
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Great Plains and Prairies*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Patrick Bourgeron, Regional Ecologist, The Nature Conservancy
Robert Jacobsen, Regional Associate Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

Western Rangelands Habitat Region: *Western Deserts and Grasslands*



Geographical Description of the Region

The Western Rangelands Habitat Region, *Western Deserts and Grasslands*, contains parts of 12 states. The region includes parts of Texas, New Mexico, Arizona, California, Nevada, Utah, Colorado, Wyoming, Idaho, Montana, Oregon, and Washington. Parts of EPA Regions 6, 8, 9, and 10 are included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Western Deserts and Grasslands* comprises 11 ecoregions (Omernik, 1987). The natural vegetation included in the Region consists of a variety of sagebrush steppe (sagebrush and wheatgrass), saltbush, greasewood, creosote bush, bur sage, needlegrass shrub steppe, juniper, pinyon woodlands, blackbush, Great Basin sagebrush, grama, tobosa shrub steppe, Trans-Pecos shrub savanna (tarbush, creosote), chaparral (manzanita, ceanothus, chamise), and tule marshes (bulrush and cattails). The land use pattern is mostly desert shrublands both grazed and ungrazed, irrigated agriculture, open woodlands grazed, subhumid grasslands, semi-arid grazing lands, forests and woodlands mostly ungrazed, and croplands with grazing land.

Habitats of Concern

The *Western Deserts and Grasslands* contains many habitats of concern, of which the most obvious fall into five general categories: riparian habitats, wetlands, desert complexes and scrub habitats, grasslands, and forested habitats. The principal habitats of concern most at risk in the *Western Deserts and Grasslands* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *WESTERN DESERTS AND GRASSLANDS*

1. Riparian habitats

2. Wetlands
   - shallow emergent wetlands in pluvial lake basins
   - cold desert and steppe in Great Basin and Intermountain regions
   - saline desert wetlands

3. Desert complexes and scrub habitats
   - Sonoran and Mojave desert communities
   - sagebrush type
   - salt desert shrub type

4. Grasslands
   - mixed prairie or shortgrass prairie
   - California grassland
   - Palouse grassland of the Northwest
   - southwest semidesert grassland

5. Forested habitats
   - pinyon-juniper woodland
   - ponderosa pine-bunchgrass type
   - chaparral vegetation of Arizona and California

Habitat Values and Trends

The term "rangeland" describes the lands with climate or soil conditions unsuitable for tree growth. Rangelands encompass nearly a billion ac (34% of land area) in the United States, including some of the world's most productive rangeland (Box 1989). *Western Deserts and Grasslands* habitats traverse the entire range of life zones from the alpine communities of high mountains to the subtropical Sonoran Desert scrub plains and valley of the lower Gila and Colorado Rivers. In the Rocky Mountain region, rangelands (including pinyon-juniper and chaparral-mountain scrub forests) comprise about 336 million ac. Sagebrush alone constitutes the second largest habitat type in United States with 105 million

ac, while other habitats include southwestern shrubsteppe, desert shrub, mountain grasslands, mountain meadows, desert grasslands, and plains grasslands. Rangelands in the Pacific States total 68 million ac with 23 million ac in grassland and 45 million ac in shrubland (USDA Forest Service 1989).

By the beginning of the 20th century the American range was generally overgrazed and depleted. Severe droughts also contributed to the deterioration of rangeland. The majority of rangeland is in the West, where declines in area have been minor—4% in the Rocky Mountains and 5% in the Pacific States (USDA Forest Service 1989). Although the total area of rangeland has remained relatively constant, the condition of the range ecosystems has varied considerably with competition by livestock for forage and other factors. Cattle, sheep, and wild horses and burros have contributed to reduced forage and to changes in vegetation composition on the majority of U.S. rangelands. Many native prairie types have been lost to overgrazing or agricultural conversion. Grazing and fire suppression have allowed brush species to replace many of the grass forage species on 200 million ac of the Southwest (National Association of Conservation Districts 1979), negatively impacting bighorn sheep, pronghorn, sage grouse, masked bobwhite quail, and northern aplomado falcon. At the same time, range management activities (such as pinyon-juniper removal, exotic species plantings, predator and native ungulate control) and development along valleys and lower slopes have affected wildlife community composition and critical winter range for wild ungulates. The loss of grassland habitat has been responsible for declines in many bird populations.

No data exist on the extent of areal changes, but the range of pinyon-juniper has certainly increased since settlement as a result of overgrazing, fire suppression, and climate changes. Projections for the next 50 years indicate that rangeland area will increase by 7 million ac in the Rocky Mountains and 3 million ac in the Pacific States as a result of conversion of agricultural lands through the Conservation Reserve Program (USDA Forest Service 1989). However, even where there have been increases in total area, the condition of these rangelands has been severely degraded. The majority of rangeland on nonfederal and Bureau of Land Management lands is in fair to poor condition (Joyce 1989). In the 11 western states, range conditions on public lands are rated as 2% excellent, 29% good, 42% fair, and 26% poor (Wald and Alberswerth 1989).

Klopatek et al. (1979) demonstrated that the tule marsh ecosystem in California, Nevada, and Utah has suffered the greatest loss of any habitat since presettlement times (89%), primarily owing to agricultural conversion. However, in general, vegetation in the western United States has exhibited the least losses due to land conversion and suffer primarily from degradation. Alpine meadows and barrens have undergone the least change because of their rugged topographical setting. In contrast, riparian areas are especially important to wildlife, and losses of this type of vegetation to human activities are estimated at 70% to 90% (Swift and Barclay 1980). In Texas, important rangelands include the rocky landscape along the Big Bend in the Trans Pecos Region and the extremely diverse Mountains and Basins Region, where overgrazing has damaged most of the desert grasslands and small streams (Loftis 1991).

About 84% of mammal species and 74% of avian species are associated with rangeland ecosystems during at least part of the year, and 38% of the nation's fish species and 58% of the amphibians are represented in the relatively arid rangeland ecosystems (Flather and Hoekstra 1989). Based on 1984 maps, the average number of endangered and threatened species per county is 6.1 for the *Western Deserts and Grasslands*, the highest in the nation. Although most of the value placed on rangeland habitats centers on the grass and shrub vegetation existing under different climatic conditions, and the grazing fauna they support, many other values such as reclusive reptile species and the

characteristic cryptogamic crusts of the desert are being recognized. Perhaps most important are riparian areas where the juxtaposition of terrestrial and wetland or aquatic systems enhances the value of the habitat.

Woodland and Shrubland

Pinyon-juniper woodland is a widely distributed vegetation type that supports mule deer, mountain lion, coyote, bobcat, jackrabbit, and numerous birds. Pinyon-woodland has invaded grassland areas owing to lack of fire, seed spread by livestock, overgrazing and reduced competition from grasses, and shifts in climate (Branson 1985). Woodland invasion of big sagebrush has occurred more slowly, usually where pinyon-juniper is often adjacent to sagebrush on the dissections of western basins and mountains. Fire management in now being used to encourage the reestablishment of natural vegetation and native diversity in these areas.

In Arizona and California, chaparral vegetation consists of dense stands of evergreen shrubby vegetation. In California, the sparse herbaceous understory of chaparral is less affected by livestock grazing than grasslands, but alien herbaceous species have largely replaced native perennials in both systems (Branson 1985). Areas in Arizona with high grass were converted to dense chaparral with intensive grazing following mineral prospecting in 1890; other chaparral in the Sierra Nevada is a subclimax of forest maintained by frequent fires. This habitat provides watershed protection and critical habitat for the California condor.

Grasslands

Mountain grasslands provide critical winter range for big game. These mountain meadows are sensitive to abuse, as some are destroyed by roads and camping as well as grazing. Desert grasslands consist of blue and black grama grasses and invading shrubs resulting from increased livestock grazing, climatic change, increased competition among plant species, rabbits and rodents, and fire control. They support pronghorn and collared peccary.

The mixed prairie or shortgrass prairie is subject to drought, grasshopper and jackrabbit attack, and cacti invasion. Native shortgrasses are outstanding in their resistance to grazing (perhaps developed in response to grazing by bison) and have shown remarkable improvement in certain areas.

Nowhere else in the West has the native vegetation been as completely replaced as in the 30-million-ac extent of grasslands in California (Branson 1985). Native perennials were largely replaced by introduced Mediterranean annuals by the 1860s, so that now less than 5% of the current species are perennials. This has been attributed to past overgrazing or perhaps fire. Most of the open grassland in the Sacramento and San Joaquin Valleys is now cultivated or in urban or industrial use. Adjacent grass-woodland and chaparral are grazed by livestock.

The Palouse grassland of the Northwest is dominated by bluebunch wheatgrass on 12 million ha of the Columbia Basin Province of Oregon, Washington, and Montana. Because few ungulates were present before the introduction of domestic stock, native grass species were not resistent to grazing and were strongly impacted by livestock grazing and the invasion of Mediterranean annuals (Branson 1985). The most fertile areas have been cultivated, including some drier lands now irrigated. Grazing is now much reduced in the Palouse grassland, and some improvement in range conditions has occurred.

The widespread change of southwestern semidesert grassland to shrubland is one of the greatest modifications of vegetation on western rangelands. Cited causes include excessive use by domestic stock and the reduction of range fires; the loss of topsoil may prevent ever restoring the original grasslands (Branson 1985). Over the last 100 years, mesquite, creosote bush, and tarbush have expanded to cover the entire range.

Deserts

Four major deserts occur in the western United States: the Sonoran, Mojave, Chihuahuan, and Great Basin Deserts. Among desert habitats, the desert riparian and palm oasis habitats support the greatest number and densities of bird species (Mayer and Laudenslayer 1988). The Sonoran and Mojave Deserts, in particular, support unusual plant and animal communities that are threatened by increased human activities in these regions. Cold desert types of the Great Basin support mule deer, pronghorn, coyote, collared peccary, and feral horses. Hot desert shrublands support desert mule deer, collared peccary, antelope, and desert bighorn sheep.

Both decreased rainfall in this century and effects of grazing have impacted the widely spaced woody plants and cacti of the Sonoran Desert, including the cessation of reproduction in saguaro cactus. The Mojave Desert is suffering degradation from offroad vehicles, which resulted in the cessation of the annual Barstow to Vegas motorcross (The Washington Post 1990). Desert habitats in general support many populations of unique and endangered species, including the desert tortoise. Unique geomorphological features such as desert buttes and the Utah salt flats are also facing threats from recreational activity, air pollution, and water withdrawal (Lancaster 1991).

The sagebrush habitat type is unusually susceptible to change when grazed. Many bunchgrasses in the sagebrush type lack resistance, and the historical response has been the following: (1) an increase in native shrubs undesirable for browsing, (2) reduction in grasses and forbs, and (3) exploitation of voids by alien annual weeds adapted to heavy grazing. A history of grazing and cultivation has led to encroachment and takeover by annual grasses, primarily cheatgrass. Mitigation includes burning of annuals but is effective only where there is sufficient annual precipitation. The success of cheatgrass has facilitated the successful introduction of exotic chukar partridge and supports the majority of wild horse and burro herds. The sagebrush types also support sage grouse, pronghorn, and mule deer. It is likely that the original sagebrush habitat can never be restored to pristine conditions even with removal of domestic animals (Branson 1985).

The salt desert shrub type is often called the shadescale zone because of its sparse vegetation and usually widely spaced shrubs with essentially no understory or interstitial species. In general, where there is an understory (such as black sage), historical overgrazing has reduced grasses and promoted shrub growth and invasion by the exotics halogeton and Russian thistle.

Riparian Areas

Riparian areas in the West constitute perhaps the region's most important habitat type. Although they represent only 2% to 4% of the land area in the United States, they make up 80% of the wildlife habitat. It has been demonstrated that most endangered species require riparian areas (Johnson 1989). Many neotropical migrants also rely on western riparian areas as critical nesting sites. The value of

riparian habitat extends at least 0.25 miles into adjacent areas and can support a density of pairs of breeding birds up to 1,000 per 100 ac (Carothers and Johnson 1975).

Riparian areas provide habitat for more species of birds than all other western rangeland vegetation types combined (Chaney et al. 1990). Within the Great Basin of southeastern Oregon and in southeastern Wyoming, more than 75% of terrestrial wildlife species depend on riparian systems. In Arizona and New Mexico, 80% of all vertebrates use them for at least half of their life cycle and more than 40% of the species are totally dependent on riparian areas. Although riparian areas cover less than 1% of the West, they also serve important ecosystem functions (Gillis 1991). They keep watersheds healthy by storing and releasing water from spring runoff of snowmelt and summer storms and by providing watering holes for wildlife as well as cattle. They filter sediment and aid floodplain development, improve floodwater retention and groundwater recharge, develop plant root masses that stabilize streambanks, develop channel characteristics that provide appropriate habitat for fish, and support greater biodiversity.

The linear nature of riparian areas contributes to their value (Gregory et al. 1991). River valleys connect montane headwaters with lowland habitats, and provide for the transfer of water, nutrients, sediment, particulate organic matter, and organisms. Riparian areas transfer these materials laterally onto floodplains and create complex mosaics of landforms and heterogeneous ecosystems. Wildlife utilize riparian areas for food, cover, nesting, and rearing of young. Riparian habitats are frequently used by wildlife as migration routes (Thomas et al. 1978). The greater heterogeneity of vegetation in unaltered riparian habitat increases the available ecological niches and increases the number of species that can be supported.

Of the 175 million ac of floodplains along streams and rivers in the conterminous United States, 20% are considered to be rangeland (Johnson 1978). Valley trenching starting in the 1880s resulted in the loss of many riparian meadows through massive sheet and rill erosion. The introduction and spread of saltcedar, or tamarisk, became common in most drainages in the Southwest after 1920. Saltcedar displaces native vegetation upon which certain species depend; it reduces the diversity of native shrubs and cottonwoods and transpires large quantities of water. Attempts to increase water yields by reduction of phreatophytes (such as saltcedar) have included root plows, dozer blades, various mowers and choppers, and chemical spraying. These treatments have declined significantly in recent years as a result of concerns about their efficacy and environmental impact.

Johnson (1978) estimates that only 10% of the original riparian habitat in United States remains, and that 6% is lost annually. Major losses resulted from drainage for conversion to agriculture; other causes include channelization for navigation and flood control, flooding caused by dam construction, and diversion of streamflow for irrigation. Alterations include grazing, timbering, road construction, mining, and other impacts. In Arizona, 95% of the woody riparian habitat has been lost or degraded since pre-settlement. In Utah, settlement patterns saw riparian areas converted to farmland, frequently hay fields. They continue to be threatened by water management activity, grazing, sand and gravel extraction, and development activities.

Wetlands

Specific western wetland problem areas identified by Tiner (1984) include the following:

- Estuarine wetlands of the U.S. Coastal Zone.
- Western riparian wetlands.

Wetlands in the Western Great Basin and Intermountain regions include riparian wetlands and shallow wetlands in pluvial lake basins. These shallow wetlands are often saline or alkaline as a result of high evaporation. Important large wetlands include the Bear River Marshes, UT, Malheur Lake Marshes, OR, Stillwater Marsh in the Carson Sink, NV, Tule-Klamath Basin in CA and OR, and the marsh systems of the California central valleys. Nesting habitat for Canada geese has been lost as much of the marshlands of the Great Salt Lake have been inundated with rising lake level (Thomas 1990). Important coastal estuary habitats include the large Gulf of California estuary and the fringing marshes along San Diego and Tomales Bays.

Aquatic Systems

The water area in *Western Grasslands and Deserts* is generally restricted to large bodies of water such as the Great Salt Lake (one-third of all water in the region), and the upper Missouri, Snake, and Colorado River systems.

Activities and Impacts Affecting Habitats

The *Western Deserts and Grasslands* has suffered extensive degradation and loss of rangelands through conversion to cropland; urban expansion; domestic and feral equine competition with indigenous populations for range resources; grazing-pressure effects from the introduction of shrub species to grasslands; and range management activities, including the use of herbicides and the exclusion of natural inhabitants (U.S. Forest Service 1989). Other activities negatively affecting rangelands include water management projects that dam or divert water supplies, mining impacts, and the use of remote rangelands as targets for waste disposal.

For example, in California more than 17 million ac of natural habitat have been lost through conversion to urban and agricultural land, including nearly 90% of riparian habitats in the Central Valley (California DFFP 1988). Major habitats that have lost significant acreages in the last 30 years include grasslands and coastal scrub. The use of grasslands for grazing also results in habitat loss and fragmentation, including excessive surface soil erosion on nearly 25% of western rangelands.

Grazing and water projects especially threaten riparian environments throughout the region. For example, overgrazing and phreatophyte control are destroying riparian vegetation in Arizona and New Mexico. Water diversions in the Central Valley and elsewhere have caused major losses of riparian and wetland habitats and are contributing to the declines of waterfowl along the Pacific Flyway.

Recreational use of off-road vehicles and military maneuvers are also degrading arid environments such as the Mojave. By one calculation, more than a half million ac have been disturbed by motor vehicles in California (California DFFP 1988). Fragile coastal dune habitats have also been damaged and eliminated by development, recreation, and introduced species.

The following activities result in the major impacts on habitats of concern in the *Western Grasslands and Deserts.*

IMPACTS ON HABITATS OF CONCERN IN THE *WESTERN GRASSLANDS AND DESERTS*

	Land Conversion	Grazing	Mining	Water Management	Other
Riparian habitats	Residential development and construction of pipeline and transportation corridors	Degradation from domestic and feral ungulates	Moderate	Historical impact of impoundments and water diversions	Recreational use
Wetlands	Agricultural conversion	Moderate	Moderate	Historical impact of impoundments and water diversions	Minor
Deserts	Urban expansion	Degradation from domestic and feral ungulates	Moderate	Major impact of water diversions	Off-road vehicle use
Grasslands	Agricultural conversion	Degradation from domestic and feral ungulates	Minor	Minor	Minor
Woodlands and shrublands	Urban expansion	Moderate	Minor	Minor	Moderate

Land Conversion

To date, the most fertile soils within the *Western Grasslands and Deserts* have been converted to croplands; these same areas have historically supported the greatest abundance of wildlife (Mayer and Laudenslayer 1988). In addition, urban development has been a major source of rangeland conversions, reaching the highest urban densities at lower elevations with the majority of cities of 10,000 in population occupying areas formerly in grassland or scrub vegetation.

Urban and suburban expansion have converted large areas around the Los Angeles metropolitan area. In addition, some of California's fastest growing areas are in rural counties, including those with significant range resources. Rapid growth from the Sunbelt migration is now occurring around Las Vegas and other desert cities. In the Las Vegas area, the expansion of housing development has been facilitated by land trades with the Bureau of Land Management. Riparian areas in particular are under heavy pressure from development in New Mexico, Arizona, and Nevada. Pressure upon the land and local governments to convert open space to residential, commercial, and industrial uses to accommodate growth

has been intense, and will continue to destroy rangeland habitats where population growth is most pronounced.

Conversion of rangelands to cropland will increase with the availability of ground water for irrigation (USDA Forest Service 1989). For example, sandy rangeland in Texas, Colorado, New Mexico, and Nebraska has already been converted to farmland (Sheridan 1981). Abandonment of these farms can lead to desertification if the ground water has been depleted. Areas of concern for desertification include the Challis Planning Unit in Idaho, the San Jaoquin Basin in California, the Gila, Santa Cruz, and San Pedro River Basins in Arizona, and the Sonoran and Chihuahuan Deserts in Southwest. In these arid and semiarid lands, land conversion to agriculture, grazing, and water management can cause groundwater overdraft, salinization of topsoil and water, reduction of surface water, high soil erosion, and destruction of native vegetation. Irrigation can also have adverse impacts on rangelands when poor drainage leads to waterlogged areas.

As with forest habitats, the spatial pattern and fragmentation of rangeland vegetation can negatively affect native fauna and ecosystem health. The loss of grassland habitat to agriculture is responsible for the decline in prairie birds, especially those requiring large continuous habitats, and is analogous to the reduction in old-growth forests and its obligate species. The upland sandpiper, bobolink, dickcissel, grasshopper sparrow, savannah sparrow, and Henslow's sparrow all declined by 90% between the 1950s and 1970s (Graber and Graber 1983).

Agricultural Impacts

The intensive use of agricultural land in certain areas of the *Western Grasslands and Deserts* poses additional stresses to habitats through cultivation and irrigation practices (NRC 1982). The use of fertilizers and pesticides, irrigation and drainage, double cropping, and increased field size all contribute to increased pollutant loads and severe impacts on habitats. Agricultural chemicals are toxic to many species and can negatively affect population levels, community composition, and ecosystem dynamics. Intensive cultivation practices (e.g., cotton agriculture in deserts) usually produce severe offsite impacts.

Grazing

Widespread devastation of rangeland resulted from uncontrolled overgrazing between 1880 and 1935, and the damage was undoubtedly amplified by the drought years of the 1930s (Branson 1985). The enactment of the Taylor Grazing Act of 1934 reduced grazing pressure at that time. With the advancement of range management science and the moist years following 1960, considerable improvement occurred in range vegetation. However, the USDA Forest Service (1989) reports 21% of its rangelands were still in "unsatisfactory" condition. The Bureau of Land Management (1989) reports that rangeland condition is 33% good or better, 38% fair, and 13% poor.

Overstocking and overgrazing have historically resulted in severe degradation and catastrophic flooding of rangelands. Undesirable and irreversible changes include replacement of grassland with creosote bush in the arid Southwest; replacement of native perennial bunchgrasses by Mediterranean annuals in California grasslands; and conversion of native vegetation in the Great Basin to an artificial balance of grasses and shrubs. Many national forest lands now contain different rangeland communities (e.g., invasion by Utah juniper into grass-shrub and replacement of grasses by big sagebrush).

The management of public land grazing is shared between the land management agency and the grazing permittee. Grazing permits are issued and allotments inspected for use, condition, and compliance by the management agency; actual management of the livestock and maintenance of improvements is the responsibility of the permittee. Attempts to reduce grazing allotments in national forests to allow improvements on lands in poor or fair condition has caused resentment among graziers. However, federal permit fees are only one-fifth the rate for private lands. As the acreage of private grasslands continues to decline with urban and agricultural conversion, there will be increased pressure on public lands.

Grazing poses the following threats to rangeland habitats (Cooperrider 1990):

- Competition with ungulates and small herbivores (e.g., desert tortoise) and limits on the populations of free-roaming pronghorn antelope, mule deer, elk, and bighorn sheep.
- Transmission of disease (e.g., dramatic diebacks in bighorn sheep with domestic sheep grazing).
- Loss of cover for birds.
- Spread of exotics and noxious weeds.
- Desertification, or serious degradation.
- The conversion of lands with sagebrush and pinyon-juniper to reseeded grassland for more forage.

Riparian Areas

The most severe impact in terms of supporting healthy ecosystems and native faunas on rangelands has been the loss of 70% to 90% of riparian areas to human activities (Ohmart and Anderson 1986). Losses of riparian areas have caused the endangerment of habitat-dependent species such as the Least Bell's vireo and likely will cause the extirpation of many species if the last remaining areas of individual types are lost (e.g., 10 species may become extinct if the cottonwood-willow association disappears). Johnson (1978) estimates that 6% of riparian areas continues to be lost annually. Historical loss estimates include 98% of riparian habitats in the Sacramento Valley of California, 95% in Arizona, and 90 to 95% in the Rocky Mountains Region. In Utah, settlement patterns saw riparian areas converted to farmland, frequently hay fields. They continue to be threatened by water management activity, grazing, sand and gravel extraction, and development activities.

Grazing is so ubiquitous in riparian ecosystems of the Southwest that only a few ungrazed sites exist (Szaro 1991). On average, the riparian zone is only 2% of a grazing allotment, but it produces 20% of the forage, and the cattle consume 80% of their forage from these riparian areas. Stream bottoms are natural concentration areas for livestock seeking succulent forage, shade, reliable water supply, and favorable microclimate. Only when access is limited by steep slopes are livestock absent from unfenced riparian areas. Grazing impacts riparian areas both by removing vegetation and by trampling. By affecting the spacing of plants, width of the riparian corridor, seedling establishment, and species composition, floristic diversity is often lower in grazed areas. Trampling increases soil compaction,

erodes streambanks, decreases water quality, widens and shallows channels, and physically destroys vegetation (Kauffman and Krueger 1984). Riparian degradation causes accelerated runoff and erosion, downcut streambeds, lowered water tables, and desertification of the land. It has a negative impact on wildlife habitats and leads to declines in willows and native grasses. In addition, degraded riparian areas are more susceptible to upland inputs as healthy riparian areas can filter out upland degradation. While the condition of all rangelands has improved since 1980, riparian areas are in their worst historical condition.

Although the values and functions of riparian areas have been widely and severely impacted by cultivation, road building, mining, urbanization, logging, and damming of rivers, grazing has caused the most geographically extensive impacts (Chaney et al. 1990). Impacts of grazing on riparian areas include the following:

- Little vegetation to stabilize streambank and shade stream.
- Lowered water table and subsurface water storage.
- Reduced or absent summer flow.
- Warm water in summer and icing in winter.
- Poor habitat for fish and aquatics.
- Poor habitat for wildlife.
- Reduced amount and quality of forage.

Mining

Surface mining has severely degraded large areas of the *Western Grasslands and Deserts*. Surface deposits of minerals are extracted by removing successive layers of the terrestrial environment. Reclamation efforts have increased, but true restoration success is especially difficult in arid habitats. Establishment of vegetation is problematic even with fast growing nonnative species. Oil and gas development also pose severe risks to the pristine natural areas of the West. Exploration and production of both land and off-shore oil reserves are in direct conflict with many wildlife requirements. The substantial infrastructure required by mining activities also contributes to habitat degradation.

Water Management

The regulation and damming of streams are often performed to control flooding and drain land, resulting in the impoverishment of riparian vegetation (Szaro 1991). Dams and water diversion significantly change downstream flow regimes, levels of winter floodwater, dry-season flow rates, and riparian-zone soil moisture. Downstream areas lose pulse-stimulated responses while upstream areas are affected by water impoundment and salt accumulation. Native riparian plants are usually unable to colonize the shore of reservoirs because of the altered hydrologic regime. For example, high water levels are maintained much longer in reservoirs than in rivers and streams; changes in the level are more drastic; and the large winter/spring floods required for alluvial seedbeds (e.g., cottonwood) are eliminated.

Recreational Activities

The characteristics of riparian areas that attract wildlife and livestock also attract human recreation such as birdwatching, hiking, fishing, camping, hunting, trapping, picnicking, floating, boating, and river

running (Carothers and Johnson 1975). These activities are increasing as leisure time, personal income, mobility, and pollution levels increase in the western United States. This will place even greater stress on these rare and abused ecosystems.

Military Activities

The large number of military training areas located in the *Western Grasslands and Deserts* results in major impacts on arid land environments. Both a reduction in vegetative ground cover and changes in species composition result from tracked vehicle activity and troop maneuvers (Diersing et al. 1992). There is a major shift from perennial warm-season grass (blue grama) to invading annual cool-season grasses following disturbance by tracked vehicles. This activity can also reduce densities of shrubs, trees, and succulent plants; the loss of juniper can exceed its ability to regrow.

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the *Western Deserts and Grasslands*, the primary habitat impacts are caused by the following:

- Grazing of riparian areas.
- Land conversion of riparian and wetland habitats.
- Urban conversion of desert and shrubland habitats.
- Mining impacts on arid lands.
- Water management impacts of diversion and damming on riparian and wetland areas.

It is likely that certain areas will see additional conversions to cropland or pasture, and that more open ranges will be fenced and thus restrict winter grazing by native ungulates. Increased irrigation will likely follow higher demand for water and adversely affect water tables and stream flow on rangelands. These and other activities will pose a complex of interrelated effects on habitats of concern and will require a holistic, ecosystem-level approach to mitigation. The effects of future management and mitigations on riparian areas will have the greatest impact on wildlife and native ecosystem health (NRC 1982).

Grazing

Future management of grazing on rangelands will determine whether range conditions worsen or improve from their currently degraded state (NRC 1982). In the past, range condition has been estimated by (1) forage production relative to a mythical average, and (2) production of livestock. Recently, some range managers have begun to base range condition on deviation from an ideal range or ecological climax. This and other improvements in range science provide for consideration of objectives beyond livestock production. For example, the widely used model of E.J. Dyksterhuis (1949) is based on reversible and gradual community change and is now viewed as inaccurate, as it does not incorporate threshold community shifts (Jahn 1991). The problem for habitat conservation is that the proportion of rangeland climax habitats has greatly decreased, similar to the case with old-growth forest. Although there remain disagreements over proper management methods, more effective use of ecological analyses of range condition will likely improve the management of rangelands.

Specific methods of mitigating grazing impacts on rangelands include the following (Branson 1985):

- Proper intensity and season of grazing.
- Practices that improve livestock distribution.
- Control of undesirable species using fire or other appropriate methods.
- Land-surface modification to retain soil moisture for forage production.
- Ecologically based management plans for each site using adequate field data.

Proper grazing management can restore the long-term productivity of most rangelands, but obstacles are grazing tradition, geographical extent of problem, and the difference between short-term costs and long-term benefits. Successful management requires that traditional intensive measures to increase forage be replaced by different management practices. For example, rest-rotation grazing can improve range conditions, while intensified chemical use and mechanical brush removal to improve forage will likely further degrade range habitats. In addition, fire can be used as a management tool to return pinyon-juniper areas to their previous savannah condition. As a rule, conversion to cattle from sheep requires more management as cattle use bottomland more intensely than sheep. Therefore, summer cattle use of desert ranges in an undesirable practice. Successful rangeland mitigation requires time, flexibility, commitment by graziers, and monitoring and evaluation.

Improvements in the condition of riparian areas will provide the greatest proportional benefit to rangeland integrity and functioning. The Bureau of Land Management (BLM) has plans for restoring 180,000 stream miles within 270 million ac of BLM lands to improve the functioning and status of 23.7 million ac of riparian/wetland systems to meet demands for protecting watersheds, restoring water quality, and enhancing conditions for fish, wildlife, livestock, and outdoor recreation (Jahn 1991).

Szaro (1991) argues strongly for an overall ecosystem approach to research and management of riparian areas. This includes the use of reference sites, a watershed (ecosystem) scale approach, and long time scale considerations (greater than 5 years). Mitigation of impacts to riparian areas should consider the following factors:

- Riparian floristic (plant species) diversity should take precedence over structural diversity (vegetation layers and patches) as descriptors of the habitat.
- Wildlife species depend both on floristic composition and on the relationship of riparian areas to animal movement patterns and migratory pathways.
- The distribution of riparian vegetative communities varies with topography and depends principally on elevation.
- Flooding and other natural disturbances are important to riparian systems. They contribute to their status as distinct and highly integrated pockets within other communities.

Successful riparian management requires unique solutions to the specific condition at each site (Chaney et al. 1990). However, general principles include the following:

- Include riparian areas in separate pastures with separate objectives and strategies.
- Fence or herd stock out of riparian areas to let vegetation recover.
- Control the timing of grazing (1) to keep the stock off streambanks they are most vulnerable to erosion, and (2) to coincide with the physiological needs of plants.
- Provide more rest to the grazing cycle to increase plant vigor or encourage more desirable species.
- Limit grazing intensity.
- Change from cattle to sheep to get better animal distribution through herding.
- Permanently exclude livestock from high-risk and poor-recovery areas.

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique riparian or wetland habitats, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting offsite contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Desert habitats are especially vulnerable to mechanical disruption by vehicles and machinery. Where rare plant types exist or where habitats are unstable (e.g., sand dunes), recreational access may have to be limited. These mitigations can be best implemented by creation of a regional land-use plan (through a coordinating council like the Waterfowl Flyway Council) and landowner incentives like the Conservation Reserve Program.

Conversion to agricultural land is a special concern in rangelands with increasing irrigation potential. Land conversion to agriculture can cause groundwater overdraft, salinization of topsoil and water, reduction of surface water, high soil erosion, and destruction of native vegetation. Mitigations include : re conservative irrigation techniques and improved drainage systems. Soil conservation techniques vary from windbreaks to contour plowing, stripcropping, rotation of crops, conversion to grass, and/or minimum tillage.

Amelioration of impacts from land conversion to transportation uses requires special mitigation measures. As with all land conversion, the construction of highways and power-line corridors is primarily a siting issue. Avoidance of sensitive habitats may be accomplished by modifications to the route design, and the extent of disturbance can be limited by careful construction practices. However, fragmentation of the larger area is unavoidable in the case of land conversion to transportation corridors. Many structural mitigation measures can be used to lessen the impact on animal movement across

transportation routes. Primarily, these include the construction of fences and underpasses. The goal of these structural measures should be to mimic the natural movement and migration patterns of the affected species.

Mining

Mitigation of mining impacts involves siting issues, technological solutions to eliminate contamination, and restoration programs. The major mitigations for oil and gas extraction and production are the proper sitings of rigs, reserve pits, processing facilities, and roads where they will have minimal impacts on habitats of concern. Most important for coal and mineral mining is the siting of mining operations and tailing ponds to avoid habitats of concern, wetlands, riparian areas, and recharge areas. Specific mitigation measures depend on the type of mining and the specific process causing impacts. It is generally best to minimize the area affected as it is unlikely that even the disrupted soils and sediments can be restored. In addition to minimizing the area disturbed, activities should be timed to avoid disturbing nearby plants and animals during crucial periods of their life cycle.

Possible mitigation measures for mining operations include the following (SAIC 1991a, 1991b):

- Design of mine entrances and workings to minimize future mine drainage.
- Runon and runoff control measures such as berms and ditches.
- Adequate depth and lining of pits for containment of muds and leachate.
- Elimination of migration of fluids through casings and dewatering.
- Separation of wastes and contaminated soils with proper disposal.
- Treatment of leach heaps and neutral or acidic wastewaters to reduce the load of cyanide, nitrates, and heavy metals.
- Closure planning that addresses hydrology, geochemical controls, treatment, and restoration.
- Nets or other covers over process ponds.
- Maintenance of an anaerobic environment in the tailing pile during periods of inactivity.
- Secondary containment of tanks and contingency plans for sudden or catastrophic releases.
- Backfilling and sealing of the mine workings during mine reclamation/closure.
- Recycling of process water, smelter slag, and air pollution control dust.
- Monitoring and elimination of discharges to surface water, groundwater, soils, and air.

- Replenishment of surface and ground waters with treated effluents.
- Road closure and reclamation (following recontouring) with revegetation of native species.

Although the reclamation of mined lands is often unsatisfactory for ecological habitat restoration, reforestation with native trees has been demonstrated (Plass 1975) and would serve to reduce the abundance of nest parasitic brown-headed cowbirds and restrict their access to mature forest.

Wetlands

Mitigation of wetlands destruction and degradation is the subject of a growing body of literature (Kusler and Kentula 1989). Restoration and mitigation banking concepts are still being evaluated as effective mitigation measures for direct wetlands alterations.

Military Activities

Mitigation of the impacts of military activities on habitats has only recently received attention. The Army Corps of Engineers' Construction Engineering Research Laboratory in Champaign, IL, is developing a Land Condition-Trend Analysis (LCTA) Program (Diersing et al. 1992) as a comprehensive means of matching military training mission objectives with effective natural resource management. If such a plan is instituted, it is likely that careful coordination of the siting and timing of training operations will dramatically reduce habitat impacts. An awareness of the ecological consequences of specific activities is essential to effective mitigation. The following general mitigation measures apply the primary impacts of military activity.

- Timing and siting of operations - The noise and disturbance associated with aircraft flights and large troop maneuvers cannot be eliminated. However, sensitive environments can be avoided, and operations can be timed to avoid critical nesting and migratory periods.
- Calculation of allowable use for tracked vehicles - Tracked vehicle movements are a major cause of habitat degradation. Vegetation destruction and soil erosion and compaction are the primary impacts. Precise equations can be developed that estimate sustained tracked vehicle use based on physical properties of the environment, vegetative cover, and changes in vegetative cover caused by the passage of tracked vehicles. For example, tracked vehicle use should be restricted to all-weather roads when possible.
- Fire suppression during artillery practice - Fires created by artillery pose a major problem in arid environments. Rapid identification and suppression by helicopter can virtually eliminate the spread of large-scale fires.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions such as those established for southern California).

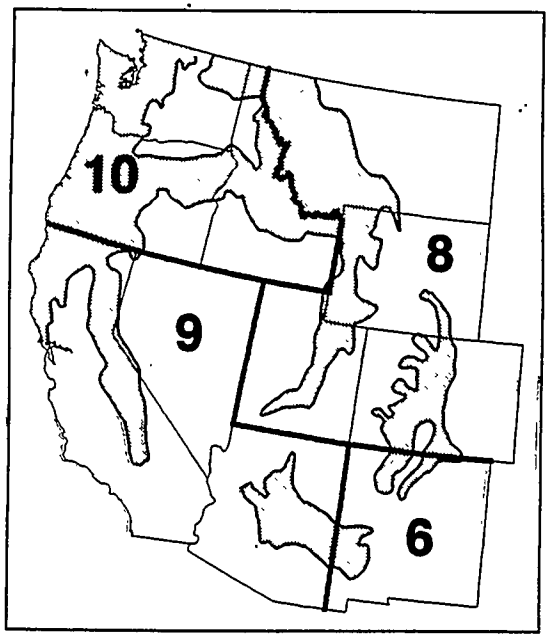
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Western Deserts and Grasslands*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Patrick Bourgeron, Regional Ecologist, The Nature Conservancy
R. Langley, Associate Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

Western Forests Habitat Region: *Western Forests*



Geographical Description of Region

The Western Forests Habitat Region, *Western Forests*, contains parts of 11 states. The region includes parts of Washington, Oregon, California, Arizona, New Mexico, Colorado, Wyoming, Utah, Nevada, Montana, and Idaho. Parts of EPA Regions 6, 8, 9, and 10 are included. The accompanying map indicates the boundaries of this habitat region and the states it comprises.

The *Western Forests* comprises 12 ecoregions (Omernik, 1987). The vegetation of the *Western Forests* includes a wide range of forest types, including spruce, cedar, hemlock, cedar hemlock, Douglas fir, redwood, silver-fir, western spruce, mixed conifer forest (fir, pine, Douglas fir), red fir, lodgepole, subalpine forest, western ponderosa pine, grand-fir, alpine meadows (bent grass, sedge, fescue, needlegrass), Arizona pine, pinyon woodland, Southwestern spruce, and a mosaic of Oregon oakwoods. The land use pattern is predominantly forest and woodlands that are grazed and ungrazed, pasture croplands, and croplands with some interspersion of pasture, woodlands, and forests.

Habitats of Concern

The *Western Forests* contains many habitats of concern; the most obvious fall into four general categories: old-growth conifer forests, remnant hardwood forests, alpine communities, and riparian and aquatic systems. The principal habitats of concern most at risk in the *Western Forests* are listed below.

PRINCIPAL HABITATS OF CONCERN IN THE *WESTERN FORESTS*

1. Old growth conifer forests
   - Douglas fir of Pacific Northwest
   - ponderosa pine east of the Cascades
   - ponderosa pine in Arizona and New Mexico
   - redwood forest in California
   - old growth in northern Rocky Mountains
2. Remnant hardwood forests
   - California oak woodlands
   - Oregon oakwoods
2. Alpine communities
   - montane grasslands
   - alpine talus and barrens
3. Riparian, wetland, and aquatic systems
   - riparian forest
   - salmon fishery habitat

Habitat Values and Trends

The western United States contains a large area of forested land, including the last substantial areas of virgin forest (excluding Alaska). Timber harvesting came to the West with the settlement era after most of the East had already been logged. The three major regions of western forests are the Rocky Mountains, California, and the Pacific Northwest.

Rocky Mountain Forests

In the Middle and Southern Rocky Mountains, intensive exploitation of forest timber began when railroads opened up the region, producing lumber mills in 1870 (Barrett 1980). Fire also played an important role in this region, promoting lodgepole pine at the expense of Douglas fir. Logging came later to the Northern Rocky Mountains, where the forests of Idaho and western Montana represent the largest area of contiguous forest in the United States with more than 80% of the land forested.

Agricultural settlement increased rapidly after the Civil War, reaching into the fertile grasslands and open timbered foothills. Farmland extension is currently slow but continuing into the forest area. About half of the forest area is grazed.

Current forestry efforts are directed at the conversion of old-growth and high-graded stands to commercial timber harvesting. Although white pines forests were intensively logged between 1910 and 1925, old-growth forests still predominate over much of the Northern Rocky Mountain Region. A total of 138 million ac of forest occur in the Rocky Mountain Region, most in pinyon-juniper woodland (47 million ac of dry plateaus and broken tablelands), Douglas-fir (18 million ac), fir-spruce (16 million ac), ponderosa pine (16 million ac), and lodgepole pine (15 million ac) (USDA Forest Service 1989). In recent decades, a modest, steady decline in forest area has occurred as a result of clearing for roads, urban development, powerline rights-of-way, and surface mining. Substantial areas in Montana, Idaho, and Colorado have been converted to homesites. Data indicate that forest ecosystem types that have declined since 1963 include western white pine (89%), larch (35%), lodgepole pine (29%), ponderosa pine (27%), and western hardwood (19%). In the future, forest area is expected to remain stable as timber harvesting lands decrease and conversions to urban uses increase.

The Rocky Mountain region is a highly dissected series of peaks and ridges containing both forests and rangeland (see Western Rangelands Habitat Region). Even within forested areas, many unusual habitats exist, including old-growth spruce/skunk cabbage, acid shale ponderosa pine communities, intermountain bunchgrass, and various alpine and subalpine communities. Many of these are uncommon and isolated, representing especially vulnerable habitats in this region.

California Forests

California is second only to Alaska in total forest area; forest area constitutes 40% of the state, or 40 million ac (Barrett 1980). Since 1953, the total commercial forest area in California has decreased by about 1 million ac because of grazing development, roads, construction of reservoirs and power lines, urban expansion, and park and wilderness dedication. The six major habitat types include redwood, mixed conifer, true fir, ponderosa pine, California oak woodland, and California chaparral. Although the state has a long history of industrial use of forest, efforts are under way to restrict timber harvesting throughout the state.

Losses of forests and woodlands have been less than 1% per year over the last decade and are caused principally by urbanization and construction of roads and reservoirs (USDA Forest Service 1989). However, the condition of forests has been greatly affected by logging, which has reduced the number of trees by 55% and changed open stands of large trees to dense stands of small trees. Forest composition has changed; hardwoods have replaced coastal conifers, while white fir and incense-cedar have replaced pine in the interior. Originally 74% of forest was mature or old growth and 13% was in sapling or saw timber stages. Now nearly 40% of mature stands have been cut and are in the sapling stage. Predictions are that about 11% of timberland will be reserved for mature stands (Raphael et al. 1988). Air pollution, both acid deposition and smog, also have caused extensive damage to these forest ecosystems, especially to the susceptible granitic watersheds and Southern California forests (California Department of Forestry and Fire Protection 1988).

Pacific Northwest Forests

The Pacific States, excluding California, comprise about 50 million ac of forest. Major types include western hemlock-sitka spruce, coastal Douglas fir, true fir-mountain hemlock, mixed conifers of southwestern Oregon, mixed pine-fir of eastern Oregon and Washington, and northwestern ponderosa pine (USDA Forest Service 1989). Since 1963, many forest ecosystem types have declined: western white pine (99%), redwood (31%), ponderosa pine (26%), Douglas fir (20%), and lodgepole pine (17%).

The Pacific Northwest rainforest (principally spruce, hemlock, and fir) constitutes one of the most productive forest regions in the world. The western areas of Washington and Oregon are 80% forested, and the eastern portions of these states are 35% to 40% forested. Large-scale settlement began in the Pacific Northwest during the middle of the 19th century. Agriculture was restricted to river valleys and the steppe vegetation of the East, but adjacent forested areas were used extensively for grazing of both sheep and cattle. Timber harvesting increased with the advent of the California Gold Rush and has continued to be a major industry ever since. Forest use west of the Cascades started along waterways and progressed inland onto steeper slopes as logging technologies improved. Virgin timber is still being cut on the higher slopes of the Olympics and western slopes of the Cascades, but the age classes of the second forest follow the original, regional pattern of harvesting. Clearcut logging has been almost universal west of the Cascades with partial cut logging used to the east (Barrett 1980).

The Olympic Peninsula of Washington contains one of the best examples of old-growth forests remaining in the United States. Of the 390,000 ac of old growth existing in 1940, only 94,000 remained in 1988 (Morrison 1990). Although sitka spruce and western hemlock covered more than 1 million ac before European settlement, logging and human-caused fires have reduced the area by 97%. Additional ecological zones include Douglas fir, pacific silver fir, mountain hemlock, subalpine fir, and alpine. In both Oregon and Washington, the most obvious change in forest cover over the last 10 years has been the reduction in area of old-growth forests by logging. Major impacts in both states have been clear cutting, road building, edge effects, fragmentation, and human fires, as well as disease and pest mortality in eastern Washington.

Morrison (1988) assessed the amount and condition of ecological old-growth conifer forest that still exists on 6 of the 12 westside national forests in the coastal region of Oregon, Washington, and northern California and estimated the amount of old growth that will remain in 5 years if present policy continues. The results predict that old growth covers less area and is being lost more rapidly than is claimed by the U.S. Forest Service. Factors contributing to the vulnerability of old-growth forest in the Northwest include the following:

- Nearly all of the old growth on private lands in the Pacific Northwest has been logged.
- Only 31% of the remaining old growth is in designated wilderness areas.

Based on 1984 maps (Flather and Hoekstra 1989), the average number of endangered and threatened species per county is 5.6 for the *Western Forests*, among the highest in the nation. The following listing of Pacific Northwest forest types illustrates some of their characteristic ecological values:

Douglas-fir - dense overstory forest of ancient trees supports important plants such as epiphytes and yew, and rare species such as spotted owl and marbled murrelet; forest openings and early

seral stages support elk, grizzly bear, moose, blue and ruffed grouse, mammalian predators such as mountain lions and bobcats, and endangered American peregrine falcon.

Fir-spruce and hemlock-Sitka spruce - dense canopy forest with little understory but interspersed with meadows or stream bottoms with willows and aspens; support moose, elk, wolverine, lynx, black bear, mountain lion, and some grizzly bear.

Ponderosa pine - historically, fire kept habitat open and park-like with ground cover of grasses, sedges, and forbs; supports black bear, mule deer, elk, and mountain lion.

Lodgepole pine - supports moose, elk, wolverine, lynx, black bear, mountain lion, coyote, and some grizzly bear.

Redwood - dense overstory forest of small geographic extent in California and Oregon; supports elk, mountain lion, bobcat, and black bear.

Western hardwoods - 50% or more of coast live oak, canyon live oak, blue oak, valley oak, interior live oak, or aspen; in California supports mule deer, California quail, mountain quail, skunk, and endangered San Joaquin kit fox.

Pinyon-juniper - often adjacent to sagebrush on dissection of western basins and mountains; supports mule deer, mountain lion coyote, bobcat, jackrabbit, numerous birds.

Alpine - above timberline in Rocky Mountain and Pacific Coast regions; consists of grasses, grasslike species and forbs; includes lakes and ponds with endemic trout; supports pika, pocket gopher, yellow-bellied marmot, mule deer, elk, mountain sheep, and ptarmigan.

Riparian and Wetland Areas

The original amount of wetland area in the Rocky Mountain Region has been decreased by one-third since widespread settlement began (Windell et al. 1986). The Rocky Mountains comprise a relatively small area of wetlands, but a wide variety of wetland types, ranging from intermountain basins to alpine tundra. Much of the impact results from the concentration of human population within certain Rocky Mountain areas. Population tends to be sparse in the high plains, heavy along the junction between the plains and mountains, and moderate in the mountains along narrow valley floodplain corridors. The heaviest development is concentrated along water courses.

Development along water courses has dramatically reduced the area of wetlands in the Pacific States. As in the Rocky Mountain Region, many Pacific States wetlands occur in rangeland environments rather than forests. However, many wetlands do occur in the *Western Forests*, including the large estuaries of San Francisco and Puget Sound and the forest wetlands along the north coast of Washington. Perhaps of even greater importance in the *Western Forests* are riparian areas. These forest zones provide essential habitat for many forest species, connect forest to wetland areas, and provide filtering and transport of nutrients for aquatic systems. The traditional use of riparian areas for access to timber harvesting and transport of logs has severely degraded riparian areas in the *Western Forests*.

Aquatic Systems

Approximately 6 million ac of water area occur in the vast Rocky Mountains. About 4 million ac of water area occur in the Pacific States, including coastal waterways such as Puget Sound and Strait of Juan de Fuca, Crater Lake, and rivers such as the Columbia and Willamette. Incomparable salmonid fisheries were once characteristic of the *Western Forests*. Timber harvesting practices and development on major rivers, especially damming for hydropower and irrigation diversion, have dramatically reduced fishery habitat and salmonid abundance.

Activities and Impacts Affecting Habitats

The major sources of degradation and loss to terrestrial environments in the *Western Forests* are timber harvesting practices and mining. Land conversion and water management activities also affect both terrestrial and aquatic systems. The ecologically rich old-growth forests of the Pacific Northwest are under intense logging pressure as private old-growth lands are eliminated. The total area of old growth has declined by 80%, and the remaining forests are being fragmented and degraded. This issue represents one of the country's most intense conflicts of natural area preservation and resource exploitation.

In addition to timber harvesting, mining and oil and gas development pose risks to the pristine natural areas of the Northwest. Gold mining is causing habitat degradation in Washington. Pressure upon local governments to convert open space to residential, commercial, and industrial uses to accommodate growth have been intense, and have also been responsible for the loss of wildlife habitat in the area. Losses have been most severe where the effects of urbanization and population growth are most pronounced. California habitats that have lost significant acreages in the last 30 years include foothill oak woodland, closed-cone pine-cypress, and redwood forests. Much of the development in the next decade will occur on hardwood forest lands of California.

The following activities result in the major impacts on habitats of concern in the *Western Forests*.

IMPACTS ON HABITATS OF CONCERN IN THE *WESTERN FORESTS*				
	Land Conversion	Timber harvesting	Mining	Water Management
Old-growth forests	Minor	Clearcutting and forest fragmentation	Moderate	Minor
Remnant hardwood forests	Urban development	Moderate	Minor	Minor
Alpine communities	Resort and recreational development	Minor	Moderate	Minor
Riparian, wetland, and aquatic systems	Residential development in river bottoms and construction of pipeline and transportation corridors	Major impacts of erosion and sedimentation	Major	Major impacts of damming and water diversion

Timber Harvesting

Old-growth forests are of special concern for habitat conservation. Not only do these sensitive terrestrial environments contain unique assemblages of species but they are also under intense timber harvesting pressure. The only significant remaining area of old-growth forest is the conifer forest of the Pacific Northwest. Less than 5 million ac of the original 15 million ac of old growth in western Washington and western Oregon remain. Some view the altered landscape of the Olympic Peninsula in western Washington due to timber cutting as the most drastic ecological disturbance of the last 10,000 years (Morrison, 1990). Less than 20% of the original old growth on the peninsula remains, and entire ecological associations of plants and animals that once dominated lower elevations on the peninsula are now rare. Ancient forests of the Pacific Northwest have been so fragmented by roads and logging that the viability of the old-growth ecosystem is in question.

Forests serve many important ecosystem functions that can be lost or degraded by timber harvesting practices (Norse 1990a). For example, forests are naturally efficient regulators of water-flow levels through the retention of surface run-off during high precipitation periods and the maintenance of moisture levels during low precipitation periods. Forest stabilization of soils prevents increases in sediment loads and maintains water purity for aquatic habitat and human uses. In the Klamath Mountains of southwestern Oregon, erosion rates in roaded areas averaged more than 100 times higher than on undisturbed sites, and erosion caused by logging alone averaged 6.8 times higher than on undisturbed sites (Dyrness 1975). In northern California over a 9-year period, stream sediment in a developed

watershed was more than 80% higher with road building and 275% higher with logging and roads than in a similar, undisturbed watershed. Forests also serve to retain nutrients within the ecosystem by a complex process of litter accumulation and decomposition. Logging often destroys the nutrient retention ability of the soils and has been implicated in failures to achieve forest regeneration.

Fragmentation of habitat is another severe impact of timber harvesting on forests. As roads and clearcuts are placed in virgin forest, landscape fragmentation increases and the natural buffering of extremes in temperature, drought, snow pack, and wind decreases. As a result, blowdowns, fires, insect and disease infestations, snag cutting, and salvage logging increase. Approximately 60 ac of old growth are destroyed or altered for each new 25-ac clearcut in unfragmented old growth as a result of deleterious edge effects; for every mile of road built in unfragmented old growth, approximately 97 ac of old-growth forest are altered by edge effects (Morrison 1988).

Land Conversion

Land conversion in the *Western Forests* has the greatest impact on the remnant woodlands at the edge of urban centers and on the forest valleys along river courses. The U.S. Forest Service (1989) projections over the next 50 yr indicate a loss in forest area of 8 million ac with the conversion to urban and developed uses in the Seattle-Tacoma areas, numerous areas in California, and the mixed forest-urban zones of Oregon. Conversion of both uplands and wetlands has a profound effect on the natural communities in the West. In recent years, the expansion of populations into formerly pristine areas is fragmenting forest through industrial and residential development. Rural areas are also suffering from "spin-off development" associated with highway development.

Impacts on Riparian and Wetland Areas

In addition to the conversion of lands along water courses, riparian and wetland areas of the *Western Forests* face threats from other offsite and onsite activities. The primary impacts to wetlands include the following:

- Recreation and other development (especially vacation houses and resort facilities).
- Drainage and filling for buildup and parking areas (impact of cumulative effects).
- Dewatering, diversion, and irrigation (there are many transbasin diversion systems in the Rocky Mountains).
- Forest clear-cutting and channelization (causing erosion, faster snowmelt, reduced water retention, and nutrient loading downstream).
- Mineral mining (aquifer draw down, channelization, stream diversion, acid and alkaline mine drainage, waste disposal sites and tailing areas, erosion and sedimentation).
- Sand and gravel mining (expected to triple or quadruple by the year 2000).

- Road and railroad access (construction of roads, villages, and towns along medium to large streams).
- Dams and reservoirs (decreasing the acreage of riverine, riparian, and wetland systems).

Impacts on Aquatic Systems

Aquatic resources, especially the anadromous fisheries of the Pacific Northwest, are also suffering severe declines. The complex of dams on the Columbia River kill approximately 93% of young salmon and have contributed to the listing of the sockeye and chinook salmon as threatened. Recovery plans for these and other fish species will have large-scale ramifications on water management and human industry planning for the region (Weisskopf 1991).

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In the *Western Forests*, the primary habitat impacts are caused by the following:

- Timber harvesting and fragmentation of old-growth forests.
- Land conversion of remnant hardwood forests and alpine communities.
- Mining impacts on forests and aquatic systems.
- Water management impacts of diversion and damming on rivers.

Management of the combined effect of these activities on sensitive habitats requires a holistic, ecosystem-level approach. The new interagency efforts to manage the Greater Yellowstone Ecosystem in Montana and Wyoming (approximately 20 million ac, 69% publicly owned by five federal agencies) is the premier example of an integrated approach to ecosystem management (Jahn 1991). In particular, the approach pays special attention to the needs of wide-ranging species such as elk and grizzly bears. It emphasizes the need to look at the landscape scale (not institutional boundaries) for the implications of habitat value and modification.

Timber Harvesting

At a minimum, the production of commercial wood products from an area must not exceed the sustainable level if the ecological integrity of a forested area is to be maintained. Where sensitive forest types exist, logging may be completely prohibited or constrained to specific methods to prevent habitat loss or degradation. In other areas, more extreme harvesting methods may be allowed or prescribed to establish or maintain desired forest conditions. Acceptable methods will vary according to local forest ecology and the desired future condition of the site. Analysis of harvesting techniques must be based upon an analysis of the structure and diversity of the forest canopy, midstory, and understory.

A recent directive of the Chief of the U.S. Forest Service acknowledges this fact and points out that clear cutting is acceptable only when needed to replicate natural ecological processes. Selective cutting can preserve forest structural diversity, the primary determinant of wildlife habitat (Harris et al. 1979). However, it can reduce horizontal diversity (NRC 1982). The harvesting technique employed must be based upon sound silvicultural prescriptions and demonstrate its capability to maintain vertical

diversity (foliage height diversity), horizontal diversity (interspersion, edge, juxtaposition, patchiness), and a mixture of live and dead wood. Specific timber harvesting operations should be designed to preserve the structure and diversity of the natural forest habitat.

An important component of selective cutting should be the preservation of standing dead trees. Many forest birds nest, roost, or forage for invertebrates in standing trees with decayed wood. These cull trees are usually the first focus of forest-thinning operations to the detriment of the birds. Breeding bird abundance declines rapidly following a clear cut, and the species composition continues to change for 10 to 15 years (DeGraaf 1991). However, if trees with cavities are saved, many of these species can successfully forage on sound boles. About one large cavity or den tree per 2 ha is required for population of large species such as wood ducks; this requires harvest rotations of 100 to 125 years (although rotations of 65 years produce trees large enough for species nesting in smaller cavities).

Timber harvesting practices modified to reduce the impacts of simplification must also address fragmentation. The setting aside of undisturbed tracts will not achieve viable populations of the larger, wider-ranging species. Some species require specific habitat conditions; others require particular arrangements of several communities. Therefore, a successful faunal conservation strategy must emphasize the landscape configuration, not just the structural content of the communities themselves.

Responding to the "biodiversity crisis," the U.S. Forest Service is moving toward an ecosystem approach to forest management (Bob Szaro, personal communication). Recent forest management plans have incorporated tenets of the "New Forestry" espoused by Jerry Franklin. These progressive plans require the rigorous implementation of ecological management practices to maintain forest productivity and preserve the functioning of sensitive forest components such as old-growth or late-successional forests. Effective mitigations for habitat conservation in forest management require specific management measures at the site, watershed, and landscape levels. For example, the location and size of timber harvests should be planned to minimize reduction of core area of mature forest (e.g., harvest only alternate basins until regrowth). Maintenance of mature-forest stands in managed landscape can be achieved by extending rotation (beyond 80) to 150 to 200 years, by leaving some stands unharvested for old growth, and by linking stands. Landscape-scale considerations include the provision of buffer zones and habitat corridors as discussed in the introduction to this document. Management measures recommended for conserving habitat within managed forests include the following:

- Minimize the construction of new roads and close roads not in use either permanently or seasonally.
- Use best management practices (BMPs) such as filter strips to minimize erosion during harvesting or road construction.
- Maintain 100-ft riparian zones with adjacent feathered transition zones to buffer edge effects.
- Restrict harvesting operations to periods when the ground is either dry or frozen.
- Maintain site productivity by retaining large woody material and minimizing mineral soil exposure and compaction during harvesting.

- Manage for natural disturbance patterns to maintain natural openings and successional-stage composition.
- Maintain connections between blocks of interior forest, especially old growth.
- Provide for the protection of special areas, including cliffs, caves, taluses, riparian areas, and old-growth stands.
- Maintain the structural integrity and the native variety of the forest by managing for the natural composition of the following components: vegetative types, seral stages, tree types and sizes, standing dead trees and down material, tree snags, and cavity trees.

The preservation of old-growth forest in the Pacific Northwest has been the focus of intensive scientific study. For example, the report of The Scientific Panel on Late-Successional Forest Ecosystems provides a model of alternatives of forest management for preservation of ecosystems and wildlife (Johnson et al. 1991). Using the spotted owls as an indicator species, the panel derived the following recommendations for mitigating the impact of timber harvesting on late-successional/old-growth forest in the Northwest:

- Late-Successional/Old-Growth (LS/OG) areas should be protected as habitat conservation areas (HCAs). Blocks suitable to maintain 20 pairs of owl should be not more than 12 miles apart. Areas between these blocks must follow the 50-11-40 rule: 50% of forest must have an average tree diameter of 11 inches and canopy closure of 40%. Areas with additional owls may be added to the HCAs to meet the goal of preservation.
- Provisions for watersheds and fish include major reductions in road mileage and road drainage improvements, as well as extended logging rotations. "Problem" roads would be improved or removed, and unstable soils would remain unroaded.
- Riparian management will include no-harvest areas of varying width (1/4 mi to 50 ft depending on the value of the stream).

In a series of alternatives (from high timber harvest to LS/OG and watershed/fish emphasis), the Panel found that "current forest plans do not provide a high level of assurance for maintaining habitat for old-growth-dependent species." No alternative provides abundant timber harvest and high levels of habitat protection for species associated with late-successional forests.

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located at a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique woodland or wetland habitats, hydrological and contamination concerns are especially important. Construction or resource management activities require the use of sediment filter strips and other means of intercepting offsite contaminants. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable (e.g., riparian areas), recreational access may have to be limited. These mitigations can be best implemented by creation of a regional land-use plan (through a coordinating council like the Waterfowl Flyway Council) and landowner incentives like the Conservation Rescrve Program.

Mining

Mitigation of mining impacts involves siting issues, technological solutions to eliminate contamination, and restoration programs. The major mitigations for oil and gas extraction and production are the proper sitings of rigs, reserve pits, processing facilities, and roads where they will have minimal impacts on habitats of concern. Most important for coal and mineral mining is the siting of mining operations and tailing ponds to avoid habitats of concern, wetlands, riparian areas, and recharge areas. Specific mitigation measures depend on the type of mining and the specific process causing impacts. It is generally best to minimize the area affected as it is unlikely that even the disrupted soils and sediments can be restored. In addition to minimizing the area disturbed, activities should be timed to avoid disturbing nearby plants and animals during crucial periods of their life cycle.

Possible mitigation measures for mining operations include the following (SAIC 1991a, 1991b):

- Design of mine entrances and workings to minimize future mine drainage.
- Runon and runoff control measures such as berms and ditches.
- Adequate depth and lining of pits for containment of muds and leachate.
- Elimination of migration of fluids through casings and dewatering.
- Separation of wastes and contaminated soils with proper disposal.
- Treatment of leach heaps and neutral or acidic wastewaters to reduce the load of cyanide, nitrates, and heavy metals.
- Closure planning that addresses hydrology, geochemical controls, treatment, and restoration.
- Nets or other covers over process ponds.
- Maintenance of an anaerobic environment in the tailing pile during periods of inactivity.
- Secondary containment of tanks and contingency plans for sudden or catastrophic releases.
- Backfilling and sealing of the mine workings during mine reclamation/closure.

- Recycling of process water, smelter slag, and air pollution control dust.
- Monitoring and elimination of discharges to surface water, groundwater, soils, and air.
- Replenishment of surface and ground waters with treated effluents.
- Road closure and reclamation (following recontouring) with revegetation of native species.

Although the reclamation of mined lands is often unsatisfactory for ecological habitat restoration, reforestation with native trees has been demonstrated (Plass 1975) and would serve to reduce the abundance of nest parasitic brown-headed cowbirds and restrict their access to mature forest.

Wetlands

Mitigation of wetlands destruction and degradation is the subject of a growing body of literature (Kusler and Kentula 1989). Restoration and mitigation banking concepts are still being evaluated as effective mitigation measures for direct wetlands alterations.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions such as those established for the Columbia River Basin).

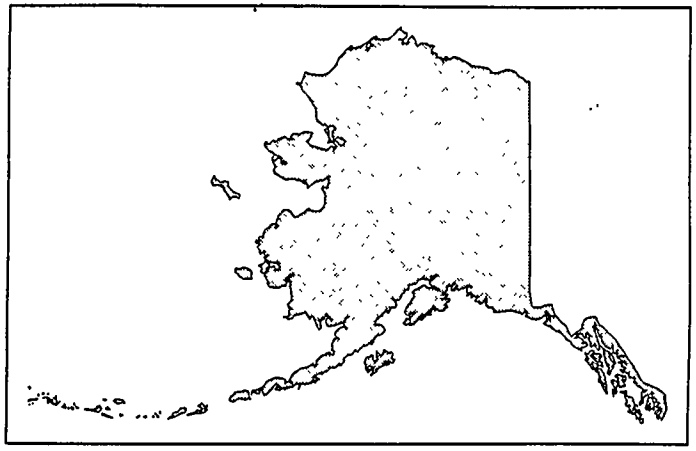
Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Western Forests*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Patrick Bourgeron, Regional Ecologist, The Nature Conservancy
Jim Teeter, Associate Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

ALASKA HABITAT REGION: *ALASKA*



Geographical Description of the Region

The Alaska Habitat Region consists of the state of *Alaska* and is contained in EPA Region 10. Although only the single state is included, *Alaska* constitutes one-third of the land area of the United States. Also, because it is separated from the conterminous states, *Alaska* contains a unique set of habitat types.

Alaska comprises 5 ecoregions (Bailey 1980). The vegetation of *Alaska* consists of grasses, sedges, lichens with willow shrubs, birch-lichen woodland, needleleaf forest, cottongrass-tussock, dwarf shrubs, lichens, mosses, dwarf birch, Labrador-tea, cinquefoil, white spruce mixed with cottonwood, balsam poplar, willow rose, dogwood, berry bushes, dwarf arctic birch, crowberry, arctic willow, resin birch, dwarf blueberry, cottongrass, bluejoint, taiga, green and thinleaf alder, dogwood, sphagnum, bog rosemary, white mountain-avens, moss-campion, black oxytrope, arctic sandwort, alder thickets, devils club, mountain ash, and alpine-azalea.

Alaska is unique among the regions of the United States in that it still possesses large areas of pristine landscape. The scale of the state is vast, and changes to the landscape from different land use patterns, although increasing, are still primarily restricted to urban centers, fishing ports, and oil and gas producing operations.

Habitats of Concern

Alaska contains many habitats of concern; the most obvious fall into five general categories: old-growth forest, riparian watersheds and fisheries, tundra, maritime forest, and boreal forest. The principal habitats of concern most at risk in *Alaska* are listed below.

PRINCIPAL HABITATS OF CONCERN IN *ALASKA*

1. Old-growth forest of southeastern Alaska
2. Riparian watersheds and salmon rivers
3. Tundra
   - wetlands (e.g., muskeg and sedge meadow)
   - arctic tundra foothills and uplands
   - alpine tundra
4. Aleutian Island maritime grasslands
5. Boreal forest of south-central Alaska

Habitat Values and Trends

The scale and range of habitat types that occur in *Alaska* are unparalleled in the contiguous United States. Large areas of *Alaska* are still without any ground inventories or meaningful ecological descriptions.

Tundra

Alaska contains 173 million ac of rangeland mostly in arctic and alpine tundra. By many definitions, the tundra of *Alaska* is wetland and includes many wetland complexes such as muskeg and sedge meadow. These areas support large populations of caribou, moose, and about 30,000 reindeer. Also present are bears, wolves, coyotes, foxes, squirrels, and mice. Lichen is a primary ground cover in *Alaska*, and it is critical to the survival of reindeer. Lichen habitat has been seriously degraded by overgrazing and wildfires. In the arctic tundra and Bering tundra provinces, cottongrass-tussock is widespread; in the Brooks Range region, lower elevations may be vegetated with sedges and shrubs (USDA Forest Service 1989).

Tundra provides critical habitat for waterfowl; it also supports fisheries on the lowlands and black-tailed deer on the uplands. In the North Slope foothills, caribou use the uplands for calving and

are seasonally dependent on tundra vegetation. The tundra and maritime grasslands of the Aleutian system provide one of the outstanding pristine ecosystems in the United States.

Forests

Alaska is less than 40% forested. Today, Alaskan forests consist of 116 million ac of fir-spruce and 11 million ac of hemlock-Sitka spruce (USDA Forest Service 1989). More than 90% of the commercial coastal forests are still in old growth; however, in the interior more than 50% are in young stands (Barrett 1980). Except in the immediate vicinity of villages, the native Indians made no impact on the coastal forests. However, both aboriginal and modern cultures have altered the interior forest through fire.

The mainland of coastal Alaska and the island archipelago contain one of the largest pristine rainforest and shoreline ecosystems in the world. Of this, 11,600,000 ha fall within the Tongass and Chugach National Forests and the Glacier Bay National Park and Preserve. Southeast Alaska is 46% forested, with the remainder in alpine, permanent snow and ice (including broad piedmont glaciers at the northern tip), or bog (muskeg). This coastal forest type (Sitka spruce-western hemlock) extends westward across south-central Alaska where the state is only 11% forested. Similar to the Pacific Northwest, Alaska old-growth forest is multi-aged with codominants 200 to 250 years of age. However, Alaskan old-growth forest experiences less frequent natural perturbations (such as fire) and contains a greater percentage of total closed-canopy cover. Highly productive old-growth forests usually occur in smaller patches than in the Pacific Northwest and are increasingly fragmented toward their northern range limit. In general, however, Alaskan old-growth forest is abundant owing to the relatively low frequency of catastrophic disturbance (Alaback and Juday 1989). Coastal Alaskan old growth supports Sitka black-tailed deer and other wildlife species.

Alaska Coastal Plain

The Alaska Coastal Plain is one of the last intact arctic ecosystems. It supports caribou, musk-ox, moose, Dall sheep, wolf, arctic fox, brown bear, and 22% of the western arctic population of lesser snow goose. This area is threatened by oil and minerals exploration and development; in many cases land is being leased to oil companies by native corporations (Frazier 1987). Oil drilling in Prudhoe Bay has caused erosion, vehicle damage, heavy dust loads from the road system, and water damming and tundra ponding.

Aquatic Systems

About 16 million ac of *Alaska* is in water area, principally the coastal waterways, the numerous large rivers of the Yukon system, and more than 3 million lakes more than 20 ac in size. *Alaska* possesses the world's most productive salmon fisheries.

Activities and Impacts Affecting Habitats

The following activities result in the major impacts on habitats of concern in *Alaska*.

IMPACTS ON HABITATS OF CONCERN IN *ALASKA*

	Land Conversion	Timbering	Mining	Other
Old-growth forest	Minor	Heavy logging in the Southeast	Minor	Minor
Riparian watersheds and fisheries	Urban development in river bottoms and development of pipeline and transportation corridors	Major impact from logging practices and sedimentation	Degradation from in-stream placer mining	Minor
Tundra	Conversion around urban centers	None	Impacts of oil and gas production	Impacts of military activities
Maritime grasslands	Minor	None	Minor	Impacts of military activities
Boreal forests	Minor	Moderate	Minor	Minor

Land Conversion

Alaska is experiencing rapid development of certain areas, especially around Anchorage and Fairbanks (Mary Lynn Nation, personal communication). This includes urban sprawl and the building of infrastructure for tourism. Considerable conflicts with wetland fills have arisen because of the extent of tundra wetland. Land conversions include areas for ports and airports infrastructure, and areas for harbors and the shipping industry. Private fish hatcheries and ladders are consuming land in the south-central region, and the fishing industry in Dutch Harbor has converted land for processing and storage operations. One of the greatest threats is posed by transportation corridors; a recent proposal is to open the Dalton Highway (the hauling road to the North Slope) to recreation.

Timber Harvesting

Timbering of Alaska is principally confined to the coastal southeastern area of productive Sitka spruce-hemlock. It ranks with tourism, behind oil production and fisheries, as the state's major industries (USDA Forest Service 1989). Considerable research has been conducted on timbering methods for this area and will likely result in both less national forest area being available for logging and more intensive timbering of the remaining lands. The increase in privately owned forest will likely result in logging and a decreased forest area in certain locations. In particular, the leasing of land through native corporations has resulted in increased logging.

Timbering activities include clear cuts and conversions for roads, antennas, and other operational areas. Severe impacts are also caused by log transfer, staging, and in-water storage. Negative effects include erosion and si"ation of salmon fishery habitat and loss of habitat for black-tailed deer.

Mining

In addition to timbering, mining and oil and gas development pose severe risks to the pristine natural areas of *Alaska*. Exploration and production of oil reserves in *Alaska* are in direct conflict with many wildlife requirements. In addition to the production on the Kenai Peninsula oil patches and offshore oil drilling in Cook Inlet, considerable small-scale drilling exploration is conducted in undeveloped areas. Discovery of oil in these regions would require substantial infrastructure development, including pipelines and tankering. New petroleum and liquid natural gas (LNG) pipelines are also proposed.

Gold mining is another cause of habitat degradation in *Alaska*. This includes placer mining and proposed copper leachate facilities. Impacts include the effects of tailings and runoff, especially the contribution to erosion and sedimentation that negatively affect salmon fisheries.

Military Activities

Military operations constitute another activity degrading habitats in *Alaska*. This is most important in the pristine Aleutian maritime grasslands; the fact that these areas are generally inaccessible has prevented virtually all other degradation. Impacts include toxic releases and bulldozing operations causing erosion.

Mitigations of Impacts

The conservation of habitats requires consideration of mitigations for the major activities impacting habitats of concern. In *Alaska*, the primary habitat impacts are caused by the following:

- Timbering of old-growth forests in southeastern Alaska.
- Mining impacts on tundra and aquatic systems.
- Urban expansion and conversion of tundra environments.
- Impacts of logging and development on riparian areas and salmon fisheries.

Management of the combined effect of these activities on sensitive habitats requires a holistic, ecosystem-level approach. In particular, the approach pays special attention to the needs of wide-ranging species such as caribou. It emphasizes the need to look at the landscape scale (not institutional boundaries) for the implications of habitat value and modification.

Timber Harvesting

At a minimum, the production of commercial wood products from an area must not exceed the sustainable level if the ecological integrity of a forested area is to be maintained. Where sensitive forest types exist, logging may be completely prohibited or constrained to specific methods to prevent habitat loss or degradation. In other areas, more extreme harvesting methods may be allowed or prescribed to establish or maintain desired forest conditions. Acceptable methods will vary according to local forest

ecology and the desired future condition of the site. Analysis of harvesting techniques must be based upon an analysis of the structure and diversity of the forest canopy, midstory, and understory.

A recent directive of the Chief of the U.S. Forest Service acknowledges this fact and points out that clear cutting is acceptable only when needed to replicate natural ecological processes. Selective cutting can preserve forest structural diversity, the primary determinant of wildlife habitat (Harris et al. 1979). However, it can reduce hori. ntal diversity (NRC 1982). The harvesting technique employed must be based upon sound silvicultural prescriptions and demonstrate its capability to maintain vertical diversity (foliage height diversity), horizontal diversity (interspersion, edge, juxtaposition, patchiness), and a mixt..re of live and dead wood. Specific timber harvesting operations should be designed to preserve the structure and diversity of the natural forest habitat.

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- Minimize the construction of new roads and close roads not in use either permanently or seasonally.
- Use best management practices (BMPs) such as filter strips to minimize erosion during harvesting or road construction.
- Maintain 100-ft riparian zones with adjacent feathered transition zones to buffer edge effects.
- Restrict harvesting operations to periods when the ground is either dry or frozen.

- Maintain site productivity by retaining large woody material and minimizing mineral soil exposure and compaction during harvesting.
- Manage for natural disturbance patterns to maintain natural openings and successional-stage composition.
- Maintain connections between blocks of interior forest, especially old growth.
- Provide for the protection of special areas, including cliffs, caves, taluses, riparian areas, and old-growth stands.
- Maintain the structural integrity and the native variety of the forest by managing for the natural composition of the following components: vegetative types, seral stages, tree types and sizes, standing dead trees and down material, tree snags, and cavity trees.

The conservation of old-growth forest presents a special challenge that is currently being addressed in *Alaska*. In southeastern Alaska, the rainforest extends 500 miles long by 100 miles wide across a mosaic of offshore islands. The forest supports Sitka spruce 200 feet tall and 400 years old with a lush undergrowth of evergreen plants, ferns, and mosses. Most of this rainforest is within the confines of the Tongass National Forest and is subject to the multiuse management and timber harvesting of the U.S. Forest Service. Forest series with late successional components in the Tongass include upland, riparian, and beach Sitka spruce, Sitka spruce-western hemlock, mixed conifer, and subalpine mountain hemlock. An old-growth management prescription for the Tongass prepared by a recent workgroup (Samson et al. 1991) included the following requirements: (1) define ecological units; (2) establish a province system that captures representative habitat for dependent species; and (3) recommend the size, shape, and distribution of habitats to maintain viable populations of species. The group recommends that at least one watershed within each province be left intact for wildlife. Timber and timber-wildlife emphasis alternatives were described. The latter requires that forest management in the Tongass include the following:

- Harvest areas from the periphery inward to maintain large continuous blocks.
- Harvest areas so that they are "sloppy" with small patches of green trees, brushy openings, and snags to increase the habitat available through time.
- Provide edges that are "feathered" to reduce vulnerability to windthrow.
- Harvest habitat types in a manner that ensures the continued existence of each type and relative availability of each type.
- Use habitat models for indicator species to prioritize areas to be retained as old-growth wildlife habitat.

Based on population models of ermine, islands of less than 2,000 ac of forest habitat should not be logged. Alternatively, clusters of smaller islands may withstand timbering if species have appropriate dispersal routes.

Mining

Mitigation of mining impacts involves siting issues, technological solutions to eliminate contamination, and restoration programs. The major mitigations for oil and gas extraction and production are the proper sitings of rigs, reserve pits, processing facilities, and roads where they will have minimal impacts on habitats of concern. Most important for coal and mineral mining is the siting of mining operations and tailing ponds to avoid habitats of concern, wetlands, riparian areas, and recharge areas. Specific mitigation measures depend on the type of mining and the specific process causing impacts. It is generally best to minimize the area affected as it is unlikely that even the disrupted soils and sediments can be restored. In addition to minimizing the area disturbed, activities should be timed to avoid disturbing nearby plants and animals during crucial periods of their life cycle.

Possible mitigation measures for mining operations are listed below (SAIC 1991a, 1991b):

- Design of mine entrances and workings to minimize future mine drainage.
- Runon and runoff control measures such as berms and ditches.
- Adequate depth and lining of pits for containment of muds and leachate.
- Elimination of migration of fluids through casings and dewatering.
- Separation of wastes and contaminated soils with proper disposal.
- Treatment of leach heaps and neutral or acidic wastewaters to reduce the load of cyanide, nitrates, and heavy metals.
- Closure planning that addresses hydrology, geochemical controls, treatment, and restoration.
- Nets or other covers over process ponds.
- Maintenance of an anaerobic environment in the tailing pile during periods of inactivity.
- Secondary containment of tanks and contingency plans for sudden or catastrophic releases.
- Backfilling and sealing of the mine workings during mine reclamation/closure.
- Recycling of process water, smelter slag, and air pollution control dust.
- Monitoring and elimination of discharges to surface water, groundwater, soils, and air.
- Replenishment of surface and ground waters with treated effluents.
- Road closure and reclamation (following recontouring) with revegetation of native species.

Although the reclamation of mined lands is often unsatisfactory for ecological habitat restoration, reforestation with native trees has been demonstrated (Plass 1975) and would serve to reduce the abundance of edge species and restrict their access to mature forest.

Land Conversion

Effective mitigation of land conversion activities can sometimes be obtained only by avoiding impacts on rare or unusual habitat types. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In these cases, mitigation is a siting issue, where construction and degrading activities are located at a distance from the habitats of concern. The habitat is adequately preserved if all possible impact scenarios are accounted for. Barring this solution, effective management measures must be implemented to ensure the protection of the habitats of concern.

In the case of unique tundra habitats, hydrological and contamination concerns are especially important. Construction or resource management activities must take special precautions to minimize mechanical disturbance of permafrost soils. Road building and structural "improvements" must not result in altered hydrological regimes. Where rare plant types exist or where habitats are unstable, recreational access may have to be limited. These mitigations can be best implemented by creation of a regional land-use plan (through a coordinating council like the Waterfowl Flyway Council) and landowner incentives like the Conservation Reserve Program.

Wetlands

Mitigation of wetlands destruction and degradation is the subject of a growing body of literature (Kusler and Kentula 1989). Restoration and mitigation banking concepts are still being evaluated as effective mitigation measures for direct wetlands alterations.

Guidelines for Reviewers

Reviewers of environmental impact assessments will find this document useful if they follow the steps laid out in the introduction:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most

important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer also should determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions).

Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for *Alaska*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Gerry Tande, Regional Ecologist, The Nature Conservancy
Mary Lynn Nation, Division of Federal Activities, U.S Fish and Wildlife Service, Alaska

HAWAII AND THE ISLAND TERRITORIES

This section briefly discusses *Hawaii and the Island Territories*. They comprise a relatively small land area, but are sufficiently distinct to require discussion separate from the seven major regions of the United States.

Geographical Description

The Hawaiian Islands and the Pacific Trust Territories of Guam and the Northern Marianas are all included in EPA Region 9. Puerto Rico and the U.S. Virgin Islands are included in EPA Region 2. Hawaii forms its own ecoregion in the Bailey system (1980), a Highland Ecoregion within the Rainforest Division. The island territories have not been classified into ecoregions by either the Bailey or Omernik systems.

The vegetation of the Hawaiian Islands comprises tropical shrubs, dense needleleaf and broadleaf forests, bogs, and moss lichen communities. Because of its isolation, Hawaii contains many endemic species and possesses a fauna and flora unlike that found anywhere else. Although the community compositions are different, the vegetation of the Pacific Trust Islands and Puerto Rico and the Virgin Islands contains many of the same elements of tropical forests and island floras.

Habitats of Concern

The diverse ecosystems of Hawaii can be classified as existing on dry leeward or wet windward areas. Leeward lowlands consist mostly of introduced plants such as kiawe and haole koa in grassland or savanna habitats. Leeward uplands contain evergreen scrublands and forests with exotics such as guava, Java plum, and Christmasberry. Windward evergreen rainforests are dominated by native ohia and koa, and constitute 0.3 of the 1.7 million ac of forest on Hawaii. Above the rainforest on the highest islands of Maui and Hawaii are zones of mountain parklands of koa and mamane, alpine scrub, and alpine tundra (USDA Forest Service 1989).

Of the 150 vegetation types in the Hawaii Natural Heritage classification, more than 50% are rare and nearly all are endemic (Sam Gon, personal communication). Principal habitats of concern include the following:

- Brackish anchialine pools along the shore.
- Coastal and lowland wetlands (below 3000 ft).
- Coastal and lowland forest and shrub ecosystems.
- Upland forest types.
- Wet bog ecosystems within forests.
- Subalpine and alpine zones.

Habitat Values and Trends

All the major ecological zones are represented in the 6,500 sq mi of Hawaiian land mass. More than 10,000 species of plants and animals are endemic to Hawaii. Extinctions of native species began with the arrival of Polynesians 1,500 years ago and accelerated with the arrival of Europeans in the late

1700s, reaching rates thousands of times the natural rate. Of the 140 bird species native to Hawaii, 70 have become extinct and 30 more are endangered. Currently, 37 species of plants in Hawaii are federally listed as endangered and 152 more are expected to be listed in the next 2 years (Hawaii State Department of Land and Natural Resources et al. 1991).

The aboriginal Hawaiians converted most of the land below the 600-meter elevation to agriculture on the eight main islands. Today, nearly two-thirds of Hawaii's original forest cover and 50% of the rainforest have been lost to land conversion for housing, agriculture, and ranching. Ninety percent of the lowland plains dry forests, 61% of the mesic forests, and 42% of the wet forests have been destroyed. The last remnants of Hawaiian coastal plant communities are on the most remote and arid shores. The unique terrestrial environments of Hawaii are also being degraded or lost due to the logging of tropical forests. Hawaii contains 180 terrestrial ecosystems, of which at least 88 ecosystems will be lost within 20 years unless current losses of habitat are addressed (Tangley 1988). Similar histories have befallen the Pacific Trust Territories of Guam and the Northern Marianas and Puerto Rico and the U.S. Virgin Islands. For example, the loss of tropical rainforest to timbering and conversion to agriculture is a major problem in Puerto Rico.

The invasion of non-native species represents the greatest threat to surviving native species and natural communities on all the U.S. islands. The Hawaiian archipelago has lost more than 75% of its original endemic land bird fauna through prehistoric and historic extinctions; the comparable Galapagos archipelago as a whole is not known to have lost a single land bird species (Loope et al. 1988). The absence of native large mammals has left the native fauna and flora vulnerable to the browsing, rooting, and trampling of introduced pigs, goats, cattle, and deer. On Hawaii's 1.4 million ac of rangeland, most native plants have been replaced by introduced perennials. Native Hawaiian birds have suffered from avian malaria spread by introduced mosquitos, and native plants have been smothered by the exotic banana poka. In Guam, the introduced brown tree snake has wiped out 9 of the 11 species of native birds, and Hawaii is now threatened by the repeated reintroduction of this reptile.

Activities and Impacts Affecting Habitats

The majority of forest land remaining in Hawaii is contained within the state forest reserves and conservation districts. These lands are managed principally for watershed and aquifer protection and allow little commercial wood harvesting. However, timbering of native koa and exotic eucalyptus do occur, and logging continues to impact private lands.

A greater threat to fore ecosystems in Hawaii is livestock grazing. Substantial areas of forest continue to be cleared to prom forage growth for cattle ranching (USDA Forest Service 1989). The current tax structure in Hawaii encourages clearing of forest for ranching.

Conversion of lands for urban and resort construction has a major impact on coastal and lowland environments. In addition, growing commercial and residential development contributes to the loss of dry areas subject to fire. This problem is exacerbated on military firing ranges.

Agriculture has long been an important industry on Hawaii, and it continues to impact adjacent terrestrial and aquatic habitats through sedimentation and contamination with pesticides.

The primary threat to *Hawaii and the Island Territories* is alien species. Introduced species contributing to habitat destruction include herbivorous mammals, predaceous ants, dogs, cats, mongoose, alien arthropods, mollusks, and alien plants. Wet ecosystems, in particular, are threatened by invading non-native animals (principally pigs, goats, deer) that disrupt the natural vegetation to the extent that native species are replaced by non-native plants. The invasion of combustible non-native weeds has created a cycle of wildfires that often destroy rare dryland native plants (Hawaii State Department of Land and Natural Resources et al. 1991).

The decline and extinction of many endemic Hawaiian bird species can be attributed to the unprecedented invasion of exotic species. Among exotic birds, more introductions (162) and establishments (between 45 and 67) have occurred in Hawaii than anywhere else in the world (Scott et al. 1986). Today, more than 80 introduced vascular plant species currently pose threats to the native biota in Hawaii. The inadequacy of detection and control has resulted in continuing invasions, and the problem of existing exotics requires constant management or additional losses will result. It is believed that biological methods offer the best hope of extensive long-term control of the most aggressive alien plants in natural systems.

Guidelines for Reviewers

Reviewers of environmental impact assessments for *Hawaii and the Island Territories* should refer to other regional discussions for more detailed information on habitat impacts and their mitigations. The following section outlines the consideration of habitat conservation in the review process:

1. Review the status and trends of habitats in the region.
2. Identify the habitats of concern.
3. Link the activities involved with impacts to these habitats of concern.
4. Devise appropriate mitigations for the impacts.

Each reviewer can then determine the adequacy of the environmental impact assessment in question and recommend modifications to enhance its effectiveness.

In identifying the habitats of concern, the reviewer should supplement the information in this document with detailed locational information on the abundance and distribution of habitats within the region of interest, and with any historical information on the extent and quality of these habitats. Most important, the reviewer should characterize the habitats in terms of their ecological values (e.g., use of wooded wetlands by migratory waterfowl).

In considering the links between activities and habitats, the reviewer should look beyond direct impacts to indirect and subtle effects, including cumulative impacts, interactive and synergistic impacts, and scale-dependent impacts (e.g., effects of fragmentation on ecosystem integrity and species home ranges).

In devising possible mitigations, the reviewer should follow the seven principles for habitat mitigation repeated below. The reviewer should also determine whether adequate assurances have been given that the mitigations proposed will be completed.

1. Base mitigation goals and objectives on a landscape-scale analysis that considers the needs of the region.
2. Mimic natural processes and promote native species.
3. Protect rare and ecologically important species and communities.
4. Minimize fragmentation of habitat and promote connectivity of natural areas.
5. Maintain structural diversity of habitats and, where appropriate, species diversity to promote the natural variety of the area.
6. Tailor management to site-specific environmental conditions and to the unique impacts of the specific degrading activity.
7. Monitor for habitat impacts and revise mitigation plans as necessary.

Finally, the reviewer should consider the proposed activities and mitigations in the context of relevant regional program goals and objectives (e.g., whether the outcome of the project will be in accordance with principles set out by regional planning commissions).

Contacts and Information Sources

When considering habitat conservation issues in an environmental impact assessment for the *Hawaii and the Island Territories*, the reviewer should consult the following organizations and individuals for information on habitat impacts and mitigations:

State Natural Heritage Programs
U.S. Fish and Wildlife Service, Regional and Area Offices
State Fish and Game Departments
University and Research Programs
Herbaria and Museums

Sam Gon, Regional Ecologist, The Nature Conservancy
Jim Teeter, Associate Director, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service

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(8-89)
EFG (07-90)

United States Government **Department of Energy**

memorandum

DATE: JAN 27 1994

REPLY TO ATTN OF: Office of Environmental Guidance:Koss:202-586-7964

SUBJECT: INFORMATION -- FINAL CLEAN AIR ACT RULE REQUIRING THAT FEDERAL ACTIONS CONFORM TO APPLICABLE STATE IMPLEMENTATION PLANS

TO: Distribution

The 1990 Clean Air Act Amendments significantly amended §176(c) of the Act. This Section provides that no Federal agency shall support any activity that does not conform to a State implementation plan (SIP) designed to achieve national ambient air quality standards. Furthermore, §176(c)(1) states that the head of each agency has an affirmative responsibility to assure that the agency's activities (which are defined very broadly) conform to the relevant SIP. The Environmental Protection Agency (EPA) issued a final rule implementing the new statutory requirements on November 30, 1993 (58 *FR* 63214). These regulations are effective as of January 31, 1994. A copy of the general conformity rule and a December 21, 1993, correction notice (58 *FR* 67442) are attached. This memorandum is being issued to notify Department of Energy (DOE) elements of the existence of the new requirements related to conformity determinations.

The final rule requires that Federal agencies prepare a written conformity analysis and determination for proposed actions in nonattainment areas for which the total of direct and indirect emissions of criteria pollutants (*i.e.*, ozone [volatile organic compounds or nitrogen oxides], carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and lead) caused by the action will exceed the threshold emission levels shown at 40 *CFR* Part 51.853(b). (In the preamble, EPA states its intention to propose in a future rulemaking that the conformity requirements also apply to certain attainment areas.) One example of a DOE action that potentially could be subject to conformity would be a project involving the construction and operation of a hazardous waste handling facility, for which indirect emissions from increased vehicular employee traffic could aggravate an ozone nonattainment situation. Certain activities [listed at 40 *CFR* Part 51.853(c,d,e)] are specifically exempted from the conformity determination process.

The final rule includes public participation requirements at 40 *CFR* Part 51.856. The availability of draft conformity determinations must be advertised, and the determination as well as supporting materials made available to those that request them. Federal agency responses to public comments must be documented.

A grandfathering provision is included at 40 *CFR* Part 51.850(c). Federal activities which meet one of the following conditions will not be subject to the requirements of the new conformity rule: (1) if a final environmental assessment (EA), environmental impact statement, or a finding of no significant impact (*i.e.*, a National

Environmental Policy Act [NEPA] analysis) was completed before the effective date of the rule; or (2) if an EA was begun, or a contract was awarded to develop the environmental analysis, before the effective date of the rule, which will enable an affirmative conformity determination to be made by March 15, 1994.

In evaluating the burden of the rule on the Department, EH-23 estimates that approximately 125 DOE projects would need to be examined annually to determine whether the conformity rule might apply to them; about 100 of these projects would be exempt, or would have emissions below the threshold levels. The Department intends to implement the general conformity regulations in the context of its existing NEPA requirements. **Thus, this memorandum should be distributed to NEPA Compliance Officers and other staff with NEPA responsibilities.** The Office of NEPA Oversight (EH-25) will oversee implementation of the new rule. EH-23 will be issuing a detailed analysis of the new regulations at a later date. Questions on the general conformity rule should be directed to Ted Koss of my staff (202-586-7964).

Raymond F. Pelletier
Director
Office of Environmental Guidance

Attachment

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cc: Other Organizations

National Low-Level Waste Management Program, EG&G Idaho
Hazardous Waste Remedial Action Program, (HAZWRAP)
Remedial Action Program Information Center
EM Information Center

federal register

Tuesday
November 30, 1993

Part II

Environmental Protection Agency

40 CFR Parts 6, 51, and 93

Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 6, 51, and 93

[FRL–4805–1]

Determining Conformity of General Federal Actions to State or Federal Implementation Plans

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Clean Air Act (Act) requires EPA to promulgate rules to ensure that Federal actions conform to the appropriate State implementation plan (SIP). Conformity to a SIP is defined in the Act as amended in 1990 as meaning conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards (NAAQS) and achieving expeditious attainment of such standards. The Federal agency responsible for the action is required to determine if its actions conform to the applicable SIP.

This final rule establishes the criteria and procedures governing the determination of conformity for all Federal actions, except Federal highway and transit actions ("transportation conformity"). Transportation conformity requirements are established in a separate rulemaking action.

EFFECTIVE DATES: The final rules for 40 CFR parts 51 and 93 are effective January 31, 1994. The final rule for 40 CFR part 6 will be effective January 31, 1994 unless notice is received by December 30, 1993, that someone wishes to submit adverse or critical comments. If the effective date is delayed for the 40 CFR part 6 rule due to the need to provide for public comment, timely notice will be published in the **Federal Register**. The information collection requirements contained in 40 CFR part 51, subpart W, and 40 CFR part 93, subpart B, have not been approved by the Office of Management and Budget (OMB) and are not effective until OMB has approved them. A document will be published in the **Federal Register** announcing the effective date.

FOR FURTHER INFORMATION CONTACT: Doug Grano: U.S. EPA, Office of Air Quality Planning and Standards (MD–15), Research Triangle Park, NC 27711, (919) 541–3292.

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I. Summary of the Final Rule

The purpose of this rule is to implement section 176(c) of the Act, as amended (42 U.S.C. 7401 *et seq.*), which requires that all Federal actions conform to an applicable implementation plan developed pursuant to section 110 and part D of the Act. Section 176(c) of the Act requires EPA to promulgate criteria and procedures for demonstrating and assuring conformity of Federal actions to a SIP. States are required through this rule to submit to EPA revisions to their implementation plans establishing conformity criteria and procedures consistent with this rule within 12 months of today's date.

For the purpose of summarizing the general conformity rule, it can be viewed as containing three major parts: applicability, procedure, and analysis. These are briefly described in the next three paragraphs.

The general conformity rule covers direct and indirect emissions of criteria pollutants or their precursors that are caused by a Federal action, are reasonably foreseeable, and can practicably be controlled by the Federal agency through its continuing program responsibility. The rule generally applies to Federal actions except:

(1) Those covered by the transportation conformity rule;

(2) Actions with associated emissions below specified de minimis levels; and

(3) Certain other actions which are exempt or presumed to conform.

The rule also establishes procedural requirements. Federal agencies must make their conformity determinations available for public review. Notice of draft and final conformity determinations must be provided directly to air quality regulatory agencies and to the public by publication in a local newspaper.

The conformity determination examines the impacts of the direct and indirect emissions from the Federal action. The rule provides several options to satisfy air quality criteria and requires the Federal action to also meet any applicable SIP requirements and emission milestones. Each Federal agency must determine that any actions covered by the rule conform to the applicable SIP before the action is taken.

The EPA continues to believe that the statute is ambiguous and that it provides EPA discretionary authority to apply these general conformity procedures to both attainment and nonattainment areas.

However, EPA cannot now apply these rules in attainment areas because it did not propose to do so. The EPA must first complete notice and comment rulemaking on the application of the appropriate criteria and procedures for conformity determinations in attainment areas. Therefore, the criteria and procedures established in this rule apply only in areas that are nonattainment or maintenance with respect to any of the criteria pollutants under the Act:[1] carbon monoxide (CO),

[1] Criteria pollutants are those pollutants for which EPA has established a NAAQS under section 109 of the Act.

lead (Pb), nitrogen dioxide, ozone, particulate matter (PM–10), and sulfur dioxide (SO_2).

This rule does not apply to Federal procurement actions. The March 15, 1993 proposal was silent on the application of conformity requirements specifically to procurement actions, however, a number of comments were received on procurements. Although the comments generally indicated that procurements should be exempt from the final conformity rule, EPA is inclined to believe that Congress intended for certain procurement actions to be covered by the general conformity provisions. It is impossible at this time to resolve the competing concerns regarding which procurement actions should be covered and which should be exempt since the existing record is inadequate. Therefore, the EPA will propose to cover certain procurements in a future rulemaking, but will take comment on other interpretations.

The EPA will also propose exemptions for certain procurement actions which it believes would fit the de minimis criteria or result in emissions which are not reasonably foreseeable. The EPA believes the majority of procurement actions would be de minimis or not reasonably foreseeable. Given the complexity of Federal procurement and the government's desire to streamline procurement activities, the EPA will seek comment on its proposed exemptions and the process for applying conformity to procurement activities.

II. Background

The general conformity rule was proposed on March 15, 1993 (58 FR 13836). Additional background information can be found in the proposal notice.

Conformity is defined in section 176(c) of the Act as conformity to the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards, and that such activities will not:

(1) Cause or contribute to any new violation of any standard in any area,

(2) Increase the frequency or severity of any existing violation of any standard in any area, or

(3) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The Act as amended in 1990 ties conformity to attainment and maintenance of the NAAQS. Thus, a Federal action must not adversely affect the timely attainment and maintenance of the NAAQS or emission reduction progress plans leading to attainment. The Act as amended in 1990 includes a new emphasis of reconciling the emissions from Federal actions with the SIP, rather than simply providing for the implementation of SIP measures. This integration of Federal actions and air quality planning is intended to protect the integrity of the SIP by helping to ensure that SIP growth projections are not exceeded, emissions reduction progress targets are achieved, and air quality attainment and maintenance efforts are not undermined.

The rule amends part 51 of title 40 of the Code of Federal Regulations by adding a new subpart W. Part 51 is entitled: "Requirements for preparation, adoption, and submittal of implementation plans." Amendment to part 51 is necessary to require States to revise their implementation plans to include conformity requirements. Once the State plans are revised, the Federal agencies would be subject to those requirements.

In addition, the rule adds a new subpart B to part 93 of title 40 of the Code of Federal Regulations. This is necessary to make the conformity requirements apply to Federal agencies as soon as the rule is effective and in the interim period before the States revise their implementation plans. The part 93 requirements are identical to the part 51 requirements with one exception: they do not require a State to revise its implementation plan. To avoid duplication, the preamble language cites only the part 51 sections, however, the relevant part 51 discussion also applies to the equivalent part 93 rules.

As noted in the proposal (58 FR 13837), EPA promulgated conformity rules in 1979 and 1985 to implement the conformity provisions for EPA actions at 40 CFR 6.303. Today's final rule applies the conformity provisions of the Act as amended in 1990 to all Federal activities, including EPA activities. Thus, the conformity requirements of 40 CFR 6.303 are superseded by these rules. Accordingly, paragraphs (a) through (f) of 40 CFR 6.303 are replaced with a new paragraph (a) which refers to the conformity rules promulgated today and a new paragraph (b) which retains the requirements of (old) paragraph (g), which addresses other requirements of section 316(b) of the Act. The EPA is taking this action without specifically having proposed to make these changes to 40 CFR 6.303 in the March 15, 1993 proposal because the Agency views this as a noncontroversial action and anticipates no adverse comments. This action will be effective January 31, 1994 unless, by December 30, 1993 notice is received that adverse or critical comments will be submitted regarding the changes to 40 CFR 6.303. If final action on the changes to 40 CFR 6.303 is delayed pending public comment, the requirements of the new part 51 and 93 rules will still supersede the requirements of 40 CFR 6.303.

III. Discussion of Major Issues and Response to Comments

For additional background information on the major issues, the reader should refer to 58 FR 13837–13847, March 15, 1993. Unless otherwise noted, the discussions in Sections III and IV below only address issues where public comments were received. For portions of the proposed rule where comments were not received, the final rule is consistent with the proposed rule for the reasons set forth in the proposal notice. Further discussion of such issues is not addressed in this preamble. Portions of the proposed rule were also changed so that the final rule more clearly states the intended meaning. Sections III and IV address issues in the same order as they were addressed in the proposal which is also consistent with the regulatory portion of this rulemaking notice.

A. Effective Dates

1. Proposal

The effective date of this rule was proposed to be 30 days after the final rulemaking notice is published. At that time, however, some projects that are dependent on Federal actions will have already commenced or completed planning activities, perhaps including their environmental assessment. Such projects would then be faced with the uncertainty of new conformity requirements that could not have been anticipated prior to the final rules being published. This uncertainty could threaten the viability of projects for which considerable time and funds already have been or are about to be invested.

The preamble to the proposal specifically invited comments on transition (or grandfathering) provisions for on-going projects that are dependent on Federal actions (58 FR 13837). Two options were proposed which would allow grandfathering based on activities that will have either already commenced or completed their environmental assessment by the time the final rulemaking notice is published.

2. Comment

The EPA received comments on this issue which recommended a variety of

approaches. The comments included the following recommendations, among others:

(1) Exempt Federal actions where the environmental analysis has been "commenced" prior to the effective date of the final rules.

(2) Base the exemption on the "completion" of the environmental analysis prior to the effective date of the final rules. One commenter suggested the following definition of "complete:" Projects where there has been sufficient environmental analysis for the agency to determine that the project is in conformity with the purposes of the SIP pursuant to the agency's affirmative obligation under Act section 176(c), or where a written determination of conformity under section 176(c) of the Act has been made.

(3) The rule should apply retroactively to November 15, 1991, the deadline set by Congress for promulgation of the rules by EPA.

(4) The final conformity rule should take effect only after a State revises its SIP to meet the new Act conformity requirements and the revision is approved by EPA.

(5) Exempt only projects that have received funding prior to the effective date of the conformity rules.

(6) Exempt projects that have completed an environmental analysis which included public participation.

(7) Phase-in review by focusing first on environmental impact statements (EIS's) and then later extend to other actions or exempt projects completed prior to 1 year after the rules are final.

3. Response

This final rule does not require a new conformity determination for Federal actions where the Federal agency completed its conformity determination by March 15, 1994 or National Environmental Policy Act (NEPA) analysis prior to the effective date of this rule. If a conformity determination has been "completed" it means the responsible Federal agency made a final determination that a specific action conforms, pursuant to section 176(c) of the Act. In such cases, the Federal actions must have conformity determinations pursuant to section 176(c) of the Act, but they would not be subject to the specific rules published today. Alternatively, if the Federal agency had completed its environmental analysis for a Federal action under the NEPA prior to the effective date of this rule, as evidenced by an EIS, environmental assessment (EA), or finding of no significant impact (FONSI), then such an action is also not subject to the specific rules published today, although it would have been subject to applicable conformity requirements at the time the environmental analysis was completed.

In determining whether to apply rules immediately, EPA generally considers the following factors:

(1) Whether the new rule represents an abrupt departure from well established practice or merely attempts to fill a void in an unsettled area of law.

(2) The extent to which the party against whom the new rule is applied relied on the former rule.

(3) The degree of burden which immediate application of a rule imposes on a party, and

(4) The statutory interest in applying a new rule despite the reliance of a party on the old standard.

The EPA considered all options contained in the comments and determined that the grandfathering provision in the final rule is appropriate for the reasons described below.

(1) The general conformity rule represents an abrupt departure from the previous conformity requirements EPA published in 40 CFR 6.303, which applied only to EPA actions (and which are being replaced by this rulemaking). Although staff working drafts of the new rule existed as early as November 1991, the final rule is considerably changed from all of the early drafts, which also had very limited circulation.

(2) Considering the general absence of conformity determinations by Federal agencies prior to the 1990 amendments to the Act, most parties appear to have relied on the NEPA requirements or on 40 CFR 6.303 to mean that specific general conformity requirements did not apply for Federal agencies other than EPA.

(3) Prior to this final rulemaking, many Federal actions will have already completed their environmental analysis pursuant to NEPA. Such projects would then be faced with the uncertainty of the new conformity requirements that were not anticipated prior to the final rules being published. This uncertainty could threaten the viability of projects for which considerable time and funds already have been or are about to be invested.

(4) The statutory interest in applying the new requirements during this interim period is preserved where the Federal action specifically considered the conformity requirements of the Act and completed such an analysis or fulfilled the NEPA requirements, since such actions would provide for an environmental analysis focusing on air quality as envisioned by Congress even though the analysis might not meet all the details contained in the new rules.

After determining that some form of grandfathering is appropriate, EPA selected a hybrid of the commencement and completion dates of a conformity determination or where a NEPA analysis has been completed. That is, the final rule grandfathers actions where: (1) The NEPA analysis is completed by the effective date of this rule, or (2) the environmental analysis was commenced prior to the effective date of this rule, sufficient environmental analysis is completed, and the conformity determination is completed by March 15, 1994 (1 year after the date of the proposed rulemaking). This approach is supported by the following reasons:

(1) The completion date can be well defined, as described above.

(2) The commencement date and phase-in approaches are valid concepts but, by themselves, are subject to too much uncertainty. These concepts have less well defined dates than the completion date. In many cases, the conformity analysis could have been recently started and the new rules could be incorporated into the analysis without hardship. The commencement date is likely to exceed the 5-year timeframe for conformity reanalysis in many cases. The EPA believes that it is reasonable to expect that a conformity determination could be developed in parallel with the ongoing environmental analysis and/or rely on any previous environmental analyses to the degree they are complete; in this manner the conformity determination should not require extensive, new analyses nor prolong the environmental review process in most cases.

(3) The date after EPA approval of the State conformity rules is an unjustifiably lengthy delay and is not consistent with the statutory intent to have the Federal rules in place and the States later follow with their own conformity rules.

(4) The funding date may be difficult to define since it could be based on a variety of steps within an overall grant process or based in some way on the actual expenditure of funds.

(5) Grandfathering based on previous public participation and/or the commencement of an environmental analysis would not assure that the analysis was completed and also would require EPA to define what level of previous public participation would be considered adequate—an issue not addressed in the proposal.

As described in § 51.857(a), a conformity determination automatically lapses 5 years from the date of the initial determination unless the Federal action has been completed or a continuous program has been commenced to

implement that Federal action within a reasonable time. This 5-year provision also applies with respect to conformity determinations grandfathered as described above.

The information collection requirements in 40 CFR parts 51 and 93 have not yet been approved by the OMB and are not effective until OMB approves them.

B. SIP Revisions—State Authority

1. Proposal

As described in the March 15, 1993 preamble, EPA proposed that States may adopt criteria and procedures more stringent than the requirements in the EPA rules (58 FR 13838).

2. Comment

Several commenters supported EPA's view. These commenters stated that Federal agencies are to be afforded no special privileges and that the Act in no way prevents the imposition of more stringent control measures in instances where public health and welfare may be at risk.

Other commenters, however, stated that Federal agencies should not be held to a higher standard by State regulations than adjacent or nearby private or State activities. These comments suggest that this provision may be inconsistent with section 118 of the Act. Section 118 of the Act states that Federal agencies are to comply with State air pollution requirements "in the same manner and to the same extent as any nongovernmental entity." Since the general conformity requirement is not imposed on any non-Federal entity, these agencies argue that there is not a waiver of sovereign immunity which would allow State regulation of Federal activities in either sections 118 or 176 of the Act; therefore, these agencies argue, the Act does not permit States to set more stringent conformity requirements than those set by EPA. Some commented that multiple State rules would cause confusion to Federal agencies trying to meet the conformity requirements.

One comment stated that only areas designated "extreme" should be allowed to require more stringent State or regional general conformity rules in its SIP.

3. Response

In considering the comments received on this issue, EPA has taken the provisions of sections 116, 118 and 176(c) of the Act into account. The new language added to section 176(c) by the 1990 amendments to the Act makes it clear that the purpose of section 176(c) is to make emissions from Federal actions consistent with the Act's air quality planning goals. The conformity requirement is different from most other requirements of the Act because it is imposed solely on Federal agencies, and is not required of nongovernmental entities. Therefore it is appropriate for EPA to establish the criteria and procedures for the conformity of Federal actions as specified by section 176(c)(4)(A) of the Act. It is also required that States adopt a SIP revision that includes these criteria and procedures, as indicated by section 176(c)(4)(C) of the Act. Furthermore, EPA interprets the requirements imposed by section 116 of the Act to mean that the criteria and procedures set by State conformity rules may not be any less stringent than those established by this rulemaking.

The EPA interprets the section 118 requirement that Federal agencies comply with air pollution requirements "in the same manner and to the same extent as any nongovernmental entity" to mean only that Federal agencies must comply with any air pollution rule established under the Act to no less an extent than nongovernmental entities. The general conformity rule and State rules adopted pursuant to it are rules established under the Act with which, under section 118, Federal agencies must comply. Consequently, EPA does not agree that there is no waiver of sovereign immunity at all in section 176(c). The EPA concludes that section 176(c)(4)(c) requires State conformity SIP's that would regulate Federal activities.

However, the language of the relevant sections does leave unclear the extent to which the waiver of sovereign immunity may limit the manner in which a State's section 116 authority is applied to Federal agencies. After careful consideration of the legal and policy arguments presented to EPA after the March 15, 1993 notice of proposed rulemaking (NPR), EPA has concluded that State conformity rules which do not apply to non-Federal entities and which apply more stringent requirements than the EPA general conformity rule to federally-assisted facilities would be inconsistent with the waiver of sovereign immunity provided by section 118 of the Act. Applying such rules exclusively to federally-assisted facilities, which could be the case with any more stringent conformity requirements since conformity requirements do not apply statutorily to nongovernment entities, would have an unjustifiably discriminatory effect. Under current case law, a reviewing court would construe waivers of sovereign immunity, like that in section 118, narrowly. See *Department of Energy* v. *Ohio*, 112 S.CT. 1627, 1633 (1992); *McMahon* v. *United States*, 342 U.S. 25, 26, 72 S.CT. 17, 18 (1951). The EPA believes that such purely discriminatory more-stringent State programs would be prohibited under such case law.

The EPA recognizes that States have historically developed their own conformity requirements despite the absence of any Federal rules. Further, States have frequently adopted requirements that differ from State to State, both with respect to conformity and general air quality management, in order to address different air quality needs and regulatory authorities. There are several statements excerpted below from the congressional Record which support the conclusion that States may adopt conformity rules that are more stringent than the rules promulgated by EPA.

> Such [Federal] regulations will provide guidance to the states for the adoption of conformity requirements in each SIP and will govern the conformity decisions of federal agencies and metropolitan planning organizations (MPOs) required to make conformity determinations. Federal agencies will also have to comply with applicable provisions of the SIP if stronger than the underlying basic federal regulations. Cong. Rec., S16958 (October 27, 1990) (Statement of Senator Chafee).
>
> States are also free under section 116 to continue to apply any more stringent project review criteria in effect under state or local law. The criteria in section 176(c)(3) are merely the additional federal criteria that must be met to qualify for federal approval or funding of transportation projects, programs, and plans prior to the date when a revised implementation plan takes effect under these amendments. Cong. Rec., S16973 (October 27, 1990) (Statement of Senator Baucus).
>
> Such regulations will provide guidance to the states for the adoption of conformity requirements in each SIP and will govern the conformity decisions of federal agencies and MPOs required to make conformity decisions. Federal agencies will also have to comply with applicable provisions of the SIP if stronger than the underlying basic federal regulations." Cong. Rec., S16973 (October 27, 1990) (Statement of Senator Baucus).

Consequently, the EPA believes that if a State wishes to apply more stringent conformity rules for the purpose of attaining air quality, it may do so, but only if the same conformity requirements are imposed on non-Federal as well as Federal actions. States adopting more stringent conformity rules may not cause a more significant or unusual obstacle to Federal agencies than non-Federal agencies for the same type of action.

Therefore, if a State decides to adopt more stringent conformity criteria and procedures, these requirements must be imposed on all similar actions whether the sponsoring agency is a Federal or non-Federal entity; non-Federal entities include State and local agencies and private sponsors. Sections 51.851 and 51.853 have been revised accordingly in the final rule.

If a State elects to impose more stringent conformity requirements, they must not be so narrowly construed as to apply in practical effect only to Federal actions. For example, if a State decides that actions of employers with more than 500 employees require conformity determinations, and the Federal government is the only employer of this size in a particular jurisdiction, then this rule would be viewed as discriminatory and would not be permitted. Consequently, more stringent State conformity rules must not only be written to apply similarly to all Federal and non-Federal entities, but they must be able to be implemented so that they apply in a nondiscriminatory way in practice.

Moreover, when EPA approves State conformity rules, the Agency should determine that more stringent State conformity requirements are directly related to the attainment of air quality in the State.

C. Indirect Emissions—Inclusive/ Exclusive Definition

1. Proposal

The proposal indicated that the Act expressly prohibits Federal actions that would "support in any way" activity which does not conform to a SIP. Given this language, EPA concluded that indirect emissions must be included in any conformity determination, under either subpart T or W. The EPA proposed two different definitions of indirect emissions—"inclusive" and "exclusive"—and invited comment on both versions. The inclusive and exclusive definitions are identical except the phrase "and which the Federal agency has and will continue to maintain some authority to control" appears only in the exclusive definition. As described in the preamble to the proposal (58 FR 13840), the exclusive version of indirect emissions excluded emissions that may be attributable to a Federal action but that the Federal agency has no authority to control. The inclusive version (58 FR 13839) includes all emissions attributable to the Federal action, whether or not they are under the control of the Federal agency. The terms "caused by" and "reasonably foreseeable" are common to both definitions and are discussed elsewhere in this notice.

2. Comment

The EPA received substantial and diverse comments from air regulatory agencies, the building industry, various Federal agencies, environmental groups, and individuals. The "inclusive" definition of indirect emissions is supported primarily by the air regulatory agencies and environmental groups. The "inclusive" version, however, is viewed as unnecessarily broad by many of the other groups. Many individuals and building industry representatives objected to the inclusion of indirect emissions in either approach.

Commenters supporting the inclusive definition pointed out that this approach provides the greatest opportunity for States to prevent Federal actions that could violate the NAAQS. They indicated that to prevent actions that could cause new or worsen existing air quality violations, it is necessary to consider not only the Federal action, but all reasonably foreseeable emissions caused by the Federal action, whether or not they are under the Federal agency's control.

Commenters supporting the exclusive version of indirect emissions argued that it is unreasonable to include emissions that may be attributable to a Federal action, but that the Federal agency has no authority to control. As stated in the March 15, 1993 preamble, many of the Federal agencies reiterated that this approach might require the Federal agency to impose conditions on the project (e.g., mitigation) to demonstrate conformity that would be meaningless since there would be no effective Federal enforcement mechanism.

A third group of commenters stated that there should be no consideration of indirect sources in the general conformity rule. They cited section 110 of the Act as limiting Federal authority to conduct indirect source review to major federally-funded and federally-sponsored actions. These comments are addressed in section III.E of this notice.

3. Response

a. General—indirect emissions. As described in the proposal, the Act expressly prohibits Federal actions that would "support in any way" activity which does not conform to a SIP. Because this language is very broad, EPA believes indirect emissions must be included in any conformity determination, under either subpart T (transportation conformity) or W (general conformity). As described below, congressional guidance is much clearer for transportation conformity than for general conformity. In fact, there is virtually no information in the Congressional Record specifically directed at general conformity. Therefore, in interpreting the statutory intent for the general conformity rule, EPA believes it is helpful to consider the guidance provided by Congress on transportation conformity in section 176(c) of the Act.

Congress clearly intended the transportation conformity rule to cover the indirect emissions from vehicles that would travel to and on highways constructed with Federal support. Thus, the conformity review does not focus on emissions associated with only the construction of the highway project, but includes emissions from vehicles that later travel to and on that highway. The general conformity rule originates from the same statutory language and so must meet the same congressional intent.

As described above, the transportation treatment provisions of the Act clearly require consideration of indirect emissions. Therefore, EPA concludes that the general conformity rule must also cover indirect emissions.

On March 15, 1993, EPA proposed that as a legal matter, the statute could be interpreted to support either the inclusive or exclusive definition and both definitions were offered for public comment. As a result of the public comments and consultation with other Federal agencies, the final rule incorporates the exclusive definition of indirect emissions. The exclusive definition is selected because it meets the requirements of section 176(c) of the Act, and it:

(1) Is consistent with the manner indirect emissions are covered in the transportation conformity rule,

(2) Can be reasonably implemented, and

(3) Best fits within the overall framework of the Act.

As commenters noted, the inclusive definition would require the review of more Federal actions, as described in this rule, than the exclusive definition and, thus, could identify more cases where an air quality violation is possibly associated with a Federal action. The inclusive definition, however, is not selected for the following reasons:

(1) Mitigation measures required under this approach may not be enforced,

(2) It is not consistent with the manner in which indirect emissions are covered in the transportation rule,

(3) It would impose an unreasonable burden due to the large number of affected Federal actions, and

(4) It establishes an overly broad role for the Federal government in attaining the NAAQS.

b. Inclusive definition—enforcement. The EPA sees no value to the environment in promulgating a rule that is unenforceable. The EPA agrees with the point made by some commenters that it is unreasonable to expect Federal agencies to control indirect emissions over which they have no continuing authority to control. As stated in the March 15, 1993 preamble, this approach might result in a Federal agency imposing conditions on the project (e.g., mitigation) to demonstrate conformity that would be meaningless since there would be no effective Federal enforcement mechanism.

For example, the inclusive approach could require a Federal agency to impose restrictions on the title to land that is being sold or developed. In such cases these deed restrictions might remain forever with the land. Enforcement of these types of restrictions is very difficult and is not likely to be an effective approach. Further, it is not reasonable to attach a restriction to a deed forever, since the land use might change over time and, certainly, the environment will change over time—both of which may remove or alter the need for the deed restriction, which would nonetheless remain in place since there is no mechanism to remove it. In this example, EPA believes that it is impractical to use deed restrictions to control emissions and that the Federal agency would not maintain control since there is no continuing program responsibility for that Federal agency to control future emissions associated with that land.

c. Inclusive definition—transportation. In the inclusive approach, the Federal agency is made responsible for emissions that are reasonably foreseeable. This would include emissions from on-site or off-site facilities. Assume, for example, that the Federal Aviation Administration (FAA) approves an airport expansion project which would require a general conformity determination. The airport expansion also includes a highway interchange construction project needing a project level transportation conformity approval. Additionally, it is known that a cargo handling facility will be constructed near that interchange due to the airport expansion. The project level transportation conformity review would cover emissions from vehicle activity to and on the highway interchange, but would not cover indirect emissions possibly associated with the airport or cargo facility. Thus, the project level transportation conformity review covers direct and certain indirect emissions associated with the highway interchange action itself.

The general conformity inclusive approach could rely on the transportation conformity review with respect to vehicle activity to and on the highway interchange. In addition, the general conformity inclusive approach would specifically consider direct and indirect emissions at the airport itself and at the cargo facility. In contrast, the exclusive approach, similar to the project level transportation conformity approach, covers direct and certain indirect emissions associated with the airport expansion action itself, but does not specifically consider additional indirect emissions (i.e., the cargo facility). Thus, the exclusive approach appears to be more consistent with the transportation conformity approach.

d. Inclusive definition—unreasonable burden. The inclusive definition could be interpreted to include virtually all Federal activities, since all Federal activities could be argued to give rise to, at least in some remote way, an action that ultimately emits pollution. This broadest interpretation of the statute could impose an unreasonable burden on the Federal agencies and private entities that would have been affected by that definition. For example, since the Federal government issues licenses for any export activities, an inclusive definition approach could go so far as to require the manufacture of the export material and the transportation of the same material to be subject to a conformity review. Such an approach, however, is very burdensome due to the large number of export activities, the fact that the licensing process is not a factor in any SIP, and that the vast majority of these manufacturing and transportation activities may have little to no impact on air quality. Thus, the inclusive approach goes far beyond the set of Federal activities reasonably related to the SIP.

The many Federal agencies subject to the inclusive approach would have been required to document air quality impacts from tens of thousands of public and private business activities each year, even where the associated Federal action is extremely minor. For example, the Army Corps of Engineers (COE) estimates that 65,000 of their regulatory actions would have required a conformity review in 1992 under the inclusive definition. The COE permits are often limited to a small portion of a much larger project and, thus, may not be the best mechanism to review the larger project: e.g., one river crossing for a 500 mile gas pipeline or a half-acre wetland fill for a twenty acre shopping mall.

The Federal agencies might also have been required to expend substantial resources in an attempt to enforce mitigation measures for actions that are outside their jurisdiction. Some delay to these public and private activities would have been expected as the conformity requirements were carried out. In some cases these Federal actions would not take place at all as a result of conformity consideration. In addition, the threat of litigation over this expansive list of actions would have been significant. That is, projects could have been delayed through litigation simply due to arguments over application of the conformity rule to the project, even where the air quality impacts were very minor.

Through public comments and by communication with other Federal agencies, the EPA received a large number of examples of Federal activities, a few of which are listed below, that are not normally considered in SIP's, but could not clearly be said to have absolutely no ties to actions that result in emissions of pollutants.

(1) COE permit actions.
(2) The sale of Federal land.
(3) National Pollutant Discharge Elimination System (NPDES) permit issuance.
(4) Transmission of electrical power.
(5) Export license actions.
(6) Bank failures.
(7) Mortgage insurance.

Based on the public comments and consultation with the other Federal agencies, EPA believes that Congress did not intend the general conformity rule to affect innumerable Federal actions, impose analytical requirements on activities that are very minor in terms of Federal involvement and air quality impacts, and result in the significant expense and delay that is likely in an inclusive definition. Thus, adopting the inclusive definition approach could have imposed an unreasonable burden on these public and private activities.

The Federal agencies would, in many cases, be unable to reduce emissions from sources that they cannot practicably control. This would result in the Federal action having to be prohibited because a positive conformity determination could not be made. The EPA believes that the Act does not intend to unreasonably restrict Federal actions so that they are generally prohibited in areas with air quality problems. Instead, the Federal agencies are required to control emissions in a reasonable manner and

States must develop general air quality plans to achieve the NAAQS.

As commenters noted, the inclusive definition would require the review of more Federal actions, as described in this rule, than the exclusive definition and, thus, could identify more cases where an air quality violation is possibly associated with a Federal action. Even with an approach that relied heavily on air quality modeling, however, there would still not be an absolute assurance that a new violation would not occur since there is considerable uncertainty associated with air quality modeling itself, due to uncertainties in emissions and meteorological data which drive the models. In fact, neither the inclusive nor exclusive definition approach would absolutely assure that all possible violations would be prevented since neither proposed approach requires air quality modeling for all Federal actions.

e. Inclusive definition—Federal role. Section 176(c) of the Act covers Federal actions that support in any way actions which could cause new or worsen existing air quality violations, delay attainment, or otherwise not conform with the applicable SIP and the purpose of the SIP. Clearly, Congress intended Federal agencies to do their part in achieving clean air. It is unlikely, however, that Congress intended Federal agencies to be responsible for emissions that are not practicably under their control and regarding which the Federal agency has no continuing program responsibility. The EPA does not believe that it is reasonable to conclude that a Federal agency "supports" an activity by third persons over whom the agency has no practicable control—or "supports" emissions over which the agency has no practicable control—based on the mere fact that, if one inspects the "causal" chain of events, the activity or emissions can be described as being a "reasonably foreseeable" result of the agency's actions.

In fact, achievement of the clean air goals is not primarily the responsibility of the Federal government. Instead, Congress assigned that responsibility to the State and local agencies in section 101(a)(3) of the Act: "air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local governments." Similar to NEPA, section 176(c) of the Act requires Federal agencies to consider the environmental consequences of their actions. Neither statutory requirement, however, requires the Federal agencies to unilaterally solve local air quality problems. Instead, the conformity rule should be viewed in a manner that fits within a broader view including NEPA activities by the Federal agencies and State and local air quality planning and regulatory actions. Together, these activities provide the framework to attain and maintain the NAAQS.

It is possible that a Federal action could be taken which, together with other reasonably foreseeable emissions caused by the Federal action, could cause or contribute to a violation of an air quality standard or otherwise not conform with the applicable SIP. The exclusive definition is adequate to cover Federal actions and meet the goals of section 176(c) where the resultant emissions are practicably under the control of the Federal agency, and are subject to a continuing agency programmatic responsibility. Where the Federal control over the resultant emissions is relatively minor, the problem is likely caused by multiple pollution sources and a solution may be impossible unless it is directed at all the contributing sources. This role is given to the State and local agencies by Congress and should not be interpreted as the Federal agencies' role under section 176(c).

In a case where, through a NEPA analysis, a violation is projected to occur at a proposed private housing development that receives a NPDES permit or private shopping mall that receives a COE permit, the projected violation is the result of the new projected emissions from the independent private actions not subject to Federal permit or approval and the background concentrations, due to existing local and areawide emission sources. The appropriate solution to the problem is for the Federal agency to ensure conformity of Federal actions to the SIP by minimizing new emissions from the Federal activities in a reasonable manner and for the State and local agencies to control the local and areawide emissions under the SIP to the extent needed to attain the NAAQS. The Federal agencies' responsibility should be to assure that only those emissions that the Federal agency can practicably control, and that are subject to the agency's continuing program responsibility, will be reasonably controlled, not to attempt to limit other sources' emissions, which would infringe on the air quality and land use planning roles of the State or local agency.

f. Exclusive definition—reasonable implementation. In the exclusive version, indirect emissions include only emissions over which the Federal agency can practicably control, and has continuing program responsibility to control. Unlike the inclusive definition, the exclusive definition does not require Federal agencies to adopt and enforce mitigation measures that the agency cannot practicably control and that the agency has no continuing program responsibility to control. As described below, the exclusive definition does not cover innumerable Federal actions, does not require an agency to leverage their authority, and does not generally prohibit Federal actions in areas with air quality problems.

Consistent with the above discussion, and in order to clarify the scope of the term "indirect emissions," that term is revised in the final rule. Specifically, the meaning of the phrase in the proposed definition regarding emissions "which the Federal agency has and will continue to maintain some authority to control," is clarified in the final rule. In the final rule, the definition of "indirect emissions" is limited to emissions "the Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency." The meaning of the words "practicably control" is discussed elsewhere in this notice and through examples contained in the notice. The meaning of "continuing program responsibility" is described in the examples below.

Assume, for example, the Army Corps of Engineers (COE) issues a permit authorizing dredging by a nonfederal entity. In one case, the COE might require the permittee to transport and dispose of the dredged material at a specific location. In another case, the COE might allow the permittee to dispose of the dredged material at a suitable upland disposal site. In the first case, the COE has a continuing program responsibility for air emissions associated with the dredging and disposal activities. In the second case, the COE's program responsibility is limited to emissions associated with the permitted dredging and does not include the disposal activity. However, if the COE were to impose conditions on the operation and management of the dredged material disposal site or regarding subsequent development activities on that site, mandating the use of practices which would result in air pollutant emissions, then these added emissions would be a continuing program responsibility of the COE.

In another case, assume the Forest Service permits a ski resort and imposes conditions regarding the construction and operation of the resort. Also assume that housing development will occur

nearby but on privately-owned land. In this case, emissions from the construction and operation of the resort are a continuing program responsibility of the Forest Service and emissions from the housing activities are not. Again, if the Forest Service had authority to impose conditions on activities at the housing development and chose to exercise that authority to impose conditions that would result in air pollutant emissions, air emissions from those conditions imposed would be within the Forest Service's continuing program responsibility.

With respect to the issue of indirect emissions, the proposal pointed to the language in section 176(c)(1) of the Act which prohibits a Federal agency from providing "support in any way * * * [for] any activity which does not conform to an implementation plan." "Conformity to an implementation plan" is defined to mean that an activity "will not—cause or contribute to any new violation * * *; increase the frequency or severity of any existing violation * * *; or delay timely attainment of any standard. * * *"

Given the "support in any way" language, EPA has, in this rule, interpreted section 176(c) of the Act as requiring Federal agencies, in making their conformity determinations, to consider both the direct and indirect emissions resulting from their own actions or from actions that they support. However, nothing in those words serves to clarify a precise congressional intent regarding the scope of coverage of indirect emissions [a term which is not expressly referred to in section 176(c)(1) of the Act]. In other words, the words "support in any way" do not, in themselves, dictate a congressional preference between the inclusive or exclusive definition of indirect emissions proposed by EPA. The exclusive definition, which this final conformity rule adopts, requires that Federal agencies take into account only those indirect emissions that the Federal action would support, that the Federal agency can practicably control, and are under the continuing program responsibility of the agency. The EPA believes this interpretation is the most reasonable because it assures that Congress' primary intent under section 176(c) of the Act is met, namely, that Federal agencies advance the purpose of the SIP by controlling emissions from those actions which they support, over which they can practicably exercise control, and for which they retain continuing program responsibility.

The Clean Air Act does not define "support" for the purposes of section 176(c) of the Act.[2] If read in the broadest conceivable manner, the "support in any way" prohibition might be interpreted to include virtually all Federal activities, since all Federal activities could be argued to support, at least in some remote way, an action that ultimately emits pollution. The EPA does not believe that Congress intended the "support in any way" prohibition to be interpreted in a manner that would lead to such egregious or absurd applications of section 176(c) of the Act. Where the language of a statute is ambiguous, as is the case here, an agency has the discretion to adopt an interpretation that is reasonable.[3]

One possible approach in determining how far the "support in any way prohibition" extends is to examine the word "support" itself. Section 176(c)(1) of the Act, by its terms, prohibits Federal agencies from "support[ing]" an activity which itself "does not conform to an implementation plan."[4] Thus, the support prohibition cannot be triggered unless and until a Federal agency's actions constitute support of a particular activity. In the absence of a statutory definition for a word, courts typically turn to the word's everyday meaning. The dictionary defines "support" to mean (among other things):

- "to uphold by aid, countenance, or adherence: actively promote the interests or cause of";
- "to uphold or defend as valid, right, just, or authoritative";
- "to provide means, force, or strength that is secondary to: back up";
- "to pay the costs of";
- "to supply with the means of maintenance * * * or to earn or furnish funds for maintaining"; and
- "to provide a basis for the existence or subsistence: serve as the source of material or immaterial supply * * *" Webster's Third New International Dictionary. As the above list makes evident, the everyday meaning of "support" could range from activity that is merely facilitation or encouragement to activity wherein the actor assumes an ongoing responsibility and provides continuing assistance in order for the subsequent endeavor to be realized. Applying the dictionary definition of "support" in the context of the conformity rule, it is apparent that Federal actions that might be said to "support" subsequent projects similarly could range from mere facilitation to continuing responsibility. The EPA does not believe that Congress intended the term "support in any way" to encompass each and every one of these separate definitions, including those where the relationship between the Federal agency's action and the subsequent activity is attenuated. Thus, EPA believes it is reasonable to select a definition of "support" that focuses on the extent to which the Federal agency has continuing program responsibilities, and whether it can practicably control emissions from its own and other party activities. The exclusive definition requires Federal agencies to consider only those direct and indirect emissions over which, under their legal authorities, they can exercise and maintain practicable control and over which they have continuing program responsibilities. As noted previously, this approach is consistent with the purposes of section 176(c) of the Act. That section places certain prohibitions and responsibilities on Federal agencies. The EPA does not believe that Congress intended to extend the prohibitions and responsibilities to cases where, although licensing or approving action is a required initial step for a subsequent activity that causes emissions, the agency has no control over that subsequent activity, either because there is no continuing program responsibility or ability to practicably control. For that reason, EPA believes it is not reasonable to conclude that the Federal agency "supports" that later activity, within the meaning of section 176(c) of the Act.

As implemented by this rule, section 176(c) of the Act requires that a Federal agency ensure conformity with an approved state SIP for those air emissions that would be brought about by agency action, and that the agency can practicably control, and that are subject to a continuing program responsibility of that agency. A Federal agency has no responsibility to attempt to limit emissions that do not meet those tests, or that are outside the Federal agency's legal control. Moreover, neither section 176(c) of the Act nor this regulation requires that a Federal agency attempt to "leverage" its legal authority to influence or control nonfederal activities that it cannot practicably control, or that are not subject to a continuing program responsibility, or that lie outside the agency's legal authority.

For example, neither section 176(c) of the Act nor this regulation requires a Federal agency to withhold a Federal grant of financial assistance to a grant applicant that otherwise satisfies legal

[2] The general definitions section for part D of title I, section 171 (42 U.S.C. 7501), also does not define "support."

[3] *Chevron, U.S.A., Inc.* v. *Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842–3 (1984).

[4] Of course, section 176(c)(1) also prohibits Federal agencies from engaging in, providing financial assistance for, licensing or permitting, or approving, such activities.

requirements in order to obtain assurances from the applicant with respect to that applicant's activities that the agency cannot practicably control, or that are beyond the agency's continuing program responsibilities, or that fall outside the Federal agency's jurisdiction.

As described in the proposal, development that is related to the Federal action only in a manner that provides daily services such as restaurants, schools, and banks and which are located off Federal property, may be considered incidental rather than indirect emissions. Such activities and emissions are expected to be small relative to other emissions from the Federal action and are difficult or impossible to precisely locate and quantify. Thus, an accurate air quality and/or emissions analysis is not possible. Therefore, emissions from the daily services activities should be considered incidental and would not be included as indirect emissions in the conformity analysis even under the inclusive definition. Under the exclusive definition, incidental emissions are generally not covered for the additional reason that they are generally not under the Federal agency's control and continuing program responsibility.

g. Exclusive definition—Federal role. The exclusive definition isolates certain types of Federal actions where the role and responsibility of the Federal agency itself is major. For example, in Federal construction projects such as buildings or laboratories, the Federal agency has substantial and continuing authority and responsibility to manage that activity. Thus, the Federal contract manager should also be responsible for assuring that the construction activities conform to the applicable SIP.

By focusing on such major Federal actions, this approach would not require a conformity analysis for certain Federal actions that are necessary for, but incidental to, subsequent development by private parties. For example, the exclusive definition does not generally require that a COE fill permit needed for a relatively small part, portion, or phase of a twenty acre development on private land would somehow require the COE to evaluate all emissions from the construction, operation, and use of that larger development.

The exclusive definition, in effect, includes an examination of the duties, continuing program responsibilities, and controls that a Federal agency can practicably implement. When the Federal agency owns or operates a facility, Federal responsibility for the direct and indirect emissions from that facility is clear. However, farther down the spectrum of "assistance," where less and less Federal control and program responsibility may be found, a point is reached where the Federal agency should not have the same degree of responsibility for assuring the conformity of subsequent privately generated emissions, especially the indirect emissions from that action.

By controlling the direct and indirect emissions under the practicable control and continuing program responsibility of the Federal agency, the conformity rule assures that Federal agencies take appropriate and reasonable actions to support the purpose of the SIP, to meet all specific SIP requirements, and to assure that the SIP is not undermined by Federal actions. The exclusive definition assures that Federal actions will meet the intent of section 176(c) and that States will retain the primary responsibility to attain and maintain the air quality standards.

In support of the "exclusive" version, many Federal agencies have stated that it is unreasonable to withhold a conformity determination where it is impracticable for the Federal agency to remedy the situation. In such cases, they argue that the State and/or local jurisdictions should regulate the activities outside the Federal agency's jurisdiction. On the other hand, some commenters have argued that reliance on State or local action to control these off-site activities could be viewed as requiring the State to amend the applicable SIP to conform to the Federal action, rather than a rule that requires the Federal action to conform to the applicable SIP with respect to all subsequent emissions. For the reasons described above, EPA concludes that it would be unreasonable to interpret section 176(c) of the Act as requiring Federal agencies to take responsibility for emissions that they cannot practicably control and for which they have no continuing program responsibility.

The conclusion that the exclusive definition best fits with the balance that Congress established in the Act between Federal and State/local responsibility is supported by the Supreme Court's analysis in its 1989 decision in *Robertson* v. *Methow Valley Citizens Council*, 490 U.S. 332 (1989). In that case, the Court addressed the question," (w)hether the Forest Service may issue a special use permit for a recreational use of national forest land in the absence of a fully developed plan to mitigate environmental harm." Id. at 336. In that case, the imposition of such a mitigation plan was within the jurisdiction of State and local agencies, not the Forest Service. The Court held that the Forest Service's authority to issue the permit was not contingent upon the State and local agencies taking action. As the Court explained, "(i)n this case, the off-site effects on air quality and on the mule deer herd cannot be mitigated unless non-Federal government agencies take appropriate action. Since it is those state and local governmental bodies that have jurisdiction over the area in which the adverse effects need be addressed and since they have the authority to mitigate them, it would be incongruous to conclude that the Forest Service has no power to act until the local agencies have reached a final conclusion on what mitigation measures they consider necessary." Id. at 352–53 (footnote omitted). For the same reasons, EPA has concluded that it would be "incongruous" to read section 176(c) of the Act as rendering the ability of Federal agencies to perform their congressionally-assigned missions contingent upon State and local agencies imposing mitigation measures over activities that they and not the Federal agencies, can practicably control, and have a continuing program responsibility to control. Since the inclusive definition would, in many cases, require Federal agencies to withhold action unless and until a State/local agency imposes mitigation measures over activities that are outside the Federal agencies' control, the inclusive definition would upset the balance between Federal and State/local responsibilities for achieving clean air, and would unjustifiably frustrate Federal agencies from performing their congressionally-assigned statutory responsibilities.

The person's activities that fall outside the Federal agency's continuing program responsibility to control are subject to control by State and local agencies. In sum, expanding the Federal agencies' responsibilities to extend to emissions that are outside their continuing program responsibility to control (which the inclusive definition would have done) would upset the balance between Federal and State/local roles that Congress established in the Act and would infringe on the air quality roles of the State or local agency.

h. Exclusive definition—examples.

Example 1:

Assume that the FAA is considering approval of an airport expansion in a serious ozone nonattainment area and that adjacent development of an industrial park is known to depend on the FAA approval. Assume: (1) The airport expansion would result in an increase in emissions of 50 tons/year of

volatile organic compounds (VOC) due to vehicle and airport related emissions, and (2) assume that the adjacent industrial park would emit 200 tons/year of VOC.

Under the exclusive definition, the FAA must show that the 50 tons/year of VOC from the airport related activities conforms to the SIP. The FAA, however, is not responsible for the 200 tons/year of VOC from the industrial park. The conformity rule provides several ways to show that the 50 tons/year of VOC conforms to the SIP:

(1) The airport expansion is specifically included in the applicable SIP's attainment demonstration,

(2) The 50 tons are offset by reductions obtained elsewhere by the FAA,

(3) The 50 tons are determined to be consistent with the SIP emission budget by the State air quality agency,

(4) The State commits to revise the SIP to accommodate the 50 tons,

(5) The airport expansion is included in the conforming transportation plan, or

(6) In some cases, it is demonstrated that there is no increase in emissions in a build/no build scenario. (Note that project-specific modeling for ozone is not generally considered an option since, as a technical matter, ozone models are not sufficiently precise to show such impacts unless the project is a large portion of the total area inventory.)

Example 2: In another case, the same airport expansion might be in a CO or PM–10 nonattainment area where a local scale modeling analysis is determined to be needed by the State agency primarily responsible for the SIP. In such cases, the modeling analysis must consider emissions due to the airport activity and emissions due to any existing sources, including background concentrations. Emissions from the future industrial park would not, however, be required as part of the modeling analysis since such emissions are not covered by the conformity rule.

Example 3: A Federal action to lease land to a private developer does not in itself have any immediate direct or indirect air pollution emissions. The lease does, however, allow future activities by the private developer on the leased Federal land that could result in indirect air pollution emissions. This can be seen clearly in cases where the leasing action is accompanied by a description of future activities that the developer plans to undertake on the leased Federal land which would result in emissions and where the lease contains emission limits imposed on the use of the leased Federal land. Where the Federal agency has the authority to impose lease conditions controlling future activities on the leased Federal land, these emissions must be analyzed in the conformity determination.

Example 4: Where a COE permit is needed to fill a wetland so that a shopping center can be built on the fill, generally speaking, the COE could not practicably maintain control over and would not have a continuing program responsibility to control indirect emissions from subsequent construction, operation, or use of that shopping center. Therefore, only those emissions from the equipment and motor vehicles used in the filling operation, support equipment, and emissions from movement of the fill material itself would be included in the analysis. If such emissions are below the de minimis levels described below for applicability purposes (section 51.853), no conformity determination (section 51.858) would be required for the issuance of the dredge and fill permit.

i. Exclusive definition—types of Federal actions covered. The following types of Federal actions, among others, are likely to be subject to conformity review under the exclusive definition. Some of these actions are likely to be above the de minimis levels, controllable currently by the Federal agency, and the Federal agency will maintain an ability to control the emissions in the future through oversight activities.

(1) Prescribed burning activities by Federal agencies or on Federal lands: The burning is conducted by the Federal agency itself or is approved by the Federal agency, consistent with a Federal land management plan, and the Federal land manager maintains an oversight role in either case.

(2) Private actions taking place on Federal land under an approval, permit, or leasing agreement, such as mineral extraction, timber harvesting, or ski resort construction: A lease agreement, for example, may be subject to mitigation conditions as needed to show conformity and the Federal land manager will maintain an oversight role, including the enforcement of lease agreements. The conditions needed to show conformity would also be enforceable by the State and EPA through the SIP (as described elsewhere in this notice).

(3) Direct emissions from COE permit actions: The COE will evaluate the direct emissions from the activity involving the discharge of dredged or fill material. If these direct emissions were to exceed the de minimis level, the COE has legal authority to impose permit conditions to control those emissions.

(4) Wastewater treatment plant construction or expansion actions: Construction projects funded by EPA may be conditioned so that the new treatment capacity conforms to growth assumptions in the SIP. The EPA maintains a continuing control authority since future expansion would need a new approval action. Emissions from this activity can be quantified and located only on a regional scale; they cannot be located in a precise manner and subject to a microscale analysis. Such emissions are nevertheless considered reasonably foreseeable, if only on a regional scale. The SIP planning generally takes into account the growth limiting effects of wastewater treatment capacity and, thus, changes to the capacity must be shown to conform to the SIP. This is an area where Congress clearly desires a conformity review, as evidenced by section 316 of the Act.

(5) Federal construction projects such as buildings, laboratories, and reservoirs on Federal land: Contracts to complete construction projects funded by GSA or other Federal agencies may be conditioned so that the new construction meets mitigation measures as needed to show conformity. The Federal contract manager would maintain an oversight role to assure that all the contract agreements are met.

(6) Project level minerals management leasing activities: The lease agreement may be structured as described in item b above.

(7) New airports or airport expansion actions: Grants to fund projects or approval by the FAA to build projects may be conditioned so that the new projects meet mitigation measures as needed to show conformity. Under FAA's funding statute, grants for new airports, new runways, and major runway extensions must include such conditions. The grant conditions are enforceable through the grant agreements. Failure of the airport owner/operator to comply with grant conditions may result in suspension or termination of Federal assistance.

(8) Actions taking place on Federal lands or in Federal facilities: The Federal agency has and will maintain the ability to control emissions in many other activities, such as activities in National Parks, on military bases, and in Federal office buildings.

j. Exclusive definition—types of Federal actions not covered. The following types of Federal actions, among others, are not covered by the conformity rule under the exclusive definition approach.

(1) Activities associated with property disposal at military closure and realignment bases through sale or other transfer of title. This includes transactions where there is an enforceable contract for the sale or other transfer of title that requires delivery of the deed promptly after the requirements of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9620(h)(3)) have been met whether or not the property is occupied before closing of title under the contract or a related instrument. In this case, the military does not retain continuing authority to control emissions other than those associated with the CERCLA cleanup.

(2) Leasing agreements associated with military base closure and realignment, where transfer of title is required to be conveyed upon satisfaction of the CERCLA requirements, and where the military service leases the property without retaining continuing authority to control the property except as necessary to assure satisfaction of CERCLA requirements.

(3) Certain indirect emissions related to a COE permit for the discharge of dredged or fill material. The indirect emissions from development activities related to COE permit actions are not covered where such emissions are not subject to the continuing program responsibility of the COE, or cannot be practicably controlled by the COE.

(4) NPDES permit actions: Many of these actions are taken under State rules and, as such, are not Federal actions. The issuance of the Federal permit has no direct emissions, but may have considerable indirect emissions from future development of permitted facilities. However, where EPA issues a NPDES permit, for example, to an industrial or housing development, the EPA does not maintain an authority to control emissions from the development and, thus, the indirect emissions from the development are not subject to the conformity rule.

D. Indirect Emissions—Definition of "Caused By"

1. Proposal

During the course of discussing the inclusive approach, the proposal offered examples of what emissions would be considered "caused by" a Federal action. The proposal stated that inclusive indirect emissions that would be considered "caused by" the Federal action are those emissions from sources which are dependent upon the Federal action and would only be constructed and/or operated because of that Federal action. Such emissions would include emissions from any on-site or off-site support facility which would not be constructed or increase its emissions except as a result of the Federal action. The proposal stated that indirect emissions include emissions from mobile sources that are attracted to a facility, building, structure, or installation; for example, indirect emissions resulting from roads, parking facilities, retail, commercial and industrial facilities, airports, maritime ports, sports centers, and office buildings.

Where mobile sources contribute indirect emissions, the proposal noted that the Federal agency should attribute only those emissions that are caused by the Federal action. For example, not all the emissions from trips to and from a workplace or retail site are likely to be fully "caused" by the site itself. The road to and from the site, the origin and ultimate destination points of the trip, and other factors can be used to determine the portion of indirect emissions caused by the Federal action.

2. Comment

One commenter requested clarification that EPA's intention is to use a "but for" test concerning indirect emissions caused by a Federal action.

3. Response

The EPA agrees with this comment, as discussed in the proposal and includes a definition of "caused by" in the final rule to address this concern. Since the term "caused by" is used in both the definitions of "direct emissions" and "indirect emissions," the definition in the final rule also applies to both.

As a result of EPA adopting the exclusive approach, a Federal agency will need to address the "caused by" issue only with respect to those activities which the Federal agency controls. Therefore, many of the activities that would have been covered under the inclusive definition only by reason of the "caused by" requirement will not be covered under the exclusive definition due to lack of Federal agency control. This would be true generally for the examples in the "proposal" discussion immediately above, which were offered in the context of the inclusive definition.

E. Indirect Emissions—Sections 110(a)(5)(A) and 131 of the Act

1. Proposal

Section 110(a)(5)(A) of the Act prohibits the Administrator from requiring a State to adopt a general indirect source review program. Section 131 of the Act indicates that land use control authority resides with the cities and counties. As noted in the proposal, this language could be interpreted to restrict EPA's authority to regulate indirect emissions as part of the conformity rule. However, for certain federally assisted indirect sources, section 110(a)(5)(B) of the Act expressly allows the Administrator to promulgate, implement, and enforce indirect source review programs under section 110(c) of the Act. The EPA believes that this language in section 110 of the Act is consistent with the broad mandate in section 176(c) of the Act to prohibit Federal agencies from taking actions which "support in any way" any activity which does not conform to an applicable SIP.

2. Comment

Several commenters disagreed with EPA's interpretation and argued that sections 110 and 131 prohibit EPA from promulgating a rule, such as the March 15, 1993 proposal, that covers indirect emissions. These commenters point to the legislative history of the 1977 amendments to the Act, which added section 110(a)(5) and an earlier version of section 176(c), as evidence that Congress has explicitly prohibited EPA from seeking to regulate private development or land use by Federal review of indirect sources. By rejecting efforts by EPA in the mid-1970's to restrict parking spaces and require preconstruction review of parking structures associated with indirect sources through regulation, and by adopting the explicit prohibition in section 110(a)(5), they argue, Congress clearly intended that Federal agencies not involve themselves in controlling indirect sources or interfering in local land use decisions. In addition, they find it significant that Congress did not revise or delete section 110(a)(5) even when it added arguably stricter language to section 176(c) in 1990. Moreover, to the extent that section 110(a)(5)(B) does permit Federal review of certain indirect sources, these commenters contend that such review is restricted to "major" federally-assisted indirect sources and federally-owned or operated indirect sources only.

3. Response

For the reasons described in the preamble to the proposal and as discussed above regarding the inclusive/exclusive issue and further below, EPA disagrees with these comments. The EPA has noted that section 110(a)(5)(B) expressly allows the Administrator to promulgate, implement, and enforce

indirect source review programs under section 110(c) for certain federally assisted indirect sources. However, the EPA also believes that section 176(c) provides independent authority for EPA to require SIP revisions concerning conformity requirements that include provisions addressing indirect emissions resulting from Federal actions. Such provisions are necessary to prevent Federal actions, as required by section 176(c)(1)(B), from causing or contributing to NAAQS violations.

The EPA believes that the comments do not fully reflect the legislative history of the 1977 amendments to the Act regarding the congressional concerns that prompted adoption of section 110(a)(5)(A). The congressional Conference Committee report does indeed discuss attempts by EPA to promulgate measures controlling parking supply, but, unlike the commenters' statements, points out that these efforts came only after the EPA Administrator had determined that all the SIP's submitted to meet the 1970 Act requirements had failed to ensure maintenance of the NAAQS, especially those for motor vehicle-related pollutants. Congress objected to EPA's proposed parking restrictions, not simply because they were intended to control indirect sources, but primarily because Congress believed it was a misdirected attempt to reduce motor vehicle traffic that only succeeded in shifting the air pollution control emphasis away from the major source of the problem, namely the cars themselves.

> [The EPA's] efforts based on indirect control of the use of automobiles through restrictions on parking lots, shopping centers and other indirect sources, rather than full and prompt controls for new autos, trucks, buses, and motorcycles are inherently inequitable. It transfers from the motor vehicle manufacturers to the public and to indirect source owners and operators the burden of protecting public health from dangerous vehicle emissions. H.R. Rep. No. 1975, 94th Cong., 2d Sess. 221 (1976).

So, while it is true that Congress sought to reverse these specific indirect source measures and, thereby, reallocate the regulatory burdens, it also acknowledged that even after new car emissions requirements were adopted, additional control measures would be needed by many nonattainment areas if the NAAQS were to be attained and maintained, and such measures could include regulation of indirect sources, such as "new facilities which attract heavy automobile traffic." *Id.* at 222. Consequently, although Congress restricted the Administrator's authority to require States to adopt an indirect source review program, it purposely did not remove that authority completely. Again, as stated in the Conference report: "The Committee believes that its proposal meets the specifications * * * of an acceptable and workable program. It tightly restricts the Administrator's authority with respect to indirect sources by assuring that necessary review programs for non-federally assisted indirect sources will be designed and implemented by local and State governments." *Id.* at 227. And, as the report notes elsewhere: "Of course, the prohibitions on the Administrator's implementation and enforcement of a review program* * *are not applicable with respect to federally-owned or federally-assisted indirect sources." *Id.* at 224. Nothing in section 176(c), which is only concerned with federally-assisted actions, is inconsistent with this expression of Congress' intent with respect to section 110(a)(5). Moreover, the fact that the section 110(a)(5) prohibition and the requirement that Federal actions conform to the SIP under section 176(c) were both added when the Act was amended in 1977 does nothing to further the commenters' argument since it supports EPA's position as well. Given the thorough and detailed consideration Congress expended when it limited EPA's authority to review indirect sources, it would have been easy for Congress to add language in section 176(c) stating, for example, that the section 110(a)(5) restriction on indirect source review applied there also. Not only has Congress not limited this provision, but on the two separate occasions it has addressed section 176(c) of the Act it has consistently stated the scope of the provision's coverage requires a determination of conformity for "any activity" that a Federal agency "supports in any way." Indeed, EPA's view is consistent with the exception to the prohibition in section 110(a)(5) for federally-assisted, operated, or owned indirect sources, since section 176(c) of the Act applies only to actions supported or undertaken by Federal agencies. The EPA, therefore, concludes that the prohibition in section 110(a)(5) of the Act does not limit EPA's independent authority under section 176(c) of the Act.

The EPA also does not agree with the comment that the authority provided EPA under section 110(a)(5)(B) to control certain indirect sources is limited only to major indirect sources, such as the ones enumerated therein. The discussion in the legislative history strongly suggests that the use of the word "major" was not intended to denote a limitation on the type of indirect sources EPA may review. Rather, the term as used merely describes certain large-scale, hence "major," projects of the type which, like the ones listed, normally qualify for Federal funding assistance. For example, the Conference Committee report states: "An exception to this [section 110(a)(5)] prohibition is made for major Federally funded public works projects such as highways and airports. . ." S. Rep. No. 16, Vol. 3, 95th Cong., 2d Sess. 506 (1978). But other statements in the report show that EPA's review is not limited to such projects only: "The Administrator is prohibited from promulgating regulations relating to indirect source reviews except with respect to Federally assisted highways, airports *or other indirect sources assisted, owned or operated by the Federal government.*" *Id.* at 4382 (Vol. 5)(emphasis added).

Moreover, the conformity rules regulate emissions, not local land use or zoning requirements. These rules do not infringe on the authority of local governments to control land use; rather, they restrain the ability of Federal agencies to support projects that cause certain air quality problems. Nothing in these rules inhibits the ability of local governments to set their own requirements with respect to such projects. Thus the conformity rules are not inconsistent with section 131 of the Act.

F. Indirect Emissions—Reasonably Foreseeable Emissions

1. Proposal

As described in the preamble to the March 15, 1993 proposal, the indirect emissions that are "reasonably foreseeable" must be identified at the time the conformity determination is required, though this would include emissions that would occur later in time and/or at a place other than the action itself. The proposal stated that an agency is not required to speculate or guess at potential future indirect emissions which are conceivable but not identifiable. In addition, the proposal indicated that descriptions of emissions contained in documents such as employment and financial forecasts and NEPA documents should be considered reasonably foreseeable emissions.

As described in the proposal, certain types of Federal actions occur on the programmatic level rather than on a project level, and the specific air quality and emissions impacts associated with individual projects under such programs may not be known. In instances where a Federal action is on

a programmatic level and it is impossible to accurately locate and quantify emissions and, therefore, impossible to accurately complete the air quality and emissions analysis specified in § 51.858, such emissions should not be considered reasonably foreseeable.

The proposal also stated that, for purposes of defining "indirect emissions," development that is related to the Federal action only in a manner that provides daily services such as restaurants and banks and which are located off Federal property, may be considered incidental rather than indirect emissions under certain circumstances. In such cases, specific emissions from the daily services activities should be considered not reasonably foreseeable and not included as indirect emissions in the conformity analysis.

2. Comment

The EPA received comments requesting clarification of the phrase "reasonably foreseeable emissions." Several commenters requested EPA to incorporate a definition of this term in the rule. One commenter stated that EPA's definition of reasonably foreseeable emissions would require private developers to account for, assess, and if necessary, mitigate the impacts of completely unrelated projects developed by other private parties. The commenter also objected to certain environmental analyses that rely on worst-case assumptions and exaggerate the impacts due to possible, but unlikely, future growth scenarios and where it is impossible to assess local air quality impacts.

3. Response

a. *Documentation.* In order to clarify the term, EPA has: (1) Added a definition of "reasonably foreseeable emissions" in the regulatory portion of the rule; (2) added the discussion below; and (3) listed certain Federal actions that are not considered reasonably foreseeable in § 51.853(c)(3) and, therefore, exempt from conformity requirements. The definition is similar to the discussion in the proposal, however, there are some differences as described below:

Reasonably Foreseeable Emissions are projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency.

Unlike the proposal, the final definition does not require a Federal agency to use all emissions scenarios contained in financial documents or environmental analyses. That approach could not in many cases be implemented since the various documents contain quite different scenarios and a single document sometimes contains multiple emissions scenarios. In addition, some scenarios could be based on speculation. The definition does not require the use of worst-case assumptions, unlikely growth scenarios, or analyses where it is impossible to assess local air quality impacts. Further, under an exclusive definition, the conformity review may be covering a smaller set of indirect emissions than, for example, the emissions scenarios contained in an environmental impact statement.

The final rule requires the Federal agency to review all of its own information and all information presented to the Federal agency. Selection and documentation of the relevant emissions scenarios for conformity review is the responsibility of the Federal agency and should be based on reasonable expectations of future activity resulting from the Federal action.

b. Actions not reasonably foreseeable. In order to provide further clarification, EPA listed some Federal actions that are not considered reasonably foreseeable in § 51.853(c)(3) and are, therefore, exempt from conformity requirements. This list is intended to provide examples and is not intended to be a complete listing of such activities. Additionally, actions for which emissions cannot be accurately quantified, such as the implementation of trade laws and export trade promotional activities, are not considered reasonably foreseeable. As discussed below, these actions include program scale leasing actions and electric power marketing activities that involve the acquisition, sale, and transmission of electric energy.

(1) Program Level Leasing Actions

In actions such as outer continental shelf lease sales, it will often be difficult or impossible to locate and quantify emissions early in the Federal agency review process. Thus, the emissions may not be reasonably foreseeable. Further, a conformity review is unnecessary at that time since the Federal agency must take future actions related to the lease sale which are subject to conformity review. That is, the exploration and development actions at the project level would be subject to conformity review prior to any action that would actually result in emissions. In such cases, the EPA believes that a conformity review is not required prior to the project level analysis.

On the other hand, where a conformity review, such as a lease sale, can be and is made on the program level rather than the project level, subsequent project level actions which implement the conforming program do not require new conformity reviews. This approach is consistent with language in the preamble to the proposal. For clarification, EPA added this concept in the final rule: § 51.853(c)(4) exempts actions that merely implement a decision to conduct or carry out a policy, plan, program, or project where the policy, plan, program, or project conforms.

(2) Electric Power Marketing

Federal activities in the marketing of electric power are exempt from conformity review for several reasons. In many cases, the resulting emissions from the use of the electric power cannot be precisely located or quantified and, thus, are not reasonably foreseeable. The marketing agreements would also be exempt since customers of the Federal agency could obtain electric power from other public (non-Federal) or private electric utilities even if it were not provided by the Federal agency. Thus, emissions from these customers are not "caused by" the Federal action because they would occur in the absence of the Federal action. Further, SIP's assume electric power will be available in future growth projections. Thus, the delivery of electric power would not be inconsistent with the SIP.

c: Unrelated projects. The definitions of "reasonably foreseeable emissions," "indirect emissions (exclusive)," and "caused by" make it clear that "completely unrelated projects," as stated by a commenter, are not subject to the applicability analysis. However, where an air quality modeling analysis is the basis of a conformity determination, the modeling analysis should account for emissions due to existing sources together with covered emissions from the Federal action, consistent with EPA modeling guidance.

G. Indirect Emissions—Definition of Federal Activity

1. Proposal

Although EPA included a definition of "Federal action" in the proposal, that definition merely repeated language from section 176(c) of the Act and did not clarify the meaning of the statutory language. The preamble to the proposal,

however, made it clear that EPA intended the concept to include future development activities associated with a Federal action, under either definition of indirect emissions. Under the exclusive definition, EPA proposed that consideration of such emissions would be limited to those future development activities which the Federal agency could control and would continue to maintain some authority to control.

2. Comment

The building industry commented that under *Atlantic Terminal Urban Renewal Area Coalition* v. *New York City Department of Environmental Protection*, 705 F. Supp. 988 (S.D.N.Y. 1989), the definition of Federal activity should be limited to the immediate Federal action, in that case a Department of Commerce (DOC) grant for demolition, and should not include any subsequent activities even where they are facilitated by the Federal action, in that case a subsequent housing development built on the site of the demolition. Several commenters also requested that EPA clarify which activities are covered under the conformity rule.

3. Response

The EPA does not agree that Federal actions should always be interpreted so narrowly. The EPA acknowledges that the court in *Atlantic Terminal* indicated in dicta that, in that case, the Federal activity under consideration should be limited to the demolition activity. However, that assessment was made in the context of a factual situation in which the subsequent development activity was being funded by a Department of Housing and Urban Development (HUD) block grant. The court based its decision on the unreasonable burden and duplicative efforts that would be placed on the Federal government should both DOC and HUD be required to analyze the same subsequent development. The court did not address the situation where only one Federal agency had jurisdiction over a project, and was not presented with the statutory language nor legislative history concerning transportation activities under the 1990 amendments to section 176(c) nor EPA's interpretation of Federal actions and indirect emissions (described below).

If it were the case that through an agency's approval of a demolition grant an agency were able to practicably control construction of the housing development, and had continuing program responsibility over such development, then EPA believes that the agency would have "supported" the housing development by making the grant. For these reasons, EPA believes that a court specifically addressing the issue of the definition of Federal activity under such circumstances would not reach the same decision as in *Atlantic Terminal*.

In order to clarify which activities are covered under the general conformity rule, the final rule incorporates changes in the definitions of "Indirect emissions" (discussed in section III.C.) and "Federal action" (discussed below and in section IV.D.). The definition of "Federal action" is revised by adding the following sentence to the end of the definition in the proposal: Where the Federal action is a permit, license, or other approval for some aspect of a nonfederal undertaking, the relevant activity is the part, portion, or phase of the nonfederal undertaking that requires the Federal permit, license, or approval. The following examples illustrate the meaning of the revised definition.

Assume, for example, that the COE issues a permit and that permitted fill activity represents one phase of a larger nonfederal undertaking; i.e., the construction of an office building by a nonfederal entity. Under the conformity rule, the COE would be responsible for addressing all emissions from that one phase of the overall office development undertaking that the COE permits; i.e., the fill activity at the wetland site. However, the COE is not responsible for evaluating all emissions from later phases of the overall office development (the construction, operation, and use of the office building itself), because later phases generally are not within the COE's continuing program responsibility and generally cannot be practicably controlled by the COE.

In another case, assume the Forest Service permits a ski resort and imposes conditions on the construction and operation of the ski resort. Also assume that housing development will occur nearby but on privately-owned land. In this case, the conformity review might cover emissions due to construction and operation of the ski resort since they are activities permitted by the Forest Service. Emissions from the housing activities, however, would not generally be covered since the Forest Service does not generally take actions covering the portion of the overall development that is on privately-owned land and not subject to a Forest Service permit, license, or approve action.

H. Applicability—Attainment Areas

1. Proposal

As discussed in the preamble, EPA proposed to interpret the statute such that the conformity rules apply only to nonattainment areas and those attainment areas subject to the maintenance plans required by section 175A of the Act (58 FR 13841).

2. Comment

The EPA received many comments which agreed with the proposal and many other comments stating that the statute should be read such that conformity requirements would apply in all or portions of attainment and unclassified areas as well. Similar comments were received arguing that conformity should not apply in attainment areas.

One commenter noted that development in attainment areas on the fringe of nonattainment areas is likely to increase the size of the nonattainment areas, increasing the impact on public health and welfare and necessitating more costly pollution control measures to retrofit sources. The commenter also stated that development in rural attainment areas, even many miles away from urban nonattainment areas, may delay timely attainment of the NAAQS or emission milestones in nonattainment areas. Another commenter cited an example of a conformity analysis in an attainment area which showed a Federal action would cause a new violation of the NAAQS unless mitigation measures were implemented and/or planning provisions were revised.

3. Response

In the proposal, EPA indicated that the statute was ambiguous with respect to whether conformity applied only in nonattainment areas, or in attainment areas as well. As noted above, EPA received significant public comment arguing that the statute should be read to apply conformity also in attainment areas, based on the wording of Act section 176(c)(1) and the policy merits of such applicability. Similar comments were received arguing that conformity did not apply in attainment areas.

The EPA continues to believe that the statute is ambiguous, and that it provides EPA discretionary authority to apply these general conformity procedures to both attainment and nonattainment areas. The EPA plans to carry out a separate rulemaking proposing to apply general conformity procedures to certain attainment areas. The EPA sees strong policy reasons not to apply conformity in all attainment areas, given the significant burden associated with making conformity determinations relative to the risk of NAAQS violations in clean areas. Thus, EPA believes that it would be

reasonable to propose applying conformity in attainment areas for which air quality is close to nonattainment levels, for example at 85 percent of nonattainment levels (see discussion below).

The EPA intends to take comment on the basic proposal to apply conformity in attainment areas. The EPA will also seek comment on the specific application of conformity in certain categories of attainment areas.

Therefore, EPA intends to issue in the near future a supplemental notice of proposed rulemaking dealing with conformity requirements in attainment areas.[5] The requirements of this final rule will apply only in nonattainment and maintenance areas, as proposed.

While EPA will solicit comments on other options, the supplemental notice of proposed rulemaking on general conformity will propose to require conformity determinations only in the portion of attainment areas which have exceeded 85 percent of the NAAQS. These areas will be identified by using the most recently available, quality-assured air quality data covering the period appropriate for making designations of air quality status in 40 CFR part 81. Federal activities in attainment areas below 85 percent of the NAAQS and areas where representative monitoring data are not available would be exempt from the obligation to conduct a general conformity analysis based on the de minimis impact on air quality that would result for general conformity activities in such areas. Because the merit of exempting certain areas from conformity requirements will vary depending on the activities being regulated, the transportation conformity rule may propose different exemptions for applicability of conformity requirements in attainment areas than those for general conformity.

I. Applicability—De Minimis Emission Levels

1. Proposal

The proposed de minimis emission levels to be used for determining applicability of conformity requirements were pollutant specific and varied according to the severity of the nonattainment area. They ranged from 0.6 tons/year (for lead) to 100 tons/year (for carbon monoxide) (§ 51.853). These levels generally were derived from the "significance levels" established for preconstruction review of modifications to existing major stationary sources. The significance levels were taken from the Act itself, where provided, or from EPA's regulations for SIP's (40 CFR part 51) where the Act did not provide them. For ozone (VOC) and nitrogen oxides (NO_x), a sliding scale was proposed, ranging from 10 tons/year (for extreme ozone nonattainment areas) to 40 tons/year (for marginal and moderate ozone nonattainment areas).[6]

Most Federal actions result in little or no direct or indirect air emissions. The EPA intends such actions to be exempted under the de minimis levels specified in the rule and, thus, no further analysis by the Federal agency is required to demonstrate that such actions conform. Additionally, paragraph (d) of § 51.853 allows a Federal agency to establish categories of actions which would be presumed to conform due to minimal air quality impact. These provisions are intended to assure that these rules are not overly burdensome and Federal agencies would not spend undue time assessing actions that have little or no impact on air quality. Such actions include, for example, personnel actions, continuing activities with no substantial, adverse change from previous conditions that are associated with an on-going program or operation (including certain permit renewal actions), and routine monitoring.

2. Comments

Several commenters supported the concept of de minimis levels as a means of focusing conformity requirements on those Federal actions with the potential to have significant air quality impacts. Many agreed with the de minimis levels proposed in the NPR. Some commenters thought the levels should be lower so that more actions would be considered, while others wanted the de minimis levels to be raised to lessen the administrative burden on Federal agencies and avoid conformity requirements for smaller projects. A few commenters indicated that too many of their activities would be subject to a conformity review based on the de minimis cutoffs proposed in the NPR if they were used with the inclusive definition of indirect emissions.

One commenter stated that the proposed de minimis levels are arbitrary and capricious. Another commenter stated that there should be only one de minimis level rather than the pollutant- and classification-specific levels proposed.

Several comments objected to the provision that would automatically lower the de minimis levels to that of the stationary source level established by the local air quality agency. The commenters pointed out that certain air agencies have a zero threshold level, which would not be appropriate for conformity.

The EPA also received comments stating that the applicability determinations for conformity would be overly burdensome because they could be interpreted to apply to even the smallest of Federal actions. That is, the proposed rule could be interpreted to call for virtually all Federal actions, even purely administrative ones, to make a positive conformity determination before the agency is allowed to proceed with the action.

Several commenters requested EPA to specifically list types of Federal actions that would be de minimis and, thus, exempt from the conformity review requirements.

3. Response

Given the need to choose a threshold based on air quality criteria and one that avoids coverage of less significant projects, and in response to certain comments, the de minimis levels for conformity analyses in the final rule are based on the Act's major stationary source definitions—not the significance levels as proposed—for the various pollutants. Use of the de minimis levels assures that the conformity rule covers only major Federal actions. Under the major source definition, for example, the levels for ozone would range from 10 tons/year (VOC or NO_x) for an extreme ozone nonattainment area to 100 tons/year for marginal and moderate areas, not from 10 tons/year to 40 tons/year as proposed. In areas that are close to attainment, smaller projects, such as those that result in strip shopping centers, would not be subject to review. In areas with more severe air quality problems, such smaller projects would be subject to review. Larger projects, such as an airport expansion or the redevelopment of a military base, would require a conformity review under all of these de minimis levels.

[5] For PM–10, the areas which would be addressed in the supplemental notice are designated "unclassifiable." The amendments to the 1990 Act designated areas meeting certain qualifications as nonattainment for PM–10 by operation of law, while all other areas were designated unclassifiable. In the future, as appropriate, the Act provides for additional unclassifiable areas to be redesignated to attainment. This rule refers to areas redesignated to attainment as "maintenance areas."

[6] The actual significance level for VOC and NO_x established by the Act as amended in 1990 for an extreme ozone nonattainment area is zero (i.e., any increase in emissions from a modification of a major source triggers new source review). The 10 tons/year proposed for a conformity review threshold was chosen because EPA determined that a de minimis level is needed, a zero threshold does not provide a de minimis level, and sources with emissions above 10 tons/year are defined as "major stationary sources" under title I, part D, subpart 2 of the Act.

The de minimis level for lead is 25 tons/year in the final rule. The definition of major stationary source for lead is 100 tons/year. Relatively small increases in lead emissions, however (compared to other criteria pollutants) may threaten the lead standard; also, the level proposed for lead (0.6 tons/year) was proportionately much smaller than 100 tons/year. Therefore, a 100 ton/year level appears unprotective of the conformity requirement. The 25 ton/year value is based on the source size in 40 CFR part 51 that triggers an attainment demonstration requiring dispersion modeling.

The de minimis levels proposed were generally those used to define when modifications to existing stationary sources require preconstruction review. It was pointed out to EPA in comments on the proposal that these thresholds would result in the need to perform a conformity analysis and determination for projects that constituted a "modification" to an existing source but not a "major" source in some cases. The EPA agrees that conformity applies more appropriately to "major" sources and after careful consideration has decided to revise its original proposal in the final rule to use the emissions levels that define a major source, except as described above for lead. The definition of a major source under the amended Act is explained in more detail in the April 16, 1992 Federal Register in the EPA's General Preamble to Title I (57 FR 13498). Section 51.853(b)(3) of the rule has also been revised to remove the provision that would automatically lower the de minimis levels to that established for stationary sources by the local air quality agency. In keeping with its conclusion that only major sources should be subject to conformity review, EPA agrees that a zero emissions threshold, as established by some local agencies, should not be required by this rule.

Further, the EPA believes that Federal actions which are de minimis should not be required by this rule to make an applicability analysis. A different interpretation could result in an extremely wasteful process which generates vast numbers of useless conformity statements. Paragraphs (c)(1) and (2) of § 51.853 are added to the final rule to provide that de minimis actions are exempt from the requirements of this rule. Therefore, it is not necessary for a Federal agency to document emissions levels for a de minimis action. Actions that a Federal agency recognizes as clearly de minimis, such as actions that do not cause an increase in emissions, do not require a positive conformity determination. Instead, such actions are exempt from the rule as provided in § 51.853(c)(1).

In order to illustrate and clarify that the de minimis levels exempt certain types of Federal actions, several de minimis exemptions are listed in § 51.853(c)(2). There are too many Federal actions that are de minimis to completely list in either the rule or this preamble. In addition to the list in the rule, the EPA believes that the following actions are illustrative of de minimis actions:

(1) Routine monitoring and/or sampling of air, water, soils, effluent, etc.

(2) Air traffic control activities and adopting approach, departure and enroute procedures for air operations.

(3) Acquisition of properties through foreclosure and similar means.

(4) Assistance or subsidy for social services such as health care, day care, or nutrition services, as well as payments under public assistance.

(5) Deposit or account insurance for customers of financial institutions and flood insurance.

(6) Routine installation and operation of aviation and maritime navigation aids.

(7) Participating in "air shows" and "fly-overs" by military aircraft.

(8) Educational and informational programs and activities.

(9) Advisory and consultative activities, such as legal counseling and representation.

(10) Construction of hiking trails.

(11) Regeneration of an area to native tree species.

(12) Timber stand and/or habitat improvement activities which do not include the use of herbicides, prescribed fire or do not require more than one mile of low standard road construction.

As noted above, the provisions in § 51.853(c) (or in § 51.853(d)–(e)) are not rebuttable presumptions and not subject to documentation since they are exemptions to the rule. The EPA believes that the nature of the exemptions listed in the rule, taken in context of the definitions of a Federal action and indirect emissions, which are limited to those actions over which the Federal agency has a continuing program responsibility and can practicably control, renders these actions truly de minimis and therefore exempt from conformity requirements.

The exemptions listed in § 51.853(d) are for actions that may be above the de minimis levels listed in § 51.853(b). The rationale for the exemptions listed in § 51.853(d)(1) for new source review (NSR) and prevention of significant deterioration (PSD) and § 51.853(d)(2) for emergencies is explained below. The activities listed in § 51.853(d) (3) and (4) are related to air quality and necessary environmental regulations and, therefore, EPA believes they should be exempt. The exemption for certain CERCLA activities is discussed in the following section.

In contrast, the provisions of § 51.853(f) are presumptions of conformity that must be supported by documentation as provided in § 51.853, paragraphs (g) and (h) (which establish criteria and procedures for Federal agencies to develop additional categories of actions which would then be presumed to conform), and that they may be rebutted as provided in § 51.853(j).

j. Applicability—Exemptions and Presumptions of Conformity

1. Proposal

In addition to Federal actions with de minimis emission levels that do not require conformity determinations, EPA identified several types of Federal actions where EPA believed that conformity of such activities or a portion of such activities can be presumed. The NPR provided several cases where conformity is presumed (§ 51.853 (c) and (d)), including the following:

(1) Actions subject to preconstruction NSR or PSD programs under the Act;

(2) Wastewater treatment works projects funded by the State Revolving Fund (SRF) under the Clean Water Act;

(3) Superfund activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA);

(4) Federal land transfers; and

(5) National emergencies.

The proposal indicated that Federal actions identified under § 51.853, paragraph (c), are presumed to conform because the required air quality analyses that would be conducted under a conformity review must be completed to comply with other statutory requirements. That is, air quality analyses are required in the NSR programs under the Act and the applicable or relevant and appropriate standards process under the CERCLA. The EPA believes these analyses are adequate for purposes of conformity.

2. Comment

A number of commenters supported these provisions in the proposal, while others objected to them. Some commenters felt that the following actions should be subject to conformity review or that the proposed presumptions of conformity were too vague and need greater clarification:

CERCLA actions, sewage treatment works projects funded under the Clean Water Act, and the Federal sale of land. Other commenters supported these presumptions and suggested many others, including procurement actions and projects with one-time only emissions. Some commenters also argued that EPA should establish exemptions for certain actions and presumptions for other actions.

Some commenters recommended that, if a wastewater agency's proposed facilities, or other water management activities, are consistent with the applicable SIP population projections, then the indirect emissions attributable to the proposed facilities should be considered to conform. In such cases the indirect emissions would already be accounted for in the SIP through a growth management element (population forecasts) adopted in the SIP.

3. Response

a. General. As discussed in the previous section, EPA determined that certain actions should be exempt from the rule and other actions should be presumed to conform, with the presumption being rebuttable. Paragraphs (c)–(f) of § 51.853 have been reorganized to indicate which Federal actions are exempt and which are presumed to conform.

b. Sources subject to NSR or PSD. Actions subject to review under the NSR or PSD programs are exempt under the final rule. As explained in the NPR, such actions undergo procedures and criteria, including air quality analyses, equivalent to those required by the conformity rule. Thus, additional review under conformity is not necessary.

c. Water management activities. A separate exemption or presumption of conformity for direct emissions from water management activities is not needed where the emissions exceed the de minimis levels as they would be subject to NSR or PSD and such emissions are exempt as described immediately above. Indirect emissions—and direct emissions that are less than the de minimis levels for NSR or PSD—from water management activities are not covered under NSR or PSD and, therefore, are not exempt.

The final rule is, however, revised to deal with the uncertainty of indirect emissions that may result from water management activities. Generally, it will be unclear what type of growth will result from expanded water management activities. It will, thus, be very difficult to assess the air quality and emissions impact of specific water management activities. Nevertheless, such activities could have a substantial effect on the SIP and it can be determined if the emissions from such actions are consistent with the SIP by comparing the growth scenarios supporting the water management actions with the growth scenario in the applicable SIP. Therefore, the final rule includes a provision in § 51.858((a)(5)(v) which allows a positive conformity determination where the growth projections for the water management actions are consistent with and do not clearly exceed those used in the applicable SIP. Where the growth anticipated from a wastewater project is consistent with that accounted for in the applicable SIP, EPA believes that further analysis of the impacts of the indirect emissions of the wastewater project is unnecessary since all such emissions are already addressed by the SIP.

The EPA agrees that the conformity rule provisions for wastewater treatment plants under the SRF should also extend to other water management activities such as drinking water treatment plants and water conveyances (e.g., pipelines and pumps), and the final rule reflects this concern. The term "regional water and/or wastewater projects" is defined and used (§ 51.858(a)(5)(v)) in the final rule to address the above concerns.

d. Superfund projects under CERCLA. Under the exclusive definition of indirect emissions, superfund projects are unlikely to be covered since the Federal agency will not maintain authority over reuse activities on that land. The presumption of conformity, thus, no longer is relevant for such actions and is not contained in the final rule.

The final rule is revised to incorporate the changes described below:

The CERCLA and related regulations require on-site remedial actions to meet, or obtain waivers from, applicable or relevant and appropriate requirements. Since these requirements include NSR and PSD, and since Clean Air Act requirements have never been waived, the direct emissions from on-site remedial actions would not violate the NAAQS because they are subject to NSR and PSD review. Therefore, these actions are exempt.

The CERCLA and related regulations require off-site remedial actions to obtain Federal, State and local permits. Since this includes NSR and PSD, the direct emissions from off-site remedial actions would also not violate the NAAQS as described above. Therefore, these actions are exempt.

Direct emissions from removal actions are exempted from other environmental requirements by section 121(d)(2) of CERCLA, and therefore we are exempting them from conformity review. The EPA's long-standing interpretation of the Superfund statute has been that actions not specifically listed in section 121(d)(2) of CERCLA do not have to comply with any other Federal environmental laws. Removal actions are exempt generally, although by regulation EPA has required them to comply with the substantive requirements of such laws to the extent practicable. CERCLA allows EPA to make the judgment that implementing a CERCLA response may outweigh the need to comply strictly with other environmental requirements. To be consistent with this interpretation, EPA is exempting such CERCLA removal actions from the conformity requirements in those situations where EPA determines that compliance is not practicable based on the urgency or limited scope of the removal.

e. Federal land transfers. (1) Proposal. The proposal stated that the sale of land from a Federal agency was presumed to conform, § 51.853(d)(4). The EPA argued that land sales do not "support" subsequent emissions activity since they do not specifically approve, authorize or permit that activity. Furthermore, it was pointed out that imposing conditions on land sales could restrict the ability of State and local agencies to determine the land use for future activities which may follow in subsequent years.

(2) *Comments.* Many commenters objected to the presumption of conformity for Federal land transfers. Several groups indicated that Federal agencies must consider reasonably foreseeable use on the property to be transferred to ensure that known emissions will not endanger air quality. It was pointed out that most Federal agency land sales are accompanied by NEPA review and it is, therefore, appropriate to require conformity review for these actions. Specifically, it was said that EPA cannot argue that land sales do not cause subsequent emissions activities as a general matter, since it has already been illustrated by the proposed sale of Pease Air Force Base for commercial airport and development use that specific reuse activities can be identified and facilitated by a Federal land transfer.

On the other hand, support for the presumption of conformity for Federal land transfers was provided by several commenters. The main arguments were put forth by the Department of Defense (DOD), specifically as it related to military base closures and long-term leases. It was indicated that military departments do not "approve" reuse of the property. The sale of property

removes the action from the province of "Federal action" and the Federal agency has no continuing authority to control the private entities' future activities. The DOD stated that, "Although [they] will analyze the impacts from reasonably foreseeable reuse proposals, the zoning of the property that allows the specific proposed reuse is determined by the local zoning authority." Furthermore, they said:

> The purpose of the conformity requirement is to assure Federal agencies consult with state and local air quality districts to assure these regulatory authorities know about the expected impacts of Federal decisionmaking and can include expected emissions in their SIP emission budget. In a closure and reuse scenario, the future development plans of the community reuse group are known, approved, and supported by the local air regulators, subject of course to the reuse group meeting local air regulations for permits, mitigation, and so forth. When a community, working with local air regulators, has decided it desires to implement an economic recovery plan with associated air emissions and will adjust its emission budget to allow for such a plan, the rationale for locking DoD into conformity limitations is absent. Reuse is most appropriately a local decision, rather than a Federal decision, with local authorities evaluating the type of growth they want or need and adjusting their SIP allocations for new growth accordingly.

(3) *Response.* Under the exclusive definition of indirect emissions, Federal land transfers are unlikely to be covered since the Federal agency will not maintain authority over reuse activities on that land. Consequently, Federal land transfers are included in the regulatory list of actions that will not exceed the de minimis levels and thus are exempt from the final conformity rules.

f. Emergencies and transportation actions. (1) Proposal. Section 51.853, paragraph (d), proposed types of actions that would be presumed to conform (unless the Federal agency determines otherwise based on its own information or after reviewing any information presented to the Federal agency). Section 51.853, paragraph (d)(1), listed "temporary Federal actions in response to national emergencies." The proposal noted that this provision would cover Federal activities which require extremely quick action on the part of the Federal agencies involved. Where the timing of such Federal activities makes it impossible to meet the requirements of this rule, EPA indicated that it would be appropriate to presume conformity. Several examples are listed in the preamble to the proposal (58 FR 13843).

(2) *Comment.* One commenter stated that transportation projects should be exempt. Other commenters recommended that a broader set of emergencies should be covered and that an exemption is appropriate for such actions, including responses to natural disasters such as hurricanes and earthquakes.

(3) *Response.* As proposed, certain transportation projects are exempt from this rule as specified in § 51.853(a). Those actions are subject to the transportation conformity rule.

The EPA agrees that immediate responses to natural disasters such as hurricanes, earthquakes and similar events such as responses to terrorist acts, civil unrest, or military mobilizations should be exempt. The exemption is needed where a Federal agency cannot practicably complete a conformity analysis prior to taking actions in response to an emergency. Accordingly, a definition of "emergency" is contained in the final rule and the exemption is contained in § 51.853(d)(2). Additional examples of emergencies that are exempt from this rule are: emergencies under CERCLA, immediate responses to the release or discharge of oil or hazardous material in accordance with approved Spill Prevention and Response Plans or Spill Contingency Plans which are consistent with the requirements of the National Contingency Plan, and response to life- and property-threatening emergencies.

The rule is clarified to state that this provision includes continuing actions which are, in effect, commenced immediately after the emergency is determined and are not limited to "national" emergencies. This does not, however, include long-term Federal actions taken in response to such events unless, as required in § 51.853(e), the Federal agency makes a periodic determination that the emergency conditions still exist. In such cases it would be impractical for the Federal emergency actions to be delayed so that a conformity determination could be made. For purposes of this rule, immediate responses are actions commenced on the order of hours or days after the emergency is determined and long-term responses occur on the order of months or years thereafter.

g. Procurement requests. (1) Proposal. The preamble to the proposed rules discussed the need for emissions associated with the Federal action to be "reasonably foreseeable" at the time the conformity determination is required (58 FR 13839) and stated that an agency is not required to speculate or guess at indirect emissions which are conceivable but not actually identifiable. The preamble also indicated (58 FR 13840) that where it is impossible to accurately locate and quantify emissions and therefore impossible to accurately complete the air quality analysis, such emissions should not be considered "reasonably foreseeable." Further, the preamble stated that on-going programs or operations, such as certain permit renewal actions, that do not increase emissions over previous levels fall below the de minimis levels in the rule (58 FR 13842); that is, only emissions increases are counted toward the de minimis levels.

(2) Comment. Several commenters recommended that procurement actions by a Federal agency should not be covered by the conformity rules and that the annual cost of conformity analyses for the total of all such actions could be greater than $100 million. The commenters argued that most procurement actions should be viewed as a separate category of Federal activity for purposes of an environmental analysis. Procurement actions would merely implement the decision to conduct or carryout a policy, plan, program or project. The environmental analysis and thus the conformity determination would be made on the decision to go forward with the program or project, not on the follow-on procurement action.

(3) Response. The March 15, 1993 proposal was silent on the application of conformity requirements to procurement actions. Many comments were received on procurements and generally indicated that procurements should be exempt from the final conformity rule. However, the EPA believes that certain procurement actions may constitute Federal actions under the general conformity provisions. It is impossible at this time to resolve competing concerns regarding which procurement actions should be covered and which should be exempt since the existing record is inadequate. Therefore, the EPA will propose to cover certain procurements in a future rulemaking.

As noted, EPA intends to issue an NPR regarding attainment areas. The EPA intends to include in this proposal request for comment on exemptions for certain procurement actions which it believes would fit the de minimis criteria or result in emissions which are not reasonably foreseeable. The EPA believes the vast majority of procurement actions would be de minimis or not reasonably foreseeable. Given the complexity of Federal procurement and the government's desire to streamline procurement activities as discussed in the National

Performance Review[7], the EPA will seek comment on exemptions and the process for applying conformity to procurement activities.

h. Fugitive emissions. (1) Proposal. The total of direct and indirect emissions must be included in the conformity analyses.

(2) Comment. Some commenters alleged that fugitive emissions can neither be reasonably quantified nor efficiently controlled, and therefore believed that projects that generate fugitive emissions should be exempt. They noted that fugitive emissions generally are not considered under the Act under the NSR program.

(3) Response. Since fugitive emissions can cause violations of the NAAQS and since there are many techniques available to control such emissions, fugitive emissions are not exempt from the general conformity rules. The conformity rules consider the "total" emissions from a Federal action. Total consistency with the NSR program is not possible, in any event, since that program also excludes mobile source emissions from consideration, whereas the general conformity rule requires that they be considered.

i. Modeling. (1) Proposal. The rule proposed to exempt actions covered by new source review (paragraph (c)(1) of § 51.853).

(2) Comment. A commenter recommended that the rule exempt actions where the Federal agency performs an air quality analysis, for example, under State environmental statutory provisions.

(3) Response. The NSR exemption is based on an air quality analysis and the prohibition of emissions or actions that would cause or contribute to a NAAQS violation. An air quality analysis is not adequate by itself to justify an exemption from the conformity rules since it does not ensure that actions would be prohibited, as necessary to prevent a NAAQS violation.

j. Miscellaneous. (1) Proposal. The proposal specifically identifies very few activities that are presumed to conform, but establishes de minimis levels in § 51.853(b)(1). Federal agencies are also allowed to establish by rulemaking specific categories of actions which would be presumed to conform.

(2) Comment. Various comments were received which suggested adding exemptions to the rule, including:

(1) Non-hub or general aviation airports.

(2) Emergency generators.

(3) Prescribed burns that follow a State-approved smoke management plan.

(4) Actions consistent with an agency's pollution prevention plan.

(5) All Federal actions for which agencies have established categorical exclusions under NEPA.

(6) Projects that request section 7 consultation for threatened and endangered species from the U.S. Fish and Wildlife Service.

(7) Act Title V permits.

(8) Federal actions where the agency does not make a determination within a 30-day time period.

(3) Response. The EPA agrees with the intent of the commenters to avoid unnecessary conformity analyses, especially where the air quality impact is likely to be very small. The final rule lists several examples of de minimis actions. However, rather than attempting to list individually all of the potential de minimis actions, EPA has established the tons/year de minimis levels.

In addition, the final rule allows Federal agencies to establish their own presumptions of conformity through separate rulemaking actions, as proposed in § 51.853. This separate procedure is necessary since exemptions under NEPA or other statutes may not be appropriate as exemptions from the Act. That is, section 176(c) does not specifically exempt any activities and, thus, a separate analysis is needed to show that any activity to be presumed to conform has no air quality impacts. The final rule includes a provision in § 51.853, paragraph (g)(2), which allows a Federal agency to document that certain types of future actions would be de minimis; where similar actions have occurred in recent years, that experience should be the basis for the needed documentation.

A 30-day timeframe is unlikely to be adequate to complete a conformity analysis in many cases. The EPA expects the conformity analysis to be coupled with the NEPA analysis and, thus, not result in undue delays. Therefore, EPA is not providing any exemption for actions not completed within 30 days.

k. Case-by-case reevaluation. (1) Proposal. Federal agencies are allowed to establish by rulemaking specific categories of actions which would be presumed to conform. However, on a case-by-case basis, an action that is presumed to conform would be subject to a conformity determination where it is shown to the Federal agency that the particular action did not, in fact, conform [§ 51.853(h)].

(2) Comment. One commenter suggested that the rule should provide a mechanism for addressing cases where data generated from other sources, such as NEPA, indicates that the proposed Federal activity could result in a violation of the NAAQS; in such cases conformity cannot be presumed and further analysis should be required.

(3) Response. The EPA agrees that a category of Federal activity may be properly presumed to conform, but exceptions might be discovered where individual projects within the category should be subject to a conformity analysis. Section 51.853, paragraph (j), in the final rule, therefore, allows the presumption to be rebutted.

e. Research activities. (1) Proposal. The proposal identified research activities, where no environmental detriment is incurred, as actions that would be presumed to conform [§ 51.853(d)(2)].

(2) Comment. One commenter indicated that an environmental agency would be best suited to determine where an action would have no environmental detriment.

(3) Response. The EPA agrees and has revised the provision so that the final rule leaves the determination of environmental detriment to the State agency primarily responsible for the applicable SIP. The EPA also believes that this change provides adequate assurance that there will be no adverse air quality impact and, thus, the provision is an exemption under the final rule.

K. Applicability—Calculation

1. Proposal

In some cases, a Federal action may include several direct and indirect emission sources, only some of which are covered under § 51.853, paragraph (c). The preamble to the proposal indicated that the applicability calculation should include emissions that are presumed to conform (58 FR 13843), although the determination analysis should not.

2. Comment

A commenter objected to the preamble language, indicating that any emissions that are presumed to conform should not be part of the applicability calculation.

3. Response

The EPA agrees that the approach suggested by the commenter is the more logical approach. It is inappropriate to include for applicability purposes emissions as to which no conformity determination is required. Therefore,

[7] "Creating a government that works better and costs less," National Performance Review, 1993.

the final rule provides that emissions that are exempt or presumed to conform are not part of the definition of "total of direct and indirect emissions" and, thus are not required to be part of the applicability or determination analyses.

The final rule requires the inclusion of the total direct and indirect emissions in the applicability (§ 51.853) and conformity (§ 51.858) determinations, except the portion of emissions which are exempt or presumed to conform under § 51.853. For example, assume that a Federal action includes construction of a new industrial boiler (whose emissions are subject to preconstruction review and, thus, exempt) and a separate office building, and assume further that direct emissions from the boiler exceed the de minimis levels in § 51.853, but the direct and indirect emissions from the office building alone are less than the de minimis levels. In that case, the action, as a whole, would not exceed the de minimis levels and, therefore, would not need a conformity determination.

L. Reporting Requirements

1. Proposal

The proposed rule contains requirements for a Federal agency to notify EPA and the State and local air quality agencies of draft and final conformity determinations.

2. Comment

The EPA received comments suggesting that additional, early notification should be required, including notification of the Metropolitan Planning Organization (MPO) and affected Federal Land Manager (FLM).

3. Response

The proposal required notification of the State and local air agencies since their expertise should be sought when interpretation of the SIP is needed. The final rule also requires notification of the MPO and affected FLM's. The MPO needs to be involved and consulted where planning assumptions are at issue. Although the conformity determination is a Federal responsibility, the State and local agencies must, in some cases, provide important information. For example, the Federal agency would need to consult with the State and/or local agency to determine the status of an area's emissions budget or population projections. Therefore, the final rule includes these requirements.

In addition, Class I areas can be seriously affected by air emissions. It is therefore important that FLM's be able to be part of the decision-making process for Federal actions that have the potential to impact land under their jurisdiction. Consequently, § 51.855 was amended to require a Federal agency taking a Federal action that requires a conformity determination and that is within 100 km of a Class I area to consult with the affected FLM when the Federal action is proposed and to notify the FLM within 30 days of the draft conformity determination and again within 30 days of the final conformity determination. This 30-day timeframe is also consistent with the timeframe in the public participation requirements of the rule, as described in the following discussion.

M. Public Participation

1. Proposal

Under the proposed rule, Federal agencies making conformity determinations would be required to provide 45 days for written public comment prior to taking any formal action on a draft determination (§ 51.856). This period may be concurrent with any other public involvement, such as occurs in the NEPA process or as otherwise required by the Administrative Procedure Act (APA), where applicable.

In procedures that might extend beyond the usual NEPA process, conformity to a SIP must specifically involve the appropriate EPA Regional Office(s), State and local air quality agencies. The Federal agency must make available for review to all interested parties the draft determination and supporting materials which describe the analytical methods and conclusions relied upon in making the determination. The agency should provide, upon request, a description of significant assumptions, the source of data and assumptions not generated by the sponsoring agency, and a reconciliation of the estimates of population, employment, travel, and congestion with those currently in use in the air quality planning process.

2. Comment

The EPA received a wide range of comments on public participation. Many supported the EPA proposal. Some commenters thought that general conformity determinations should require rulemaking actions and notification in the **Federal Register**. Others felt that no public participation is necessary. It was also suggested that each Federal agency should define its own public participation requirements. One commenter wanted the general conformity rule to follow the public participation requirements outlined in the new transportation statute. Some commenters wanted to expand the requirements for public announcement of Federal agency determinations and a longer public comment period, while others wanted these requirements further restricted. It was pointed out that the 45-day comment period was inconsistent with the statutory requirements for shorter public comment periods of a number of Federal agencies.

Certain commenters asked EPA to clarify where the prominent advertisement is to be made. Another comment suggested that the advertisement should be in a "daily newspaper of general circulation."

Comments were also received suggesting that the State and local air agencies should have a concurrence role in the conformity analysis.

Several comments recommended that the NEPA requirements for public participation should be met at the same time as the conformity requirements in order to streamline the process and reduce any time and resource burdens.

3. Response

The final rule is revised somewhat to clarify the requirements of § 51.856 and to adjust the public comment period. A Federal agency is not required to maintain mailing lists and make information automatically available to those requesting to be on the list. Such a requirement could be unduly burdensome and unnecessary since those on the list would not necessarily review all the material automatically supplied. Thus, the rule requires only that the Federal agency respond to an information request which is related to a specific action. If information is requested of the Federal agency, it should be provided in a timely manner. The rule does not prohibit a Federal agency from voluntarily maintaining and responding to a mailing list.

In addition, the final rule is changed from the proposal to specify that information must be made available only in the case of a conformity determination under § 51.858. As described in the discussion on de minimis levels elsewhere in this preamble, no documentation is required by this rule for de minimis determinations under § 51.853 in order to avoid unreasonable administrative burdens on the Federal agencies. This approach is also consistent with the requirements in § 51.855 in the proposed and final rules which apply the reporting requirements only to conformity determinations under

§ 51.858, not to applicability analyses under § 51.853.

The procedures in the final rule provide 30-day opportunities for public participation at two points in the decision-making process: Where a draft conformity determination is being made and where a final conformity determination was made. These procedures allow the public the opportunity to examine information used in the applicability calculations and draft conformity determination, to question the draft determination, to review others' comments, and, after the final determination, to use legal means, if necessary, to influence the project. The change in the comment period from 45 to 30 days was made to comply with other specific statutory requirements for public comment that other Federal agencies must comply with. This change is consistent with the comment period provided for by NEPA (40 CFR 1507.3(d)).

The EPA believes this approach provides the most effective balance between the Act's (section 127) and APA's requirements for public notification and participation and the need to avoid procedures that are unnecessarily costly, time-consuming and burdensome to the Federal agencies affected. The EPA is authorized to establish public participation requirements under sections 176(c)(4)(B) and 301(a)(1) of the Act, and 30 days notice is a reasonable requirement. Since the Act does not require conformity determinations to be formal rulemaking actions, formal rulemaking is not required by this rule unless separately required under the APA.

The EPA does not agree that the State and local air agencies should have a concurrence role in the conformity analysis. Section 176(c) of the Act does not give EPA the authority to require such concurrence.

The EPA agrees that Federal agencies should consider meeting the conformity public participation requirements at the same time as the NEPA requirements. The final rule allows the concurrent process. However, in some cases, a Federal agency may have valid reasons to use different procedures; thus, the rule does not require a concurrent process. Further, in many cases, a NEPA analysis may not include a public participation process; therefore, the flexibility is clearly needed.

The EPA agrees that the prominent advertisement should be made in a local daily newspaper of general circulation. The rule includes this clarification (§ 51.856).

N. Emissions Budget

1. Proposal

Paragraph (a)(5)(i) provides that a Federal action conforms with the air quality criteria where emissions from the action, together with all other emissions in the attainment or nonattainment area, would not exceed the emissions budget contained in the applicable SIP. The SIP's are intended to accommodate growth, and where a project is demonstrated to conform to the approved air plan, the associated growth in emissions is appropriate. In order to determine the status of the emissions budget at any time, an accounting system is needed to track the many factors included in the total emissions over an area or subarea. The tracking needs to be consistent with the State's reasonable further progress (RFP) tracking and needs to account for source compliance with SIP limits, changes in emissions due to growth and other operational changes from minor and major new stationary sources, and emissions due to other economic growth. Paragraph (a)(5)(i) of § 51.858 allows a Federal agency to rely on a certification that the Federal action is consistent with the emissions budget. The certification may only be made by the State agency primarily responsible for developing and implementing the applicable SIP. That State agency could determine that emissions from a Federal action would not exceed the emissions budget specified in the applicable SIP.

2. Comment

A commenter suggested that EPA clarify which State agency is responsible for the applicable SIP and determines consistency with the SIP emission budget. One comment suggested that the Federal agency request a determination from the MPO and local air agency regarding the effect on the emission budget. Another commenter stated that under § 51.858, the State agency responsible for the applicable SIP must determine, in each case, whether emissions associated with the Federal action are within the emissions budget specified in the air plan. The commenter was concerned that this creates an unmanageable system whereby State agencies not otherwise involved with the project or the conformity assessment itself will be required to become familiar with the action at a late stage in the process, causing delays and confusion. One commenter suggested that EPA should assist States in making this determination.

3. Response

For the purpose of this rule, the State, regional or local agency, or combination of agencies, that is responsible for developing the attainment demonstration and tracking RFP is the entity that can certify consistency of Federal actions with the SIP emissions budget, unless some other agency/agencies is/are designated by the Governor of the State. Other agencies, including EPA, may not have sufficient information to make this determination. In addition, to assure that the State determination is well founded and that the public has an opportunity to review that determination, § 51.858(a)(5)(i)(A) requires the State to document its determination.

The conformity rules do not require the State to determine in each case whether emissions associated with a Federal action are within the emissions budget. This is an option that may be used by the Federal and the State agencies. The State agency is, however, required to be notified of any conformity determinations and, thus, could be expected to be familiar with the action.

The EPA also clarified the definition of emission budgets in the final rule. The EPA will issue further guidance regarding emission budgets in the near future. An emissions budget does not exist in all nonattainment areas. In many cases, however, the SIP attainment and maintenance demonstrations and/or RFP plans will be revised or established in the near future, consistent with the amended Act requirements. In these SIP provisions, emissions budgets will be established and may be used to determine conformity, as provided in the final rule.

O. Mitigation Measures

1. Proposal

If an action does not initially conform with the applicable SIP, then a plan for mitigation or for finding emissions offsets could be pursued. Emissions offsets are appropriate where an action (with or without mitigation measures) still results in emissions that do not otherwise conform to an applicable SIP. Mitigation measures, in contrast, reduce the potential impact of an action so that the action would result in fewer emissions. Assuming implementation of the mitigation measures, the conformity analysis (i.e., consistency with the emissions budget, air quality modeling, emission milestones, etc.) would consider a smaller amount of emissions associated with the action.

Any measures that are assumed to mitigate air quality impacts must be identified and the process for implementation and enforcement of such measures must be described. Under the proposal, it was indicated that if the Federal agency, other governmental agency, or private sponsor of the project failed to implement the mitigation measures committed to and found necessary in the conformity determination, then the conformity determination automatically became invalid and resulted in the revocation of all permits, approvals, and licenses originally supported by that conformity determination. This revocation would result in the need for a new conformity determination.

Mitigation measures should generally be included by the Federal agency in enforceable documents such as permit conditions. Mitigation measures may need to be revised due to unforeseen circumstances that may arise as the action and/or related activity is completed. Where the revised mitigation measures are subject to public review and it is demonstrated that the revised measures continue to support the conformity determination, such revision would be acceptable.

The proposal indicated that States may choose to make mitigation measures committed to by a project sponsor as part of a conformity determination automatically enforceable through the SIP. One possible mechanism for incorporating mitigation measures into the SIP is for States to include a generic provision in their conformity SIP's adopting in advance and incorporating by reference the mitigation measures identified as necessary for making a conformity determination.

2. Comments

One commenter stated that the automatic revocation of the conformity determination is not an enforceable mechanism and injects too much uncertainty into the overall program.

Another commenter recommended that minor changes in mitigation measures which do not increase emissions should not need public comment.

Several comments suggested that SIP's should be required to include a generic enforcement provision, similar to other permit programs. Such a provision could make enforceable any conditions made pursuant to the SIP conformity rule and needed to show an action conforms.

A comment raised the concern that direct enforcement against non-Federal parties could violate the prohibition against indirect source review programs in section 110(a)(5).

One commenter stated that local air agencies could provide the Federal agency with suggested mitigation measures to offset the project related emissions.

Another commenter suggested that a community, working with local air agencies, could decide to adjust its emission budget to allow for a specific Federal action.

3. Response

The EPA agrees that automatic revocation is not an appropriate or enforceable mechanism. Therefore, the proposed § 51.860(c) does not appear in the final rule. Second, EPA agrees that a generic enforcement provision in the SIP is needed for mitigation agreements. Therefore, the final rule includes the requirements in § 51.860 (b)–(f) which indicate that States must adopt a generic enforcement provision which will make any agreements, including mitigation measures, necessary for a conformity determination both State and federally enforceable. Section 51.860(a) is also revised to indicate that a funding commitment is not needed in all cases.

The final rule includes the provision in § 51.860(b) of the proposal which requires any licenses, permits or approvals of the action to be conditioned on the governmental or private entity meeting the mitigation measures necessary for the conformity determination. This provision is renumbered in the final rule as § 51.860(d).

In addition to requiring in § 51.860(b) and (d) that written commitments and conditions to mitigation measures be obtained from project sponsors prior to making a positive conformity determination, § 51.860(c) and (f) of the final rule require that project sponsors comply with such commitments and conditions once made. Consistent with these provisions, § 51.858(d) provides that the analysis, which results in a conformity determination or identifies mitigation necessary for a conformity determination, must be completed before the conformity determination is made. Pursuant to these final rules issued under Title I of the Act, EPA can enforce mitigation commitments and conditions directly against project sponsors under section 113 of the Act, which authorizes EPA to enforce the provisions of rules promulgated under the Act.

As provided in § 51.860(g), once a State revises its SIP to adopt the Federal general conformity rule and EPA approves that revision, then any agreements or commitments, including mitigation measures, necessary for a conformity determination will be both State and federally enforceable. In addition, after EPA approves that SIP revision, citizens can enforce against responsible parties for violations of SIP requirements under section 304 of the Act.[8]

The concern was raised to EPA that direct enforcement against non-Federal parties could violate the prohibition against indirect source review programs in section 110(a)(5). However, EPA concludes that this prohibition is not relevant to the requirement that project sponsors comply with mitigation commitments. The EPA is not promulgating a generally applicable requirement for review of all indirect sources. Rather, EPA is enabling Federal agencies to make positive conformity determinations under section 176(c) based on voluntary commitments by project sponsors to complete mitigation measures. Project sponsors are not obligated to make such commitments. Where they volunteer to do so to facilitate Federal conformity determinations, EPA is requiring them to live up to such commitments. Without such a requirement, EPA could not allow positive conformity determinations based on mitigation measures prior to actual construction of mitigation measures.

The EPA does not agree certain changes in mitigation measures should avoid the public participation requirements. The determination that a change is a "minor" change or the calculation that there is no emissions increase may be subject to considerable judgment. As such there is a need for public participation. Section 51.860(e) reflects this provision.

As mentioned previously and as provided in § 51.858(a)(5)(i) of the final rule, EPA agrees that the State and local air agencies can play an important role in the conformity process. These agencies can provide the Federal agency with suggested mitigation measures to offset the project related emissions. The Federal agencies can take such a list and work with the local planning and regulatory agencies to effect necessary emissions reductions.

[8] Currently, the sponsors of any projects which are subject to Federal programs identified in the SIP, e.g., NSR permits and PSD requirements, are subject to State and Federal enforcement actions if applicable procedures and permit conditions are not followed. Project sponsors of Federal actions requiring a conformity determination will be subject to similar enforcement actions if they fail to implement mitigation measures prescribed by the approved SIP revision. Enforceability through the SIP will apply to all parties who agree to mitigate direct and indirect emissions associated with a Federal action for a conformity determination.

In addition, EPA agrees that a Federal action should proceed where the State and/or local air agencies decide to revise the SIP to accommodate the action. As provided in § 51.858(a)(5)(i) of the final rule, EPA agrees that a mechanism is needed to allow the action to proceed under certain circumstances. This approach is consistent with the congressional desire to assure that State plans are not undermined by Federal actions; thus, where the State voluntarily commits to revise its SIP so that a Federal action conforms, that action would not undermine the State's decision-making ability and should be allowed to conform. The State may make a commitment to regulate or mitigate emissions from sources not under the Federal agency's control (i.e., commit to revise its SIP) to allow a Federal action to proceed that otherwise would not conform. The commitment must be made by the Governor or Governor's designee for submitting SIP revisions and must provide for revision of the SIP so that emissions from the Federal action would conform to the SIP emission budget in a time period consistent with the time that emissions from a Federal action would occur.

This provision could apply, where the total of direct and indirect emissions from the action are determined by the State agency responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed an emissions budget specified in the applicable SIP. In such cases, the State Governor or the Governor's designee for submitting SIP actions would make a written commitment to EPA which would have to include the following:

(1) A specific schedule for adoption and submittal of a revision to the SIP which would achieve the needed emissions reductions prior to the time emissions from the Federal action would occur;

(2) Identification of specific measures for incorporation into the SIP which would result in a level of emissions which, together with all other emissions in the nonattainment or maintenance area, would not exceed any emissions budget specified in the applicable SIP;

(3) A demonstration that all existing applicable SIP requirements are being implemented in the area and for the pollutants affected by the Federal action, and that local authority to implement additional requirements has been fully pursued;

(4) Assurances that the responsible Federal agencies have required all reasonable mitigation measures associated with their action; and

(5) Written documentation including all air quality analyses supporting the conformity determination.

In order to assure that the commitment to revise the SIP is enforceable, the final rule also provides that where a Federal agency made a conformity determination based on a State commitment under paragraph (a)(5)(i)(B) of § 51.858, such a State commitment is automatically deemed a call for a SIP revision by EPA under section 110(k)(5) of the Act based on the inadequacy of the applicable SIP in light of the positive conformity finding. Should EPA find that the State failed to satisfy the commitment, sanctions under section 179 of the Act would apply for failure to respond to the SIP call. The EPA here determines that where the State commitment is automatically deemed a SIP call, the State must respond to that SIP call within 18 months from the time the State commitment is made, or by such earlier time, if any, that the State commits to revise the SIP.

P. EPA and State Review Role

1. Proposal

The proposal indicated that the Federal agency must give EPA, State and local air agencies, and relevant Federal agencies a 45-day notice about the proposed Federal action and draft conformity determination, and notify these same agencies within 45 days of its final conformity determination (§ 51.855). The State agency is responsible for determining if the total direct and indirect emissions from the action are within the emissions budget specified in the applicable SIP (§ 51.858).

2. Comments

The EPA received several different comments on the respective roles and responsibilities for local, State, and Federal air agencies. Some commenters felt that EPA should be responsible for approving or disapproving all conformity determinations. Others felt this authority should rest with the State, while some wanted the MPO to have a veto on conformity determinations. A number of commenters wanted a lead agency designated (similar to that in the NEPA process) that would coordinate the conformity decision-making process or have authority to make a conformity determination in cases where multiple Federal agencies were involved in a Federal action.

3. Response

The consultation procedures outlined in the proposal requiring consultation with EPA, State and local air agencies, and relevant Federal agencies are contained in the final rule (§ 51.855 and § 51.858). The 45-day notification period was changed to 30 days to be consistent with the public participation requirements. Section 176(c) states that each Federal agency is responsible for making its own conformity determination. The EPA cannot remove that authority from the Federal agency and assign it elsewhere, as suggested by some commenters.

The State air agency does have an active role in the conformity determination, however, since the State indicates whether the action falls within the SIP emissions budget. Furthermore, if the emissions from the Federal activity exceed the emissions budget and cannot be offset by other activities under the Federal agency's control, then the State agencies have the option of mitigating emissions from sources not under Federal control. In this case, without the State agencies' agreement to revise the SIP to include such mitigation measures, the project would not conform. Consequently, EPA believes the consultation procedures described in the conformity rule will ensure accountability of the Federal action to the State and EPA, while giving the ultimate authority and responsibility to the Federal Agency as intended by section 176(c).

IV. Discussion of Other Issues and Response to Comments

A. 40 CFR Part 93

1. Proposal

The part 93 provisions apply as soon as the final rule becomes effective. The part 51 provisions direct States to revise their SIPs to incorporate the conformity requirements within 12 months after promulgation of this rule (§ 51.851(a)).

2. Comment

One commenter recommended that the rule provide specific guidance concerning conformity determinations in the absence of an approved SIP.

3. Response

As described in the proposal, the part 93 provisions apply until EPA approves the conformity SIP revision submitted by the State (§ 51.851(b)). An applicable SIP is currently in place for all areas and should be used for conformity purposes.

B. SIP Revision—Deadline

1. Proposal

Although the statute specifies that EPA should require States to submit their conformity SIP revisions by November 15, 1992, the congressional intent was also that EPA would have promulgated final conformity rules by November 15, 1991. In light of the delay in EPA promulgation of these rules, it is now clearly impossible for States to submit conformity SIP's by November 15, 1992. Therefore, EPA requires States to revise their SIP's within 1 year after the date of publication of the conformity rule. This approach is consistent with the congressional intent to provide States with a 1-year timeframe to complete their rulemaking once EPA had established the Federal criteria and procedures for conformity determinations.

2. Comment

Several commenters supported the 1-year timeframe as being consistent with congressional intent. One commenter suggested 18 months. Another commenter recommended that the SIP revision be required as soon as possible and that those revisions should be due not later than March 15, 1994. The EPA also received comments requesting clarification as to which agency is to submit the SIP revision.

3. Response

The final rule incorporates a 1-year timeframe since that represents an expeditious schedule for the State agencies and since this timeframe is consistent with congressional intent, considering the actual date of final Federal rulemaking. The SIP revision must be submitted by the Governor or Governor's designee responsible for submitting SIP revisions. Responsibility for implementing the conformity rule itself should fall to the primary agency responsible for implementing the SIP, usually the State air quality agency.

If a State does not revise its SIP within the 12 months following Federal Register publication of the final general conformity rule, then EPA will make a finding of failure to submit the revision, which would start the sanctions clock. Since, in this case, the State would not have a revised SIP and also would not have adopted the general conformity regulation, any conformity determinations made prior to State adoption and EPA approval of the SIP revision would be subject to the Federal rule and Federal enforceability procedures.

In addition, the rule is clarified with respect to application in areas newly designated as nonattainment. In such cases, the requirement for the State SIP revision by 12 months after publication of the general conformity rule could be unreasonable. Therefore, the rule provides that a State must revise its SIP to include the general conformity provisions within 12 months of an area's redesignation to nonattainment. The EPA general conformity rule would apply in any interim period.

C. SIP Revision—General Conformity

1. Proposal

As described in the proposal, EPA believes that section 176(c)(4)(A) and (C) of the Act clearly require EPA to promulgate criteria and procedures for determining conformity for both general and transportation activities (58 FR 13838) and to require States to submit SIP revisions including conformity criteria and procedures for both types of activities.

2. Comment

Certain commenters disagreed with EPA's interpretation of section 176(c)(4) of the Act, arguing that SIP revisions should be required only for transportation activities. However, no new information was provided by the commenters.

3. Response

For the reasons described in full in the proposal, EPA continues to believe that a SIP revision is required for general conformity by section 176(c)(4)(C) of the Act.

D. Federal Actions—Miscellaneous

1. Proposal

The description of a "Federal action" is set out in the preamble (58 FR 13838) and in the regulatory portion (definitions) of the proposal notice.

2. Comment

One commenter requested EPA to clarify that a renewal of an existing permit or approval does not give rise to a new conformity requirement, assuming the renewal does not materially alter the type or amount of emissions associated with the originally permitted activity.

Some commenters requested that the NPDES actions should all be required to undergo a conformity analysis and others supported the proposal which calls for a conformity analysis where it is an EPA-issued NPDES permit, but not where it is a State-issued permit under a delegated NPDES program.

One commenter stated that Federal actions should include certain actions taken by State or regional non-Federal agencies.

3. Response

As described in section III.G., the definition of "Federal action" in the final rule is changed from the description in the proposal notice (58 FR 13838) in order to clarify its meaning. The following responses cover additional concerns regarding this term.

While section 176(c)(2) of the Act may be interpreted to impose certain obligations on non-Federal actions under the transportation conformity provisions, the same interpretation does not apply for general conformity (such as State-issued NPDES permits) since the relevant statutory language is different.

Section 176(c)(1) does not impose any obligations on non-Federal parties other than MPO's. Thus, EPA cannot require non-Federal actions to make conformity determinations under the general conformity rule. Where a State is taking an independent action without Federal support, even under an EPA approved program such as a State NPDES program, there is no Federal action subject to these rules. On the other hand, where a Federal agency delegates its responsibility to take certain actions to a State or local agency, as in the case of certain block grants under Housing and Urban Development programs or Federal NPDES programs, the action remains a Federal action and the State must make a conformity determination on the Federal agency's behalf.

The EPA agrees that permit renewal actions or any action that does not increase emissions, would be exempt from the conformity rule and is so stipulated in § 51.853(c)(2)(ii).

E. Applicable Implementation Plan

1. Proposal

"Applicable implementation plan" is defined as the most recent EPA-approved or promulgated SIP (58 FR 13849).

2. Comment

The EPA received comments suggesting that the conformity determinations should be based on the most recent SIP revisions submitted by the State, even if EPA has not approved them, until such revisions are superseded by a more recent State submittal or by a Federal implementation plan (FIP); basing conformity determinations on outdated and inadequate SIP's is "very unproductive." Other comments suggested that actions in regions that do not have an approved SIP should be exempt from conformity.

Certain commenters noted that Congress included explicit interim conformity requirements for transportation plans, programs and projects, but provided no comparable language for other Federal actions. These commenters suggested that, absent a newly-revised SIP, it is not possible for a Federal agency to assess conformity or whether the project will delay timely attainment of any standard or other milestones.

3. Response

The language of section 176(c) refers to conformity "to an implementation plan approved or promulgated under section 110." The plain language of the statute does not allow the flexibility suggested by the commenter.

The applicable SIP is updated by the State as necessary to meet the Act requirements. In addition, EPA takes action to approve, disapprove, or promulgate revisions to the SIP. While portions of an applicable SIP might be disapproved in certain areas of the country, the approved portion that remains constitutes the applicable SIP; i.e., an applicable SIP exists in all regions upon which to determine conformity. Section 110(n) of the amended Act preserves the applicability of previously approved SIP's. Prior to the newly-revised SIP, there might not be any SIP milestones to consider, simplifying the conformity determination.

Unlike the transportation conformity rule which primarily relies on the SIP emissions budget, the general conformity rule provides several means to determine conformity, some of which do not require a newly-revised SIP (i.e., post-1990) and accompanying attainment demonstration, milestones and emissions budget. As described in § 51.858 of the proposal, general conformity can be demonstrated by air quality modeling, obtaining emissions offsets, or determining that the action does not increase emissions with respect to the baseline emissions. Thus, the obligation to determine that Federal actions will not cause or contribute to NAAQS violations under section 176(c)(1)(B) applies even where recent SIP revisions have not been submitted or approved.

F. Increase the Frequency or Severity

1. Proposal

"Increase the frequency or severity" means to cause a location or region to exceed a standard more often or to cause a violation at a greater concentration. "A greater concentration" could be taken to mean any value numerically greater than previously existed. In the case of monitored ozone data, measurements are made in parts per million to only two significant figures. In the case of modeled data, if results are reported to three significant figures, then a difference in the third significant figure is considered to be a difference for purposes of conformity determinations.

2. Comment

A commenter stated that, given the limitations of current air quality models, it seems unrealistic to deal with such a level of significance in considering "increases in the frequency or severity" of existing air quality violations. Another commenter stated that it will be virtually impossible to meet this requirement.

3. Response

The distinction between significant figures in measured and modeled numbers is made in order to be consistent with current EPA guidance for interpretation of measured and modeled air quality data. Since emissions in nonattainment areas are generally decreasing, the ambient concentrations should also be decreasing. Thus, it would not be impossible to show an action does not increase the frequency or severity of existing air quality violations.

G. Maintenance Area

1. Proposal

Maintenance area means an area with a maintenance plan approved under section 175A of the Act (§ 51.852).

2. Comment

The EPA received comments asking for clarification of the definition, specifically wanting to know if this definition includes all maintenance areas as designated under both the 1977 and 1990 amendments to the Act.

3. Response

The definition includes only those areas that were redesignated from nonattainment to attainment (i.e., maintenance areas) after the 1990 amendments to the Act.

H. Offsets

1. Proposal

The proposal refers to emission offsets in § 51.858.

2. Comment

One commenter requested EPA to clarify that offsets must go beyond those reductions necessary for attainment of the NAAQS.

3. Response

Emission offsets are an integral part of the air program, especially within the NSR program. The final conformity rule includes a definition of offsets which is consistent with EPA guidance regarding the use and restrictions for offsets. This definition is intended to assure that offsets within the air programs are calculated and credited consistently and that the term is used the same in the conformity rules as in the EPA NSR program. All offsets must, therefore, be quantifiable, consistent with the applicable SIP attainment and RFP demonstrations, surplus to reductions required by, and credited to, other applicable SIP provisions, enforceable at both the State and Federal levels, and permanent within the timeframe specified by the program.

I. Definitions—Miscellaneous

1. Proposal

Certain terms described below were not defined in the proposal.

2. Comment

The EPA received general comments requesting the rule to be clear.

3. Response

The EPA added or removed definitions of the following terms in the rule in order to clarify the requirements:

(1) "Administrator" was deleted since the term is not used in the rule.

(2) In the definition of "Applicable SIP," the sentence in the proposal referring to maintenance plans does not appear in the final rule because it does not change the meaning of the definition and "maintenance plan" is defined elsewhere in the rule.

(3) The definition of "Milestone" is clarified with respect to PM–10 by referencing section 189(c)(1) of the Act.

(4) The definition of "Metropolitan Planning Organization" is revised to be consistent with the definition in the transportation conformity rule.

(5) "Nonattainment Area" is clarified to refer to areas designated as nonattainment under section 107.

J. Conformity Determination

1. Proposal

In some cases, multiple Federal agencies may need to make a conformity determination for a related project. A Federal agency may either conduct its own conformity air quality analysis or adopt the analysis of another agency, for example, the lead NEPA agency. A Federal agency must always make its own conformity determination. Allowing each Federal agency with responsibility for making a conformity

determination to develop its own analysis or adopt that of another Federal agency, gives flexibility to the Federal agency and fulfills the agency's responsibility for making a conformity determination. A Federal agency retains the ability to conduct its own air analysis or use that of another Federal agency and make its own conformity decision. If an agency, due to one of its analyses, determines that the project does not conform, then it may not make a positive conformity determination. If there are differing conformity determinations for a Federal action by several Federal agencies involved, the respective agencies would have to reconcile their differences before the entire project could proceed.

If another Federal agency disagrees with a Federal agency's conformity determination, but does not itself have jurisdiction for the Federal action, then the Federal agency should provide written comments to the Federal agency with jurisdiction. The Federal agency with jurisdiction is required to consider the comments of other interested agencies under the proposed rules.

2. Comments

A number of commenters supported the procedures outlined in the proposal. One commenter suggested that the general conformity rule use the same interagency coordination procedures as those in the new transportation statute. Some commenters felt that a lead agency, similar to that used in NEPA, should have responsibility for the conformity determination; one commenter suggested the lead agency should be the one with continuing authority over the project.

3. Response

The final rule requires that each Federal agency be responsible for making its own conformity determination as described in § 51.854. The rationale for this is explained in the response to comments on the EPA and State review roles. Because section 176(c) indicates that each Federal agency is responsible for making its own conformity determination, EPA cannot remove that authority from the Federal agency and assign it elsewhere. Although the general conformity rule does not specifically identify a lead agency, coordination of conformity determinations will be necessary because all Federal agencies with jurisdiction over the project will have to make a positive conformity finding for the project to proceed. Therefore, differences among Federal agencies will have to be resolved through consultation among those agencies. The EPA is not mandating formalized consultation and dispute resolution procedures, but rather leaves this to the discretion of the Federal agencies involved to allow for greater flexibility.

K. Air Quality Related Values (AQRV's)

1. Proposal

The proposal did not specifically address AQRV's.

2. Comment

One commenter stated that conformity should be applied broadly, so that Federal actions will not adversely affect the AQRV's of protected Federal lands.

3. Response

To the degree that a SIP includes requirements related to AQRV's, a Federal action would need to conform to those SIP provisions. The EPA believes that section 176(c) of the Act is intended to protect the NAAQS and the SIP. Section 176(c)(1)(A) and (B) define conformity, and do not include reference to any parameters beyond SIP requirements and NAAQS. Thus, the conformity rule does not require the conformity analysis to cover values other than the NAAQS, unless they are specifically contained in the SIP. For example, if a SIP contains PSD requirements, a Federal action must conform to those requirements to the extent they apply; in general, actions subject to PSD would not need a conformity analysis since the stationary source emissions would be exempt under § 51.853(c)(1) or § 51.853(b)(1) and any vehicle emissions associated with the action would not usually be subject to the PSD requirements.

L. Frequency of Conformity Determinations

1. Proposal

A conformity determination expires if the action is not taken in a reasonable time period (58 FR 13844). The EPA believes that conformity determinations should not be valid indefinitely, since the environment surrounding the proposed action will change over time.

The EPA proposed that the conformity status of a general Federal action automatically lapses 5 years from the date of the initial determination if the Federal action has not been completed or if a continuous program has not been commenced to implement that Federal action in a reasonable time. "Commenced" as used here has the same general meaning as used in the PSD program (40 CFR 51.166).

2. Comment

The EPA received comments both supporting and criticizing the 5-year period and other comments suggesting a 3-year period to be consistent with the transportation rule. One commenter suggested that a "continuous program" of on-site construction includes design and engineering work.

3. Response

The 5-year timeframe for conformity determinations, as described in the NPR, is contained in the final rule. The 3-year timeframe for the transportation conformity rule is specified in section 176(c)(4)(B)(ii) of the Act. However, there is no similar specification in section 176(c) for the frequency of general conformity determinations. After extensive consultation with the Federal agencies and review of the comments, EPA has decided to keep the 5-year renewal timeframe for general conformity decisions because it is consistent with the renewal frequency of NEPA decisions rather than the 3-year timeframe required for transportation conformity. Consistency with NEPA is important in order to allow Federal agencies to incorporate the new conformity procedures within their existing NEPA procedures. Most general conformity actions also need NEPA analyses, but would not need transportation conformity decisions.

The EPA agrees that a continuous program of on-site construction may include design and engineering work. Where on-site construction has been commenced and meaningful design and engineering work is continuing, this represents the kind of commitment to an action which should not be jeopardized by expiration of a previous conformity determination.

The rule is clarified in § 51.857(a) to refer to the "date a final conformity determination is reported under § 51.855." This replaces the phrase the "date of the initial conformity determination" since it is clearer. The rule is also clarified in § 51.857(b) to replace the vague phrase "the scope of the project" with "the scope of the final conformity determination reported under § 51.855." The final rule also contains a provision in § 51.857(c) which clarifies that actions which are taken subsequent to a conformity determination must be consistent with the basis of that determination.

M. Tiering

1. Proposal

The EPA proposed that Federal agencies could use the concept of tiering and analyze actions in a staged manner

(§ 51.858, paragraph (d)]. Tiering would not be acceptable for purposes of determining applicability (§ 51.853), however, since that approach might have undermined the rule if agencies chose to narrowly define their actions as separate activities for purposes of determining applicability.

2. Comments

A few commenters supported the use of tiering for conformity decisions and pointed out that it gives the Federal agency needed flexibility in planning. Many other commenters were opposed to conditioning long-term conformity decisions. Some opposed tiering because conditional findings create uncertainty, making it difficult for developers and lenders to justify investment in long-term projects. Others were against it because they felt it could result in a misleading conclusion that a meaningful analytical judgment has been made and that it would invite conflict between investment-backed expectations and the protection of public health.

3. Response

The EPA agrees with the commenters who stated that tiering would create too much uncertainty in the conformity determination process. Furthermore, it was thought that tiering could cause the segmentation of projects for conformity analyses, which might provide an inaccurate estimate of overall emissions. The segmentation of projects for conformity analyses when emissions are reasonably foreseeable is not permitted by this rule. Thus, the tiering provision is not included in the final rule. A full conformity determination on all aspects of an activity must be completed before any portion of the activity is commenced.

N. Applicability—Regionally Significant Actions

1. Proposal

The EPA proposed the concept of "regionally significant actions," to capture those actions that fall below the de minimis emission levels, but have the potential to impact the air quality of a region. When the emissions impact from a Federal action does not exceed the tons per year cutoff for a Federal action otherwise requiring a conformity determination, but the total direct and indirect emissions from the Federal action represent 10 percent or more of a nonattainment area's total emissions for that pollutant, the action is defined by the proposed regulations as a regionally significant action and must go through a full conformity analysis (§ 51.853(g)).

2. Comment

Many commenters supported the concept of regionally significant actions and believed that conformity determinations should be required for them. However, there was diverse opinion on the most appropriate level to define a regionally significant action; some commenters felt 10 percent of a nonattainment area's emissions for a pollutant to be too high, while others felt it was too low. However, no commenters provided specific documentation to support a different number. There were also some commenters who felt the entire concept of regional significance to be inappropriate and that the de minimis cut-offs should suffice for conformity applicability requirements.

3. Response

EPA is maintaining the requirement of conformity determinations for regionally significant actions in the final rule as defined in § 51.853 of the NPR. The rationale is explained in the preamble to the NPR (58 FR 13842). The EPA specifically invited comments and documentation on whether 10 percent was an appropriate significance level or whether some other percentage should be set. In view of the fact that documentation for more appropriate significance levels was not provided by the commenters, the 10 percent level of significance is used. In addition, the rule is clarified to indicate that the requirements of §§ 51.850 and 51.855 through 51.860 apply to regionally significant actions.

O. Applicability—NAAQS Precursors

1. Proposal

The PM–10 precursor pollutants should be included in the conformity analyses where the applicable SIP's control strategy requires reductions in such precursor pollutants. For ozone, emissions of NOx and VOC must be considered for purposes of both applicability and analysis. However, where an area received an exemption from NOx requirements under section 182(f) of the Act or the control strategy in the approved maintenance plan does not include NOx control measures, only VOC emissions need to be considered (58 FR 13847).

2. Comment

Commenters indicated that analysis of PM–10 precursors should be required to satisfy the provision of section 176(c)(1)(B)(i) that Federal activities must not contribute to any new violation of any standard in any area. Another commenter indicated that the rule should consider the regional impact of NOx emissions compared to VOC emissions.

3. Response

Section 189(e) of the Act provides that applicable control requirements under PM–10 nonattainment area SIP's in effect for major stationary sources of PM–10 are also applicable to major stationary sources of PM–10 precursors, except where EPA determines that the sources of PM–10 precursors do not contribute significantly to PM–10 levels which exceed the PM–10 NAAQS in the area. Consistent with this evidence of congressional intent, the final conformity rule requires the inclusion of PM–10 precursors in conformity analyses where they are a significant contributor to the PM–10 levels in the PM–10 nonattainment area SIP. The significant contribution may be from major stationary sources as well as other types of sources.

In contrast, the Act specifically requires reductions in emissions of both NOx and VOC to meet the ozone standard. Only where there is a demonstration consistent with the requirements of section 182(f) and EPA approves the demonstration are the NOx reductions not required. Thus, the conformity rule provides for the consideration of the regional impact of NOx emissions in ozone nonattainment and maintenance areas, as described in the proposal.

The final rule includes a definition of the phrase "precursors of a criteria pollutant." This definition incorporates the concerns described above. A definition of "total of direct and indirect emissions" is added to the final rule, as discussed elsewhere in this preamble, and includes the phrase "emissions of precursors of criteria pollutants" in order to incorporate this concept into the final rule.

P. Attainment Demonstration

1. Proposal

Paragraph (a)(1) of § 51.858 provides that a Federal action conforms if emissions from the action are "specifically identified and accounted for" in the applicable SIP's attainment or maintenance demonstration.

2. Comment

A commenter suggested that a Federal action should be determined to conform where the total emissions from the Federal action are "consistent with" the projected levels of emissions inventory forecasts in the applicable SIP attainment demonstration.

3. Response

The EPA believes that the language proposed in § 51.858(a)(1) is appropriate. Specificity is needed in order to avoid letting this provision become a significant loophole, open to varying interpretations. On the other hand, the emissions budget provision in § 51.858(a)(5)(i) provides a mechanism similar to that suggested by the commenter.

Q. Transportation Conformity

1. Proposal

Section 51.858(a)(5)(ii) provides that a Federal action that is specifically included in a conforming transportation plan, would be determined to conform.

2. Comment

One commenter stated that the MPO should be involved in determining when a project is specifically included in a transportation plan.

3. Response

The final rule is clarified to indicate that the MPO must determine that an action is "specifically included" in a conforming plan since the MPO is likely to be better qualified to make that interpretation than the Federal agency making the conformity determination. The rule is also clarified to state that a conforming plan refers to a transportation plan and transportation improvement program which have been found to conform under 40 CFR part 51 or part 93.

R. Baseline Emissions

1. Proposal

Where EPA has not approved a revision to the relevant SIP attainment or maintenance demonstration since 1990, a Federal action may be determined to conform if emissions from the action do not increase emissions with respect to the baseline emissions (paragraph (d) of § 51.858).

2. Comment

A commenter suggested that the rule or preamble should clarify that Federal agencies may use the latest emissions inventory available from State and local agencies in gauging the baseline. Further, conformity determinations based on such inventories should remain valid, and not be re-analyzed when a new inventory is complete.

Another commenter stated that it is not appropriate for areas which were designated nonattainment before the 1990 amendments to the Act to use a year before 1990 as the baseline. Such areas are required to submit 1990 emission inventories. For areas designated nonattainment after the 1990 amendments to the Act, the approach to establishing baselines in the proposal may be appropriate.

One commenter pointed out that using 1990 as a baseline is inappropriate in many cases since many Federal actions related to the military took place at the time of Desert Storm. As an alternative they suggest the rule allow use of a baseline established from the highest estimated emissions over a 3-year period from 1989–91. Regarding military base closure actions, one commenter stated that the baseline emissions should be the preclosure announcement baseline operating conditions. This approach does not alter the emissions budget that would have existed if a base continued to operate. Such emissions were contained in the existing and future emissions inventory numbers being used by the South Coast Air Quality Management District in its 1989 air quality plan. This should be the emissions budget used to make the conformity determination for that District.

The EPA also received a comment stating that if 1990 emissions inventory levels are used as a baseline, it is important that some type of "credit" be given to a Federal agency that is required to make a conformity determination with respect to an airport related improvement or modification project at an airport that has already implemented significant emission reduction measures prior to 1990. This credit could be made by increasing the de minimis amount for certain airport actions.

Several commenters requested clarification on how to calculate the baseline emissions. One commenter recommended that the comparison should be between the "action" versus "no action" and not between the "action" and "1990 base."

3. Response

The baseline calculation is discussed in the proposal (58 FR 13846) and specifies calendar year 1990 or an alternate time period, consistent with the time period used to designate or classify the area in 40 CFR part 81. Use of the "latest emission inventory" should, in many cases, coincide with use of the 1990 inventory since the 1990 amendments to the Act required all ozone nonattainment areas to develop a 1990 inventory. For PM–10, the Act also required an emissions inventory. But, for the initial PM–10 areas designated nonattainment as of enactment, the inventories are generally for 1 of the calendar years in the mid- to late-1980's.

The approach in the final rule uses 1990, which is the baseline year specified in the Act from which to measure progress toward attainment, the PM–10 emissions inventory years (not specifically included in the proposed rule), or the designation/classification time period, which is representative of emission levels that must be reduced in order to provide for attainment. Use of more recent emissions inventories may not be appropriate since such inventories might not be representative of the full extent of the emissions associated with the air quality problem.

The EPA sees no basis for the rule to select certain activities for "credit" due to previously implemented emission reduction measures, whether at airports or military bases. Such decisions reside with the State when the control strategy and emissions budget are developed. Since the final rule allows use of the years other than 1990 where appropriate, it could, in effect, provide some of the "credit" the commenter is suggesting in some cases.

As described in the proposal, baseline emissions are defined as the total of direct and indirect emissions that are estimated to have occurred during calendar year 1990 or an alternate period based on the classification or designation as promulgated in 40 CFR part 81. The proposed rule intended to provide for a positive conformity determination if the future use of the area resulted in equal or less emissions. However, the proposal did not take into account that any motor vehicle emission activities occurring in the baseline year would, in fact, emit less in the future year scenario (at the same, historic activity levels) due only to improved emissions controls in newer vehicles. Thus, the proposed rule was skewed in a manner that unjustifiably could appear to allow future actions to conform. Therefore, § 51.858(a)(5)(iv)(B) of the final rule is revised to focus on the baseline activity levels rather than the baseline emissions and the emission calculations must use emission factors appropriate to the future years analyzed. In other words, the rule specifies a "build/no build" test, not a "build/1990" test.

S. Annual Reductions

1. Proposal

Paragraph (c) of § 51.858 of the proposal states that a Federal action may not be determined to conform unless emissions from the action are consistent with all relevant requirements and milestones contained in the applicable SIP, such as elements identified as part of the RFP schedules.

2. Comment

The EPA received comments suggesting that the rules should require Federal activities to be consistent with the RFP requirements of the Act and with expeditious attainment of the NAAQS. Thus, the general conformity rules should be amended to require Federal agencies to demonstrate that their activities are achieving annual reductions in emissions and are consistent with State efforts to achieve attainment as expeditiously as practicable.

A commenter noted that the proposed rule would allow Federal agencies to satisfy the conformity provision by merely offsetting predicted emission increases from a project on a 1:1 basis. The commenter suggested that the rule should be modified to specify that a Federal action only conforms if the action is contributing to the required annual reductions in emissions and is consistent with State efforts to achieve attainment as expeditiously as practicable.

Another commenter noted that emissions budgets set in the SIP are supposed to accommodate growth.

3. Response

The EPA believes that, for the general conformity, the provisions in paragraph (c) of § 51.858 meet the section 176(c) Act requirements for RFP and other milestones and that additional language concerning attainment as expeditiously as practicable would not substantively alter these requirements. A State has considerable discretion to select a strategy to meet the RFP requirements. Neither the Act RFP requirements nor the Act general conformity requirements specify that each individual Federal action contribute proportionately to emission reductions. Instead, the Act generally allows a State to choose a strategy that might achieve greater reductions at certain sources and lesser or no reductions at other sources, and which may provide for growth in certain areas. The transportation conformity rule, in contrast to the general conformity rule, reflects specific provisions of section 176(c) of the Act regarding specified required emission reductions from transportation activities. Consequently, so long as general Federal actions meet the requirements of the general conformity rule, EPA believes that such activities would be consistent with the SIP, RFP, and attainment demonstrations and that every general Federal action is not required by the Act to result in an emissions decrease.

T. Summary of Criteria for Determining Conformity

1. Proposal

The proposal contained a narrative description of the § 51.858 requirements for making conformity determinations.

2. Comment

Some commenters requested EPA to include in the final rule preamble a table summarizing the requirements in § 51.858.

3. Response

The following table summarizes these requirements; it should not be read to substitute for the regulatory language itself. If there is a conflict between the table and other portions of this final rulemaking notice, the table should not be relied upon.

Section 51.858(a)	Areawide only		Local and possibly areawide		Local only
	O_3	NO_2	PM–10	CO	Pb/SO_2
(1) Specified in attainment or maintenance demostration	X	X	X	X	X
(2) Offsets within same nonattainment/maintenance area	X	X			
(3) Areawide and local modeling	.....	.....	X	X	X
(4)(i) Local modeling only if local problem	.....	.....	X	X	
(4)(ii) Areawide modeling only *or* meet (5)	.....	.....	X	X	
(5)(i) Emissions budget	X	X	(*)	(*)	
(5)(ii) Transportation plan	X	X	(*)	(*)	
(5)(iii) Offsets	X	X	(*)	(*)	
(5)(iv) Baseline/No increase	X	X	(*)	(*)	
(5)(V) Water project	X	X			

X=Option to show conformity.
*=Option if areawide problem.

U. Planning Assumptions

1. Proposal

Paragraph (a) of § 51.859 requires the conformity analyses to be based on the latest planning assumptions approved by the MPO.

2. Comment

A commenter recommended that conformity determinations should be based on the latest planning assumptions used in establishing the SIP's RFP emissions target(s) and emissions budget(s). States should be required to evaluate and update the SIP's planning assumptions used for demonstrating RFP and attainment. Discrepancies between the planning assumptions and estimates used to demonstrate RFP and attainment and those used for project-level conformity determinations could distort estimates of growth in emissions in the nonattainment area.

3. Response

As noted in the preamble to the proposal (58 FR 13846), EPA acknowledges that the conformity determination may be more difficult where the assumptions in the SIP differ from the recent MPO assumptions. For actions such as wastewater treatment plants, planning assumptions are indeed critical. However, for many other Federal actions, the planning assumptions are not as critical a factor in determining conformity.

In addition, the plain language of the statute does not allow the approach suggested by the commenter. Section 176(c) of the Act states: "The determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel and congestion estimates as determined by the metropolitan planning organization or other agency authorized to make such estimates." Thus, EPA must require use of the most recent planning assumptions.

In the event any revisions to these planning assumptions are necessary, § 51.859(a)(2) in the proposal indicated that such revisions must be approved in writing by the MPO or other agency authorized to make such estimates for the urban area. This section has been revised in the final rule to indicate that written approval is not required, as long

as the MPO or appropriate agency has authorized the change, so as not to delay the conformity analysis.

V. Forecast Emission Years

1. Proposal

Paragraph 51.859(d) in the proposal identified the emission scenarios to be considered. Total direct and indirect emission estimates were proposed to be projected, consistent with key dates with respect to the amended Act, the project itself, and the applicable SIP. Thus, the analysis was proposed to contain:

(1) The Act mandated attainment year or, if applicable, the farthest year for which emissions are projected in the maintenance plan;

(2) The year during which the total direct and indirect emissions from the action are expected to be the greatest on an annual basis; and

(3) Any year for which the applicable SIP specifies an annual emissions budget.

2. Comment

One commenter indicated that the emission scenarios requirement should be omitted and lead agencies be allowed to determine the scenarios on a project-specific basis. Another commenter stated that the analysis should include a maintenance period. The EPA also received a comment that all Federal actions must be analyzed for their impact in the 20(+)-year timeframe.

3. Response

The scenarios proposed by EPA are also reflected in the final rule because they are the minimum possible scenarios which still meet the statutory requirements that relate conformity to attainment, maintenance, SIP milestones, and RFP. The above emission estimates are necessary in order to assure that the Federal action would not "delay timely attainment of any standard or any required interim emission reductions or other milestones in any area" (section 176(c)(1)(B)(iii) of the Act). This provision links emissions from the action to the emission reduction targets required by the Act to demonstrate RFP prior to the attainment date. Emission estimates are also needed to provide for determinations of conformity with respect to maintenance plans as required by section 176(c)(4)(B)(iii) of the Act. For an action to conform to the applicable SIP, it must conform at all of the above times.

The inclusion of a maintenance period is not reasonable since many SIP's may not have identified a maintenance period. The rigidity of a 20(+)-year timeframe is also unnecessary. Rather, the emission scenarios should be keyed to the relevant years for RFP, attainment and maintenance planning specified in the SIP. In some, but not all, cases a 20(+)-year timeframe will, in fact, be necessary under the final rule to meet one of the specified emission scenarios.

W. Total of Direct and Indirect Emissions

1. Proposal

The preamble states that "net" emissions from the various direct and indirect sources should be used in the applicability and conformity analyses (58 FR 13847). However, the rule uses the phrase, "total direct and indirect emissions."

2. Comment

A commenter suggested that EPA should expressly state in the final rule that "net" emissions from the particular Federal action under review should be evaluated in determining both applicability and conformity.

Another comment stated that the conformity analysis should include the direct and indirect impacts of the Federal activity along with all other reasonably foreseeable projects (Federal and non-Federal) in the area.

3. Response

The final rule is revised to clarify that the total direct and indirect emissions may be a "net" emissions calculation. For example, where an agency has several offices in one metropolitan area and is considering consolidation into one large centralized office, vehicular activity may actually decrease, depending on the location of the new office building, availability of mass transit, and other factors. In such cases, the Federal agency should consult with the MPO in determining the "net" emissions from such an action. Consultation with the MPO is also important to help assure that indirect emissions, once attributed to a source, will not be double-counted by attributing the same emissions to nearby projects that are subsequently reviewed.

The conformity requirements for applicability and analysis generally do not include reasonably foreseeable projects other than those caused by the Federal action. Thus, the calculation of emissions for de minimis or offset purposes includes only the (net) direct and indirect emissions caused by the Federal action in question. However, where an air quality modeling analysis is part of the conformity determination, the EPA guideline on air quality models (reference in § 51.859) requires the modeling to include emissions from existing sources as well as the potential new emissions due to the Federal action in order to accurately determine the effect of the action on the NAAQS and whether the action might cause or contribute to a new violation or worsen an existing violation.

In addition, the definition is revised to clarify that emissions of criteria pollutants and emissions of precursors of criteria pollutants (as defined in the final rule) are included within the meaning of "total of direct and indirect emissions." Further, the final definition makes it clear that the portion of emissions which are exempt or presumed to conform under § 51.853 are not included in the "total of direct and indirect emissions."

X. New or Revised Emissions Models

1. Proposal

The proposed rules require use of the most current version of the motor vehicle emissions model specified by EPA and available for use in the preparation or revision of SIP's (58 FR 13852).

2. Comment

One commenter suggested that the final rules should provide that conformity determinations be made with the same mobile source emissions model as was used in the development of the SIP until such time as EPA approves a SIP revision, based on a new model.

Another commenter noted that the latest planning assumptions may not be consistent with assumptions contained in the SIP. In such cases, the commenter suggests that the final rule should allow the affected agencies to determine which prevails. The commenter also suggested that the general conformity rule should provide a transition period similar to that in the transportation conformity rule, where EPA updates the motor vehicle emissions model.

3. Response

The statute requires the determination of conformity to be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates. As noted in the proposal (58 FR 13846–13847) EPA recognizes this issue and urges that these estimates should be consistent with those in the applicable SIP, to the extent possible. However, based on the clear statutory language,

the most recent estimates must be used, rather than the estimates that may have been used in (older) SIP revisions. In cases where the emissions estimate in the applicable SIP is outdated and the Federal agency chooses not to rely on it in the conformity analysis, the final conformity rules allow a Federal agency to demonstrate conformity through analyses that focus on emission offsets and/or air quality modeling.

Section 51.859(b) of the final rule includes provisions to provide flexibility for cases where use of otherwise required emission models or emission factors is inappropriate and the approval of the EPA Regional Administrator is obtained. In addition, the final rule provides a reasonable grace period where the EPA motor vehicle emissions model has been updated, so that ongoing analysis efforts are not unduly disrupted. The grace period is consistent with the provisions in the transportation conformity rule as suggested by the comment.

Specifically, the rule establishes a 3-month grace period during which the motor vehicle emissions model previously specified by EPA as the most current version may be used. In addition, conformity analyses for which the analysis was begun during the grace period or no more than 3 years before the notice of availability of the latest emission model may continue to use the previous version of the model specified by EPA.

Y. Air Quality Modeling—General

1. Proposal

Where the conformity analysis relies on air quality modeling, that modeling must use EPA-approved models, unless otherwise approved by the EPA Regional Administrator [paragraph (c) of § 51.859]. The analysis must include any year for which the applicable SIP specifies an annual emissions budget (paragraph (d)(3) of § 51.859).

2. Comment

One commenter pointed out several problems in the rules: the rule would require the use of models that are inappropriate for complex terrain; before any models can be used, they must be EPA-approved; and conformity determinations should also include an analysis of the milestone years that are used in the SIP to demonstrate attainment.

3. Response

As proposed, the final rules generally require use of EPA-approved models, including complex terrain models in some cases. However, where such models are unavailable for a particular application, alternate air quality analyses can be conducted upon approval of the EPA Regional Administrator. The EPA believes it is essential to standardize air quality model applications since models could otherwise be invented or existing models manipulated to show virtually any results desired.

However, § 51.858(a)(3) in the final rule does not apply to ozone or nitrogen dioxide modeling efforts. The EPA believes that, as a technical matter, application of existing air quality dispersion models to assess project level emission changes for these regional scale pollutants is generally not appropriate. That is, photochemical grid models are generally not sufficient to assess incremental changes to areawide ozone concentrations from emissions changes at a single or group of small sources. Emission changes should amount to some significant fraction of base emissions before photochemical grid modeling results can be interpreted with sufficient confidence that the results are not lost in the noise of the model and the input data.

In addition, § 51.858(a) (3) and (4) are revised to clarify that, in some cases, either local or areawide modeling or the provisions of § 51.858(a)(5) for CO and/or PM–10 would satisfy the § 51.858(a) requirements. As specified in § 51.858(a)(4), the State agency primarily responsible for the applicable SIP would identify the cases/areas for which both local and areawide modeling is not needed to demonstrate conformity since that agency has the expertise to make such a determination.

The analysis required in paragraph (d)(3) of § 51.859 is for the same years as the milestone years noted by the commenter. This requirement applies where the applicable SIP specifically includes emissions budgets for the milestone and/or attainment years.

Z. Air Quality Modeling—PM–10

1. Proposal

The proposal called for modeling of localized PM–10 impacts in some cases (§ 51.858).

2. Comment

This analysis is not currently in use in California and is unfamiliar to technical air quality consultants and the California Air Resources Board.

3. Response

The EPA's air quality modeling guideline contains models intended specifically to analyze the local and regional impacts of PM–10, including point, area, and volume sources. In addition, EPA will be making guidance available on how to use an existing guideline model (CALINE3) and other EPA guidance to analyze the local air quality impacts of PM–10 roadway emissions.

AA. Activity on Federally-Managed Land

1. Proposal

The preamble to the general conformity proposal indicates that prescribed burning activities by FLM could be one activity affected by the rule.

2. Comment

Comments submitted by Federal land managers include general comments that are addressed elsewhere in this preamble. Some of the comments are more specific to their land management activities and are addressed here.

Regarding de minimis levels, one commenter stated that the proposed rule mixes up emissions and impacts; the rule should focus on the "effect" on the nonattainment area rather than emissions. The commenter stated that the approach has implications for prescribed burning. Prescribed burning is a temporary source that may occur at a time of year when the air quality standards are not being violated. In addition, the focus on emissions is also a problem when the smoke is blown away from the nonattainment area.

3. Response 1

Regarding de minimis levels, the emissions-based threshold does not provide as direct an indicator of a project's air quality impact as an ambient concentration-based threshold. It was selected for the final rule, however, because it does provide a rough indicator of a project's impact. In addition, it was selected because it is not feasible to expect Federal agencies, at the conformity applicability stage, to perform the air quality dispersion modeling analysis necessary to determine whether a project is above an air quality concentration. Such an analysis would be time consuming and potentially result in the Federal agency having to expend significant resources analyzing the air quality impact of an action that could be determined, upon completion of analysis, to have a "de minimis" air quality impact. Moreover, for some actions requiring an air quality modeling analysis up-front is a potential waste of resources when the Federal agency may ultimately select an option for adequately showing conformity that does not involve air quality modeling.

Regarding the timing of prescribed burns, if a burn occurs during a time of year when a nonattainment area does not experience violations of the NAAQS and the applicable SIP's attainment demonstration specifically reflects that finding, then such a burn may be determined to conform pursuant to § 51.858(a)(1).

Regarding the direction of smoke emissions, for the reasons noted above EPA has selected an emissions-based threshold for conformity applicability purposes. Such an approach does not account for emissions direction or dispersion. Depending on the nature and scope of the activity and conformity option selected pursuant to section 51.858, the conformity analysis may or may not explicitly address these factors. Section 51.855 was amended, however, to require the consultation and notification of FLM's by other Federal agencies when a Federal action requiring a conformity determination is within 100 km of a Class I area.

4. Comment

Two commenters noted that the rule could affect many of their agencies' activities. One commenter stated the rule becomes less focused as it attempts to address the different types of Federal actions. The commenter stated the rule is unclear about how the Federal agency should make a conformity determination for prescribed fire, among other activities, to take into account the complex issues involved. The commenter stated that the rule should encourage pollution prevention by exempting actions consistent with an agency's pollution prevention plan. Another comment indicated that most of its agency's management plans, which are programmatic, include emissions that are not reasonably foreseeable.

5. Response

The final rule applies to nonattainment and maintenance areas and requires conformity determinations for Federal actions where the total of direct and indirect emissions exceed de minimis levels as described in § 51.853(b). Section 51.858 provides several options for showing conformity for Federal activity generally, including FLM activity. The conformity showing includes an air quality test where the Federal agency must demonstrate that the action does not cause or contribute to any new NAAQS violation or increase the frequency or severity of any existing violation. The Federal agency can either make this showing explicitly through air quality modeling or by selecting a surrogate option such as consistency with an emissions budget. The conformity showing also includes an emissions test where the Federal agency must show that the action is consistent with all SIP requirements and milestones.

In general, EPA recognizes the complex problems posed by the goals and missions of the air quality and land management agencies and EPA intends to work with the FLM's and States to find solutions. One such area of concern is ecosystem management and forest health and the challenges posed to air quality and visibility by the need for more prescribed burning expressed by the FLM.

Regarding reasonably foreseeable emissions, the rule does not require Federal agencies to include emissions in conformity applicability determinations or analyses which are not reasonably foreseeable. Reasonably foreseeable emissions (as defined in § 51.852) are projected future indirect emissions that are identified at the time the conformity determination is made and for which the location and quantity is known.

Regarding pollution prevention plans, while the final rule does exempt certain actions or presume them to conform, it does not specifically exempt actions consistent with a Federal agency's pollution prevention plan. Paragraph (c)(2) of § 51.853 of the final rule exempts actions whose total direct and indirect emissions are below the de minimis rates and other actions which would result in no emissions increase or an emissions increase that is clearly de minimis. Certain actions listed in paragraph (c)(3) of § 51.853 where the emissions are not reasonably foreseeable are also exempt. In addition, paragraphs (d) and (e) of § 51.853 of the final rule identify other actions which are exempt from conformity, such as Federal actions in response to emergencies. Therefore, since this rule does not exempt them or presume them to conform, actions consistent with an agency's pollution prevention plan that increase emissions beyond the de minimis levels are subject to conformity. However, §§ 51.853(g) and 51.853(h) of the rule provide Federal agencies with the requirements and procedures to establish activities that are presumed to conform which could conceivably include actions consistent with a pollution plan provided the rule's appropriate requirements are met. Further, to address those situations where prescribed burns are part of a conforming smoke management plan, § 51.853(c)(4)(ii) was added to exempt such actions.

6. Comment

One comment concerned the air pollution emissions information EPA maintains in a document entitled "Compilation of Air Pollutant Emission Factors (AP–42)." The commenter indicated the document does not correctly represent emissions from prescribed burning. The commenter also stated that the rule should not require the development of demographic and other data from urban nonattainment areas when they are not relevant, nor should the rule dictate such data in suburban or rural areas in the agency's planning process. In addition, the commenter stated that the rule would require the use of inappropriate air quality models. Another commenter stated that models for use in analyzing prescribed burning emissions in mountainous terrain have not yet been developed.

7. Response

Regarding emission factors, the final rule allows for alternative emissions data to be used where it is more accurate than that provided in EPA's AP–42 document. Regarding demographic data, the final rule requires that all planning assumptions must be derived from data most recently approved by the MPO where available. Such data are available for urban areas; the rule does not require its use in suburban and rural areas if it is unavailable.

Regarding modeling, if EPA guideline modeling techniques are not appropriate in a conformity determination, then the rule provides for the use of alternative models provided written approval is obtained from the EPA Regional Administrator. If no model is available for a particular application, then modeling may not be an option available for that conformity determination.

BB. Federalism Assessment

1. Proposal

The preamble to the proposal states that there are no federalism effects associated with this rule (58 FR 13848).

2. Comment

One commenter stated that a federalism assessment should be conducted under Executive Order 12612.

3. Response

A federalism assessment has not been conducted under Executive Order 12612. However, federalism effects are considered throughout this rule (e.g., discussions regarding State, Federal

agency, and EPA roles in General Conformity).

V. Economic Impact

The estimates presently available are preliminary and do not reflect substantive and recent revisions to the final rule. These estimates represent specific information solicited from the Federal agencies presumed to be affected by the rule. The EPA is interested in comments from the affected agencies on the economic impacts presented in this section. A revised analysis will be prepared and submitted to OMB in the form of a revised Information Collection Request (ICR) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

The preliminary estimates presented here are based on data provided by the following sources: Department of Interior (DOI), Department of Agriculture (USDA), Department of Energy (DOE), Department of Defense (DOD), Department of Housing and Urban Development (HUD) and the General Services Administration (GSA). It is estimated by the Federal agencies that between 10,000 and 50,000 Federal actions may need to be reviewed annually for applicability of the conformity rule. About 15% of these actions will require a conformity determination. The estimated cost of one conformity determination ranges from $1,700 for a straightforward determination to $133,000 for a base closure conformity determination. In total, the anticipated cost of the general conformity rule from the raw data submitted by the agencies ranges from $63 million per year to $111 million per year. These annual cost estimates reflect a U.S. Army Corps of Engineer's (COE) estimated annual cost ranging from $53 million to $102 million.

There are several factors that will lead to a change in these estimates, substantially lowering and narrowing the ranges. These factors are:

(1) Some of the estimates were based on the inclusive definition co-proposed by the rule in March 1993, and the definitions of indirect emissions and Federal action, but are not representative of the final rule.

(2) New "de minimis" cutoffs and various added exemptions are present in the final rule and differ from the proposed rule.

(3) There is need to completely account for overlap of Federal projects which have air environmental consequences and are subject to the National Environmental Policy Act (NEPA) as well as the NSR, operating permit, SIP and FIP, NSP and hazardous emission standards and other requirements of the Act.

Most of the cost of determining conformity falls to Federal agencies and/or private sponsors of projects needing Federal action. The Federal agencies and/or private sponsors will need to fund the analysis of the actions for air quality impact. In addition, State and local agencies may choose to participate in development and/or review of the analysis. The incremental cost estimates include recordkeeping, reporting, performing air quality and mitigation analysis, and considering public comments where appropriate.

As stated above, these estimates are preliminary. Revisions will be addressed in a forthcoming revised document that will specifically assess the costs and recordkeeping and reporting burden of the rule, as stipulated under Section VI(C) Paperwork reduction Act below.

VI. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866, (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action". As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 and applicable EPA guidelines revised in 1992 require Federal agencies to identify potentially adverse impacts of Federal regulations upon small entities. Small entities include small businesses, organizations, and governmental jurisdictions. The EPA has determined that this regulation does not apply to any small entities. This regulation directly affects only Federal agencies. Consequently, a Regulatory Flexibility Analysis (RFA) is not required. As required under section 605 of the Regulatory Flexibility Act, 5 U.S.C. *et seq.*, I certify that this regulation does not have a significant impact on a substantial number of small entities and thereby does not require a Regulatory Flexibility Analysis (RFA).

C. Paperwork Reduction Act

The Paperwork Reduction Act (PRA) requires that an agency prepare an Information Collection Request (ICR) to obtain OMB clearance for any activity that will involve collecting information from ten or more non-Federal respondents. These information requirements include reporting, monitoring, and/or recordkeeping. The ICR for this rule includes the cost to the States of developing and implementing the General Conformity rule as well as the cost of the collection burden for private sponsors of activities that require Federal support or approval.

The information collection requirements in 40 CFR parts 51 and 93 have not been approved by OMB and are not effective until OMB approves them. These information collection requirements will be submitted as part of a revised ICR to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* These requirements will not be effective until OMB approves them and a technical amendment to that effect is published in the Federal Register.

D. Federalism Implications

A federalism assessment has not been conducted under Executive Order 12612. However, federalism effects are considered throughout this rule (e.g., discussions regarding State, Federal agency, and EPA roles in General Conformity).

List of Subjects

40 CFR Part 6

Environmental impact statements, Foreign relations, Grant programs—environmental protection, Waste treatment and disposal.

40 CFR Parts 51 and 93

Environmental protection, Administrative practice and procedure, Air pollution control, Carbon monoxide, Intergovernmental relations, Lead,

Nitrogen oxides, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Volatile organic compounds.

Dated: November 15, 1993.

Carol M. Browner,

Administrator.

The Code of Federal Regulations, title 40, chapter I, is amended as follows:

PART 6—[AMENDED]

1. The authority citation for part 6 is revised to read as follows:

Authority: 42 U.S.C. 4321 *et seq.*, 7401–7671q; 40 CFR part 1500.

2. Section 6.303 is amended by removing and reserving paragraphs (c) through (g) and revising paragraphs (a) and (b) to read as follows:

§ 6.303 Air quality.

(a) The Clean Air Act, as amended in 1990, 42 U.S.C. 7476(c), requires Federal actions to conform to any State implementation plan approved or promulgated under section 110 of the Act. For EPA actions, the applicable conformity requirements specified in 40 CFR part 51, subpart W, 40 CFR part 93, subpart B, and the applicable State implementation plan must be met.

(b) In addition, with regard to wastewater treatment works subject to review under Subpart E of this part, the responsible official shall consider the air pollution control requirements specified in section 316(b) of the Clean Air Act, 42 U.S.C. 7616, and Agency implementation procedures.

(c)–(g) [Reserved]

PART 51—[AMENDED]

1. The authority citation for part 51 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

2. Part 51 is amended by adding a new subpart W to read as follows:

Subpart W—Determining Conformity of General Federal Actions to State or Federal Implementation Plans

Sec.

51.850 Prohibition.
51.851 State implementation plan (SIP) revision.
51.852 Definitions.
51.853 Applicability.
51.854 Conformity analysis.
51.855 Reporting requirements.
51.856 Public participation.
51.857 Frequency of conformity determinations.
51.858 Criteria for determining conformity of general Federal actions.
51.859 Procedures for conformity determinations of general Federal actions.
51.860 Mitigation of air quality impacts.

Subpart W—Determining Conformity of General Federal Actions to State or Federal Implementation Plans

§ 51.850 Prohibition.

(a) No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan.

(b) A Federal agency must make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this subpart before the action is taken.

(c) Paragraph (b) of this section does not include Federal actions where either:

(1) A National Environmental Policy Act (NEPA) analysis was completed as evidenced by a final environmental assessment (EA), environmental impact statement (EIS), or finding of no significant impact (FONSI) that was prepared prior to January 31, 1994;

(2) (i) Prior to January 31, 1994, an EA was commenced or a contract was awarded to develop the specific environmental analysis;

(ii) Sufficient environmental analysis is completed by March 15, 1994 so that the Federal agency may determine that the Federal action is in conformity with the specific requirements and the purposes of the applicable SIP pursuant to the agency's affirmative obligation under section 176(c) of the Clean Air Act (Act); and

(iii) A written determination of conformity under section 176(c) of the Act has been made by the Federal agency responsible for the Federal action by March 15, 1994.

(d) Notwithstanding any provision of this subpart, a determination that an action is in conformance with the applicable implementation plan does not exempt the action from any other requirements of the applicable implementation plan, the NEPA, or the Act.

§ 51.851 State implementation plan (SIP) revision.

(a) Each State must submit to the Environmental Protection Agency (EPA) a revision to its applicable implementation plan which contains criteria and procedures for assessing the conformity of Federal actions to the applicable implementation plan, consistent with this subpart. The State must submit the conformity provisions within 12 months after November 30, 1993 or within 12 months of an area's designation to nonattainment, whichever date is later.

(b) The Federal conformity rules under this subpart and 40 CFR part 93, in addition to any existing applicable State requirements, establish the conformity criteria and procedures necessary to meet the Act requirements until such time as the required conformity SIP revision is approved by EPA. A State's conformity provisions must contain criteria and procedures that are no less stringent than the requirements described in this subpart. A State may establish more stringent conformity criteria and procedures only if they apply equally to non-Federal as well as Federal entities. Following EPA approval of the State conformity provisions (or a portion thereof) in a revision to the applicable SIP, the approved (or approved portion of the) State criteria and procedures would govern conformity determinations and the Federal conformity regulations contained in 40 CFR part 93 would apply only for the portion, if any, of the State's conformity provisions that is not approved by EPA. In addition, any previously applicable SIP requirements relating to conformity remain enforceable until the State revises its SIP to specifically remove them from the SIP and that revision is approved by EPA.

§ 51.852 Definitions.

Terms used but not defined in this part shall have the meaning given them by the Act and EPA's regulations, (40 CFR chapter I), in that order of priority.

Affected Federal land manager means the Federal agency or the Federal official charged with direct responsibility for management of an area designated as Class I under the Act (42 U.S.C. 7472) that is located within 100 km of the proposed Federal action.

Applicable implementation plan or applicable SIP means the portion (or portions) of the SIP or most recent revision thereof, which has been approved under section 110 of the Act, or promulgated under section 110(c) of the Act (Federal implementation plan), or promulgated or approved pursuant to regulations promulgated under section 301(d) of the Act and which implements the relevant requirements of the Act.

Areawide air quality modeling analysis means an assessment on a scale that includes the entire nonattainment or maintenance area which uses an air quality dispersion model to determine the effects of emissions on air quality.

Cause or contribute to a new violation means a Federal action that:

(1) Causes a new violation of a national ambient air quality standard

(NAAQS) at a location in a nonattainment or maintenance area which would otherwise not be in violation of the standard during the future period in question if the Federal action were not taken; or

(2) Contributes, in conjunction with other reasonably foreseeable actions, to a new violation of a NAAQS at a location in a nonattainment or maintenance area in a manner that would increase the frequency or severity of the new violation.

Caused by, as used in the terms "direct emissions" and "indirect emissions," means emissions that would not otherwise occur in the absence of the Federal action.

Criteria pollutant or standard means any pollutant for which there is established a NAAQS at 40 CFR part 50.

Direct emissions means those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and occur at the same time and place as the action.

Emergency means a situation where extremely quick action on the part of the Federal agencies involved is needed and where the timing of such Federal activities makes it impractical to meet the requirements of this subpart, such as natural disasters like hurricanes or earthquakes, civil disturbances such as terrorist acts, and military mobilizations.

Emissions budgets are those portions of the applicable SIP's projected emissions inventories that describe the levels of emissions (mobile, stationary, area, etc.) that provide for meeting reasonable further progress milestones, attainment, and/or maintenance for any criteria pollutant or its precursors.

Emissions offsets, for purposes of § 51.858, are emissions reductions which are quantifiable, consistent with the applicable SIP attainment and reasonable further progress demonstrations, surplus to reductions required by, and credited to, other applicable SIP provisions, enforceable at both the State and Federal levels, and permanent within the timeframe specified by the program.

Emissions that a Federal agency has a continuing program responsibility for means emissions that are specifically caused by an agency carrying out its authorities, and does not include emissions that occur due to subsequent activities, unless such activities are required by the Federal agency. Where an agency, in performing its normal program responsibilities, takes actions itself or imposes conditions that result in air pollutant emissions by a non-Federal entity taking subsequent actions, such emissions are covered by the meaning of a continuing program responsibility.

EPA means the Environmental Protection Agency.

Federal action means any activity engaged in by a department, agency, or instrumentality of the Federal government, or any activity that a department, agency or instrumentality of the Federal government supports in any way, provides financial assistance for, licenses, permits, or approves, other than activities related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 *et seq.*). Where the Federal action is a permit, license, or other approval for some aspect of a non-Federal undertaking, the relevant activity is the part, portion, or phase or the non-Federal undertaking that requires the Federal permit, license, or approval.

Federal agency means, for purposes of this subpart, a Federal department, agency, or instrumentality of the Federal government.

Increase the frequency or severity of any existing violation of any standard in any area means to cause a nonattainment area to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented.

Indirect emissions means those emissions of a criteria pollutant or its precursors that:

(1) Are caused by the Federal action, but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable; and

(2) The Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency.

Local air quality modeling analysis means an assessment of localized impacts on a scale smaller than the entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals, which uses an air quality dispersion model to determine the effects of emissions on air quality.

Maintenance area means an area with a maintenance plan approved under section 175A of the Act.

Maintenance plan means a revision to the applicable SIP, meeting the requirements of section 175A of the Act.

Metropolitan Planning Organization (MPO) is that organization designated as being responsible, together with the State, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. 1607.

Milestone has the meaning given in sections 182(g)(1) and 189(c)(1) of the Act.

National ambient air quality standards (NAAQS) are those standards established pursuant to section 109 of the Act and include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter (PM–10), and sulfur dioxide (SO_2).

NEPA is the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*).

Nonattainment Area (NAA) means an area designated as nonattainment under section 107 of the Act and described in 40 CFR part 81.

Precursors of a criteria pollutant are:

(1) For ozone, nitrogen oxides (NO_X), unless an area is exempted from NO_X requirements under section 182(f) of the Act, and volatile organic compounds (VOC); and

(2) For PM–10, those pollutants described in the PM–10 nonattainment area applicable SIP as significant contributors to the PM–10 levels.

Reasonably foreseeable emissions are projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency.

Regional water and/or wastewater projects include construction, operation, and maintenance of water or wastewater conveyances, water or wastewater treatment facilities, and water storage reservoirs which affect a large portion of a nonattainment or maintenance area.

Regionally significant action means a Federal action for which the direct and indirect emissions of any pollutant represent 10 percent or more of a nonattainment or maintenance area's emissions inventory for that pollutant.

Total of direct and indirect emissions means the sum of direct and indirect emissions increases and decreases caused by the Federal action; i.e., the "net" emissions considering all direct and indirect emissions. The portion of emissions which are exempt or presumed to conform under § 51.853, (c), (d), (e), or (f) are not included in the "total of direct and indirect emissions." The "total of direct and indirect emissions" includes emissions of criteria pollutants and emissions of precursors of criteria pollutants.

§ 51.853 Applicability.

(a) Conformity determinations for Federal actions related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 *et seq.*) must meet the procedures and criteria of 40 CFR part 51, subpart T, in lieu of the procedures set forth in this subpart.

(b) For Federal actions not covered by paragraph (a) of this section, a conformity determination is required for each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs (b)(1) or (2) of this section.

(1) For purposes of paragraph (b) of this section, the following rates apply in nonattainment areas (NAAs):

	Tons/year
Ozone (VOC's or NO_x):	
Serious NAA's	50
Severe NAA's	25
Extreme NAA's	10
Other ozone NAA's outside an ozone transport region	100
Marginal and moderate NAA's inside an ozone transport region:	
VOC	50
NO_x	100
Carbon monoxide: All NAA's	100
SO_2 or NO_2: All NAA's	100
PM–10:	
Moderate NAA's	100
Serious NAA's	70
Pb: All NAA's	25

(2) For purposes of paragraph (b) of this section, the following rates apply in maintenance areas:

	Tons/year
Ozone (NO_x), SO_2 or NO_2: All maintenance areas	100
Ozone (VOC's):	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon monoxide: All maintenance areas	100
PM–10: All maintenance areas	100
Pb: All maintenance areas	25

(c) The requirements of this subpart shall not apply to:

(1) Actions where the total of direct and indirect emissions are below the emissions levels specified in paragraph (b) of this section.

(2) The following actions which would result in no emissions increase or an increase in emissions that is clearly de minimis:

(i) Judicial and legislative proceedings.

(ii) Continuing and recurring activities such as permit renewals where activities conducted will be similar in scope and operation to activities currently being conducted.

(iii) Rulemaking and policy development and issuance.

(iv) Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities.

(v) Civil and criminal enforcement activities, such as investigations, audits, inspections, examinations, prosecutions, and the training of law enforcement personnel.

(vi) Administrative actions such as personnel actions, organizational changes, debt management or collection, cash management, internal agency audits, program budget proposals, and matters relating to the administration and collection of taxes, duties and fees.

(vii) The routine, recurring transportation of materiel and personnel.

(viii) Routine movement of mobile assets, such as ships and aircraft, in home port reassignments and stations (when no new support facilities or personnel are required) to perform as operational groups and/or for repair or overhaul.

(ix) Maintenance dredging and debris disposal where no new depths are required, applicable permits are secured, and disposal will be at an approved disposal site.

(x) Actions, such as the following, with respect to existing structures, properties, facilities and lands where future activities conducted will be similar in scope and operation to activities currently being conducted at the existing structures, properties, facilities, and lands; for example, relocation of personnel, disposition of federally-owned existing structures, properties, facilities, and lands, rent subsidies, operation and maintenance cost subsidies, the exercise of receivership or conservatorship authority, assistance in purchasing structures, and the production of coins and currency.

(xi) The granting of leases, licenses such as for exports and trade, permits, and easements where activities conducted will be similar in scope and operation to activities currently being conducted.

(xii) Planning, studies, and provision of technical assistance.

(xiii) Routine operation of facilities, mobile assets and equipment.

(xiv) Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer.

(xv) The designation of empowerment zones, enterprise communities, or viticultural areas.

(xvi) Actions by any of the Federal banking agencies or the Federal Reserve Banks, including actions regarding charters, applications, notices, licenses, the supervision or examination of depository institutions or depository institution holding companies, access to the discount window, or the provision of financial services to banking organizations or to any department, agency or instrumentality of the United States.

(xvii) Actions by the Board of Governors of the Federal Reserve System or any Federal Reserve Bank to effect monetary or exchange rate policy.

(xviii) Actions that implement a foreign affairs function of the United States.

(xix) Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and where the Federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties.

(xx) Transfers of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity and assignments of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity for subsequent deeding to eligible applicants.

(xxi) Actions by the Department of the Treasury to effect fiscal policy and to exercise the borrowing authority of the United States.

(3) The following actions where the emissions are not reasonably foreseeable:

(i) Initial Outer Continental Shelf lease sales which are made on a broad scale and are followed by exploration and development plans on a project level.

(ii) Electric power marketing activities that involve the acquisition, sale and transmission of electric energy.

(4) Actions which implement a decision to conduct or carry out a conforming program such as prescribed burning actions which are consistent

with a conforming land management plan.

(d) Notwithstanding the other requirements of this subpart, a conformity determination is not required for the following Federal actions (or portion thereof):

(1) The portion of an action that includes major new or modified stationary sources that require a permit under the new source review (NSR) program (section 173 of the Act) or the prevention of significant deterioration (PSD) program (title I, part C of the Act).

(2) Actions in response to emergencies or natural disasters such as hurricanes, earthquakes, etc., which are commenced on the order of hours or days after the emergency or disaster and, if applicable, which meet the requirements of paragraph (e) of this section.

(3) Research, investigations, studies, demonstrations, or training (other than those exempted under paragraph (c)(2) of this section), where no environmental detriment is incurred and/or, the particular action furthers air quality research, as determined by the State agency primarily responsible for the applicable SIP.

(4) Alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations (e.g., hush houses for aircraft engines and scrubbers for air emissions).

(5) Direct emissions from remedial and removal actions carried out under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA.

(e) Federal actions which are part of a continuing response to an emergency or disaster under paragraph (d)(2) of this section and which are to be taken more than 6 months after the commencement of the response to the emergency or disaster under paragraph (d)(2) of this section are exempt from the requirements of this subpart only if:

(1) The Federal agency taking the actions makes a written determination that, for a specified period not to exceed an additional 6 months, it is impractical to prepare the conformity analyses which would otherwise be required and the actions cannot be delayed due to overriding concerns for public health and welfare, national security interests and foreign policy commitments; or

(2) For actions which are to be taken after those actions covered by paragraph (e)(1) of this section, the Federal agency makes a new determination as provided in paragraph (e)(1) of this section.

(f) Notwithstanding other requirements of this subpart, actions specified by individual Federal agencies that have met the criteria set forth in either paragraph (g)(1) or (g)(2) of this section and the procedures set forth in paragraph (h) of this section are presumed to conform, except as provided in paragraph (j) of this section.

(g) The Federal agency must meet the criteria for establishing activities that are presumed to conform by fulfilling the requirements set forth in either paragraph (g)(1) or (g)(2) of this section:

(1) The Federal agency must clearly demonstrate using methods consistent with this subpart that the total of direct and indirect emissions from the type of activities which would be presumed to conform would not:

(i) Cause or contribute to any new violation of any standard in any area;

(ii) Interfere with provisions in the applicable SIP for maintenance of any standard;

(iii) Increase the frequency or severity of any existing violation of any standard in any area; or

(iv) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area including, where applicable, emission levels specified in the applicable SIP for purposes of:

(A) A demonstration of reasonable further progress;

(B) A demonstration of attainment; or

(C) A maintenance plan; or

(2) The Federal agency must provide documentation that the total of direct and indirect emissions from such future actions would be below the emission rates for a conformity determination that are established in paragraph (b) of this section, based, for example, on similar actions taken over recent years.

(h) In addition to meeting the criteria for establishing exemptions set forth in paragraphs (g)(1) or (g)(2) of this section, the following procedures must also be complied with to presume that activities will conform:

(1) The Federal agency must identify through publication in the **Federal Register** its list of proposed activities that are presumed to conform and the basis for the presumptions;

(2) The Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, the agency designated under section 174 of the Act and the MPO and provide at least 30 days for the public to comment on the list of proposed activities presumed to conform;

(3) The Federal agency must document its response to all the comments received and make the comments, response, and final list of activities available to the public upon request; and

(4) The Federal agency must publish the final list of such activities in the **Federal Register.**

(i) Notwithstanding the other requirements of this subpart, when the total of direct and indirect emissions of any pollutant from a Federal action does not equal or exceed the rates specified in paragraph (b) of this section, but represents 10 percent or more of a nonattainment or maintenance area's total emissions of that pollutant, the action is defined as a regionally significant action and the requirements of § 51.850 and §§ 51.855 through 51.860 shall apply for the Federal action.

(j) Where an action otherwise presumed to conform under paragraph (f) of this section is a regionally significant action or does not in fact meet one of the criteria in paragraph (g)(1) of this section, that action shall not be presumed to conform and the requirements of § 51.850 and §§ 51.855 through 51.860 shall apply for the Federal action.

(k) The provisions of this subpart shall apply in all nonattainment and maintenance areas.

§ 51.854 Conformity analysis.

Any Federal department, agency, or instrumentality of the Federal government taking an action subject to this subpart must make its own conformity determination consistent with the requirements of this subpart. In making its conformity determination, a Federal agency must consider comments from any interested parties. Where multiple Federal agencies have jurisdiction for various aspects of a project, a Federal agency may choose to adopt the analysis of another Federal agency or develop its own analysis in order to make its conformity determination.

§ 51.855 Reporting requirements.

(a) A Federal agency making a conformity determination under § 51.858 must provide to the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected Federal land managers, the agency designated under section 174 of the Act and the MPO a 30 day notice which describes the

proposed action and the Federal agency's draft conformity determination on the action.

(b) A Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected Federal land managers, the agency designated under section 174 of the Clean Air Act and the MPO within 30 days after making a final conformity determination under § 51.858.

§ 51.856 Public participation.

(a) Upon request by any person regarding a specific Federal action, a Federal agency must make available for review its draft conformity determination under § 51.858 with supporting materials which describe the analytical methods and conclusions relied upon in making the applicability analysis and draft conformity determination.

(b) A Federal agency must make public its draft conformity determination under § 51.858 by placing a notice by prominent advertisement in a daily newspaper of general circulation in the area affected by the action and by providing 30 days for written public comment prior to taking any formal action on the draft determination. This comment period may be concurrent with any other public involvement, such as occurs in the NEPA process.

(c) A Federal agency must document its response to all the comments received on its draft conformity determination under § 51.858 and make the comments and responses available, upon request by any person regarding a specific Federal action, within 30 days of the final conformity determination.

(d) A Federal agency must make public its final conformity determination under § 51.858 for a Federal action by placing a notice by prominent advertisement in a daily newspaper of general circulation in the area affected by the action within 30 days of the final conformity determination.

§ 51.857 Frequency of conformity determinations.

(a) The conformity status of a Federal action automatically lapses 5 years from the date a final conformity determination is reported under § 51.855, unless the Federal action has been completed or a continuous program has been commenced to implement that Federal action within a reasonable time.

(b) Ongoing Federal activities at a given site showing continuous progress are not new actions and do not require periodic redeterminations so long as such activities are within the scope of the final conformity determination reported under § 51.855.

(c) If, after the conformity determination is made, the Federal action is changed so that there is an increase in the total of direct and indirect emissions above the levels in § 51.853(b), a new conformity determination is required.

§ 51.858 Criteria for determining conformity of general Federal actions.

(a) An action required under § 51.853 to have a conformity determination for a specific pollutant, will be determined to conform to the applicable SIP if, for each pollutant that exceeds the rates in § 51.853(b), or otherwise requires a conformity determination due to the total of direct and indirect emissions from the action, the action meets the requirements of paragraph (c) of this section, and meets any of the following requirements:

(1) For any criteria pollutant, the total of direct and indirect emissions from the action are specifically identified and accounted for in the applicable SIP's attainment or maintenance demonstration;

(2) For ozone or nitrogen dioxide, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area through a revision to the applicable SIP or a similarly enforceable measure that effects emission reductions so that there is no net increase in emissions of that pollutant;

(3) For any criteria pollutant, except ozone and nitrogen dioxide, the total of direct and indirect emissions from the action meet the requirements:

(i) Specified in paragraph (b) of this section, based on areawide air quality modeling analysis and local air quality modeling analysis; or

(ii) Meet the requirements of paragraph (a)(5) of this section and, for local air quality modeling analysis, the requirement of paragraph (b) of this section;

(4) For CO or PM–10—

(i) Where the State agency primarily responsible for the applicable SIP determines that an areawide air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in paragraph (b) of this section, based on local air quality modeling analysis; or

(ii) Where the State agency primarily responsible for the applicable SIP determines that an areawide air quality modeling analysis is appropriate and that a local air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in paragraph (b) of this section, based on areawide modeling, or meet the requirements of paragraph (a)(5) of this section; or

(5) For ozone or nitrogen dioxide, and for purposes of paragraphs (a)(3)(ii) and (a)(4)(ii) of this section, each portion of the action or the action as a whole meets any of the following requirements:

(i) Where EPA has approved a revision to an area's attainment or maintenance demonstration after 1990 and the State makes a determination as provided in paragraph (a)(5)(i)(A) of this section or where the State makes a commitment as provided in paragraph (a)(5)(i)(B) of this section:

(A) The total of direct and indirect emissions from the action (or portion thereof) is determined and documented by the State agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable SIP;

(B) The total of direct and indirect emissions from the action (or portion thereof) is determined by the State agency responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed an emissions budget specified in the applicable SIP and the State Governor or the Governor's designee for SIP actions makes a written commitment to EPA which includes the following:

(*1*) A specific schedule for adoption and submittal of a revision to the SIP which would achieve the needed emission reductions prior to the time emissions from the Federal action would occur;

(*2*) Identification of specific measures for incorporation into the SIP which would result in a level of emissions which, together with all other emissions in the nonattainment or maintenance area, would not exceed any emissions budget specified in the applicable SIP;

(*3*) A demonstration that all existing applicable SIP requirements are being implemented in the area for the pollutants affected by the Federal action, and that local authority to implement additional requirements has been fully pursued;

(*4*) A determination that the responsible Federal agencies have required all reasonable mitigation measures associated with their action; and

(*5*) Written documentation including all air quality analyses supporting the conformity determination;

(C) Where a Federal agency made a conformity determination based on a State commitment under paragraph (a)(5)(i)(B) of this section, such a State commitment is automatically deemed a call for a SIP revision by EPA under section 110(k)(5) of the Act, effective on the date of the Federal conformity determination and requiring response within 18 months or any shorter time within which the State commits to revise the applicable SIP;

(ii) The action (or portion thereof), as determined by the MPO, is specifically included in a current transportation plan and transportation improvement program which have been found to conform to the applicable SIP under 40 CFR part 51, subpart T, or 40 CFR part 93, subpart A;

(iii) The action (or portion thereof) fully offsets its emissions within the same nonattainment or maintenance area through a revision to the applicable SIP or an equally enforceable measure that effects emission reductions equal to or greater than the total of direct and indirect emissions from the action so that there is no net increase in emissions of that pollutant;

(iv) Where EPA has not approved a revision to the relevant SIP attainment or maintenance demonstration since 1990, the total of direct and indirect emissions from the action for the future years (described in § 51.859(d)) do not increase emissions with respect to the baseline emissions:

(A) The baseline emissions reflect the historical activity levels that occurred in the geographic area affected by the proposed Federal action during:

(*1*) Calendar year 1990;

(*2*) The calendar year that is the basis for the classification (or, where the classification is based on multiple years, the most representative year), if a classification is promulgated in 40 CFR part 81; or

(*3*) The year of the baseline inventory in the PM–10 applicable SIP;

(B) The baseline emissions are the total of direct and indirect emissions calculated for the future years (described in § 51.859(d)) using the historic activity levels (described in paragraph (a)(5)(iv)(A) of this section) and appropriate emission factors for the future years; or

(v) Where the action involves regional water and/or wastewater projects, such projects are sized to meet only the needs of population projections that are in the applicable SIP.

(b) The areawide and/or local air quality modeling analyses must:

(1) Meet the requirements in § 51.859; and

(2) Show that the action does not:

(i) Cause or contribute to any new violation of any standard in any area; or

(ii) Increase the frequency or severity of any existing violation of any standard in any area.

(c) Notwithstanding any other requirements of this section, an action subject to this subpart may not be determined to conform to the applicable SIP unless the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones contained in the applicable SIP, such as elements identified as part of the reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice requirements.

(d) Any analyses required under this section must be completed, and any mitigation requirements necessary for a finding of conformity must be identified before the determination of conformity is made.

§ 51.859 Procedures for conformity determinations of general Federal actions.

(a) The analyses required under this subpart must be based on the latest planning assumptions.

(1) All planning assumptions must be derived from the estimates of population, employment, travel, and congestion most recently approved by the MPO, or other agency authorized to make such estimates, where available.

(2) Any revisions to these estimates used as part of the conformity determination, including projected shifts in geographic location or level of population, employment, travel, and congestion, must be approved by the MPO or other agency authorized to make such estimates for the urban area.

(b) The analyses required under this subpart must be based on the latest and most accurate emission estimation techniques available as described below, unless such techniques are inappropriate. If such techniques are inappropriate and written approval of the EPA Regional Administrator is obtained for any modification or substitution, they may be modified or another technique substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program.

(1) For motor vehicle emissions, the most current version of the motor vehicle emissions model specified by EPA and available for use in the preparation or revision of SIPs in that State must be used for the conformity analysis as specified in paragraphs (b)(1)(i) and (ii) of this section:

(i) The EPA must publish in the **Federal Register** a notice of availability of any new motor vehicle emissions model; and

(ii) A grace period of three months shall apply during which the motor vehicle emissions model previously specified by EPA as the most current version may be used. Conformity analyses for which the analysis was begun during the grace period or no more than 3 years before the **Federal Register** notice of availability of the latest emission model may continue to use the previous version of the model specified by EPA.

(2) For non-motor vehicle sources, including stationary and area source emissions, the latest emission factors specified by EPA in the "Compilation of Air Pollutant Emission Factors (AP–42)"[1] must be used for the conformity analysis unless more accurate emission data are available, such as actual stack test data from stationary sources which are part of the conformity analysis.

(c) The air quality modeling analyses required under this subpart must be based on the applicable air quality models, data bases, and other requirements specified in the most recent version of the "Guideline on Air Quality Models (Revised)" (1986), including supplements (EPA publication no. 450/2–78–027R)[2], unless:

(1) The guideline techniques are inappropriate, in which case the model may be modified or another model substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program; and

(2) Written approval of the EPA Regional Administrator is obtained for any modification or substitution.

(d) The analyses required under this subpart, except § 51.858(a)(1), must be based on the total of direct and indirect emissions from the action and must reflect emission scenarios that are expected to occur under each of the following cases:

(1) The Act mandated attainment year or, if applicable, the farthest year for which emissions are projected in the maintenance plan;

(2) The year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis; and

(3) any year for which the applicable SIP specifies an emissions budget.

[1] Copies may be obtained from the Technical Support Division of OAQPS, EPA, MD–14, Research Triangle Park, NC 27711.

[2] See footnote 1 at § 51.859(b)(2).

§ 51.860 Mitigation of air quality impacts.

(a) Any measures that are intended to mitigate air quality impacts must be identified and the process for implementation and enforcement of such measures must be described, including an implementation schedule containing explicit timelines for implementation.

(b) Prior to determining that a Federal action is in conformity, the Federal agency making the conformity determination must obtain written commitments from the appropriate persons or agencies to implement any mitigation measures which are identified as conditions for making conformity determinations.

(c) Persons or agencies voluntarily committing to mitigation measures to facilitate positive conformity determinations must comply with the obligations of such commitments.

(d) In instances where the Federal agency is licensing, permitting or otherwise approving the action of another governmental or private entity, approval by the Federal agency must be conditioned on the other entity meeting the mitigation measures set forth in the conformity determination.

(e) When necessary because of changed circumstances, mitigation measures may be modified so long as the new mitigation measures continue to support the conformity determination. Any proposed change in the mitigation measures is subject to the reporting requirements of § 51.856 and the public participation requirements of § 51.857.

(f) The implementation plan revision required in § 51.851 shall provide that written commitments to mitigation measures must be obtained prior to a positive conformity determination and that such commitments must be fulfilled.

(g) After a State revises its SIP to adopt its general conformity rules and EPA approves that SIP revision, any agreements, including mitigation measures, necessary for a conformity determination will be both State and federally enforceable. Enforceability through the applicable SIP will apply to all persons who agree to mitigate direct and indirect emissions associated with a Federal action for a conformity determination.

PART 93—DETERMINING CONFORMITY OF FEDERAL ACTIONS TO STATE OR FEDERAL IMPLEMENTATION PLANS

1. The authority citation for part 93 continues to read as follows:

Authority: 42 U.S.C. 7401–7671p.

2. Part 93 is amended by adding a new subpart B to read as follows:

Subpart B—Determining Conformity of General Federal Actions to State or Federal Implementation Plans

Sec.

93.150 Prohibition.
93.151 State implementation plan (SIP) revision.
93.152 Definitions.
93.153 Applicability.
93.154 Conformity analysis.
93.155 Reporting requirements.
93.156 Public participation.
93.157 Frequency of conformity determinations.
93.158 Criteria for determining conformity of general Federal actions.
93.159 Procedures for conformity determinations of general Federal actions.
93.160 Mitigation of air quality impacts.

Subpart B—Determining Conformity of General Federal Actions to State or Federal Implementation Plans

§ 93.150 Prohibition.

(a) No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan.

(b) A Federal agency must make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this subpart before the action is taken.

(c) Paragraph (b) of this section does not include Federal actions where:

(1) A National Environmental Policy Act (NEPA) analysis was completed as evidenced by a final environmental assessment (EA), environmental impact statement (EIS), or finding of no significant impact (FONSI) that was prepared prior to January 31, 1994; or

(2)(i) Prior to December 30, 1993, an environmental analysis was commenced or a contract was awarded to develop the specific environmental analysis;

(ii) Sufficient environmental analysis is completed by March 15, 1994 so that the Federal agency may determine that the Federal action is in conformity with the specific requirements and the purposes of the applicable SIP pursuant to the agency's affirmative obligation under section 176(c) of the Clean Air Act (Act); and

(iii) A written determination of conformity under section 176(c) of the Act has been made by the Federal agency responsible for the Federal action by March 15, 1994.

(d) Notwithstanding any provision of this subpart, a determination that an action is in conformance with the applicable implementation plan does not exempt the action from any other requirements of the applicable implementation plan, the National Environmental Policy Act (NEPA), or the Clean Air Act (Act).

§ 93.151 State implementation plan (SIP) revision.

The Federal conformity rules under this subpart, in addition to any existing applicable State requirements, establish the conformity criteria and procedures necessary to meet the Act requirements until such time as the required conformity SIP revision is approved by EPA. A State's conformity provisions must contain criteria and procedures that are no less stringent than the requirements described in this subpart. A State may establish more stringent conformity criteria and procedures only if they apply equally to nonfederal as well as Federal entities. Following EPA approval of the State conformity provisions (or a portion thereof) in a revision to the applicable SIP, the approved (or approved portion of the) State criteria and procedures would govern conformity determinations and the Federal conformity regulations contained in this part would apply only for the portion, if any, of the State's conformity provisions that is not approved by EPA. In addition, any previously applicable SIP requirements relating to conformity remain enforceable until the State revises its SIP to specifically remove them from the SIP and that revision is approved by EPA.

§ 93.152 Definitions.

Terms used but not defined in this part shall have the meaning given them by the Act and EPA's regulations (40 CFR chapter I), in that order of priority.

Affected Federal land manager means the Federal agency or the Federal official charged with direct responsibility for management of an area designated as Class I under the Act (42 U.S.C. 7472) that is located within 100 km of the proposed Federal action.

Applicable implementation plan or applicable SIP means the portion (or portions) of the SIP or most recent revision thereof, which has been approved under section 110 of the Act, or promulgated under section 110(c) of the Act (Federal implementation plan), or promulgated or approved pursuant to regulations promulgated under section 301(d) of the Act and which implements the relevant requirements of the Act.

Areawide air quality modeling analysis means an assessment on a scale that includes the entire nonattainment

or maintenance area which uses an air quality dispersion model to determine the effects of emissions on air quality.

Cause or contribute to a new violation means a Federal action that:

(1) Causes a new violation of a national ambient air quality standard (NAAQS) at a location in a nonattainment or maintenance area which would otherwise not be in violation of the standard during the future period in question if the Federal action were not taken; or

(2) Contributes, in conjunction with other reasonably foreseeable actions, to a new violation of a NAAQS at a location in a nonattainment or maintenance area in a manner that would increase the frequency or severity of the new violation.

Caused by, as used in the terms "direct emissions" and "indirect emissions," means emissions that would not otherwise occur in the absence of the Federal action.

Criteria pollutant or standard means any pollutant for which there is established a NAAQS at 40 CFR part 50.

Direct emissions means those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and occur at the same time and place as the action.

Emergency means a situation where extremely quick action on the part of the Federal agencies involved is needed and where the timing of such Federal activities makes it impractical to meet the requirements of this subpart, such as natural disasters like hurricanes or earthquakes, civil disturbances such as terrorist acts and military mobilizations.

Emissions budgets are those portions of the applicable SIP's projected emission inventories that describe the levels of emissions (mobile, stationary, area, etc.) that provide for meeting reasonable further progress milestones, attainment, and/or maintenance for any criteria pollutant or its precursors.

Emissions offsets, for purposes of § 93.158, are emissions reductions which are quantifiable, consistent with the applicable SIP attainment and reasonable further progress demonstrations, surplus to reductions required by, and credited to, other applicable SIP provisions, enforceable at both the State and Federal levels, and permanent within the timeframe specified by the program.

Emissions that a Federal agency has a continuing program responsibility for means emissions that are specifically caused by an agency carrying out its authorities, and does not include emissions that occur due to subsequent activities, unless such activities are required by the Federal agency. When an agency, in performing its normal program responsibilities, takes actions itself or imposes conditions that result in air pollutant emissions by a non-Federal entity taking subsequent actions, such emissions are covered by the meaning of a continuing program responsibility.

EPA means the Environmental Protection Agency.

Federal action means any activity engaged in by a department, agency, or instrumentality of the Federal government, or any activity that a department, agency or instrumentality of the Federal government supports in any way, provides financial assistance for, licenses, permits, or approves, other than activities related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 *et seq.*). Where the Federal action is a permit, license, or other approval for some aspect of a non-Federal undertaking, the relevant activity is the part, portion, or phase of the non-Federal undertaking that requires the Federal permit, license, or approval.

Federal agency means, for purposes of this subpart, a Federal department, agency, or instrumentality of the Federal government.

Increase the frequency or severity of any existing violation of any standard in any area means to cause a nonattainment area to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented.

Indirect emissions means those emissions of a criteria pollutant or its precursors that:

(1) Are caused by the Federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and

(2) The Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency.

Local air quality modeling analysis means an assessment of localized impacts on a scale smaller than the entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals, which uses an air quality dispersion model to determine the effects of emissions on air quality.

Maintenance area means an area with a maintenance plan approved under section 175A of the Act.

Maintenance plan means a revision to the applicable SIP, meeting the requirements of section 175A of the Act.

Metropolitan Planning Organization (MPO) is that organization designated as being responsible, together with the State, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. 1607.

Milestone has the meaning given in sections 182(g)(1) and 189(c)(1) of the Act.

National ambient air quality standards (NAAQS) are those standards established pursuant to section 109 of the Act and include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter (PM–10), and sulfur dioxide (SO_2).

NEPA is the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*).

Nonattainment area means an area designated as nonattainment under section 107 of the Act and described in 40 CFR part 81.

Precursors of a criteria pollutant are:

(1) For ozone, nitrogen oxides (NOx), unless an area is exempted from NOx requirements under section 182(f) of the Act, and volatile organic compounds (VOC); and

(2) For PM–10, those pollutants described in the PM–10 nonattainment area applicable SIP as significant contributors to the PM–10 levels.

Reasonably foreseeable emissions are projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency.

Regional water and/or wastewater projects include construction, operation, and maintenance of water or wastewater conveyances, water or wastewater treatment facilities, and water storage reservoirs which affect a large portion of a nonattainment or maintenance area.

Regionally significant action means a Federal action for which the direct and indirect emissions of any pollutant represent 10 percent or more of a nonattainment or maintenance area's emission inventory for that pollutant.

Total of direct and indirect emissions means the sum of direct and indirect emissions increases and decreases caused by the Federal action; i.e., the "net" emissions considering all direct and indirect emissions. The portion of emissions which are exempt or presumed to conform under § 93.153 (c),

(d), (e), or (f) are not included in the "total of direct and indirect emissions." The "total of direct and indirect emissions" includes emissions of criteria pollutants and emissions of precursors of criteria pollutants.

§ 93.153 Applicability.

(a) Conformity determinations for Federal actions related to transportation plans, programs, and projects developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 *et seq.*) must meet the procedures and criteria of 40 CFR part 51, subpart T, in lieu of the procedures set forth in this subpart.

(b) For Federal actions not covered by paragraph (a) of this section, a conformity determination is required for each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs (b)(1) or (2) of this section.

(1) For purposes of paragraph (b) of this section, the following rates apply in nonattainment areas (NAA's):

	Tons/ year
Ozone (VOC's or NO_X):	
Serious NAA's	50
Severe NAA's	25
Extreme NAA's	10
Other ozone NAA's outside an ozone transport region	100
Marginal and moderate NAA's inside an ozone transport region:	
VOC	50
NO_X	100
Carbon monoxide:	
All NAA's	100
SO_2 or NO_2:	
All NAA's	100
PM–10:	
Moderate NAA's	100
Serious NAA's	70
Pb:	
All NAA's	25

(2) For purposes of paragraph (b) of this section, the following rates apply in maintenance areas:

	Tons/ year
Ozone (NO_X), SO_2 or NO_2:	
All Maintenance Areas	100
Ozone (VOC's):	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon monoxide:	
All Maintenance Areas	100
PM–10:	
All Maintenance Areas	100
Pb:	
All Maintenance Areas	25

(c) The requirements of this subpart shall not apply to the following Federal actions:

(1) Actions where the total of direct and indirect emissions are below the emissions levels specified in paragraph (b) of this section.

(2) Actions which would result in no emissions increase or an increase in emissions that is clearly de minimis:

(i) Judicial and legislative proceedings.

(ii) Continuing and recurring activities such as permit renewals where activities conducted will be similar in scope and operation to activities currently being conducted.

(iii) Rulemaking and policy development and issuance.

(iv) Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails, and facilities.

(v) Civil and criminal enforcement activities, such as investigations, audits, inspections, examinations, prosecutions, and the training of law enforcement personnel.

(vi) Administrative actions such as personnel actions, organizational changes, debt management or collection, cash management, internal agency audits, program budget proposals, and matters relating to the administration and collection of taxes, duties and fees.

(vii) The routine, recurring transportation of materiel and personnel.

(viii) Routine movement of mobile assets, such as ships and aircraft, in home port reassignments and stations (when no new support facilities or personnel are required) to perform as operational groups and/or for repair or overhaul.

(ix) Maintenance dredging and debris disposal where no new depths are required, applicable permits are secured, and disposal will be at an approved disposal site.

(x) Actions, such as the following, with respect to existing structures, properties, facilities and lands where future activities conducted will be similar in scope and operation to activities currently being conducted at the existing structures, properties, facilities, and lands; for example, relocation of personnel, disposition of federally-owned existing structures, properties, facilities, and lands, rent subsidies, operation and maintenance cost subsidies, the exercise of receivership or conservatorship authority, assistance in purchasing structures, and the production of coins and currency.

(xi) The granting of leases, licenses such as for exports and trade, permits, and easements where activities conducted will be similar in scope and operation to activities currently being conducted.

(xii) Planning, studies, and provision of technical assistance.

(xiii) Routine operation of facilities, mobile assets and equipment.

(xiv) Transfers of ownership, interests, and titles in land, facilities, and real and personal properties, regardless of the form or method of the transfer.

(xv) The designation of empowerment zones, enterprise communities, or viticultural areas.

(xvi) Actions by any of the Federal banking agencies or the Federal Reserve Banks, including actions regarding charters, applications, notices, licenses, the supervision or examination of depository institutions or depository institution holding companies, access to the discount window, or the provision of financial services to banking organizations or to any department, agency or instrumentality of the United States.

(xvii) Actions by the Board of Governors of the Federal Reserve System or any Federal Reserve Bank necessary to effect monetary or exchange rate policy.

(xviii) Actions that implement a foreign affairs function of the United States.

(xix) Actions (or portions thereof) associated with transfers of land, facilities, title, and real properties through an enforceable contract or lease agreement where the delivery of the deed is required to occur promptly after a specific, reasonable condition is met, such as promptly after the land is certified as meeting the requirements of CERCLA, and where the Federal agency does not retain continuing authority to control emissions associated with the lands, facilities, title, or real properties.

(xx) Transfers of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity and assignments of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity for subsequent deeding to eligible applicants.

(xxi) Actions by the Department of the Treasury to effect fiscal policy and to exercise the borrowing authority of the United States.

(3) Actions where the emissions are not reasonably foreseeable, such as the following:

(i) Initial Outer Continental Shelf lease sales which are made on a broad scale and are followed by exploration

and development plans on a project level.

(ii) Electric power marketing activities that involve the acquisition, sale and transmission of electric energy.

(4) Actions which implement a decision to conduct or carry out a conforming program such as prescribed burning actions which are consistent with a conforming land management plan.

(d) Notwithstanding the other requirements of this subpart, a conformity determination is not required for the following Federal actions (or portion thereof):

(1) The portion of an action that includes major new or modified stationary sources that require a permit under the new source review (NSR) program (section 173 of the Act) or the prevention of significant deterioration program (title I, part C of the Act).

(2) Actions in response to emergencies or natural disasters such as hurricanes, earthquakes, etc., which are commenced on the order of hours or days after the emergency or disaster and, if applicable, which meet the requirements of paragraph (e) of this section.

(3) Research, investigations, studies, demonstrations, or training (other than those exempted under paragraph (c)(2) of this section), where no environmental detriment is incurred and/or, the particular action furthers air quality research, as determined by the State agency primarily responsible for the applicable SIP;

(4) Alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations (e.g., hush houses for aircraft engines and scrubbers for air emissions).

(5) Direct emissions from remedial and removal actions carried out under the Comprehensive Environmental Response, Compensation and Liability Act and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA.

(e) Federal actions which are part of a continuing response to an emergency or disaster under paragraph (d)(2) of this section and which are to be taken more than 6 months after the commencement of the response to the emergency or disaster under paragraph (d)(2) of this section are exempt from the requirements of this subpart only if:

(1) The Federal agency taking the actions makes a written determination that, for a specified period not to exceed an additional 6 months, it is impractical to prepare the conformity analyses which would otherwise be required and the actions cannot be delayed due to overriding concerns for public health and welfare, national security interests and foreign policy commitments; or

(2) For actions which are to be taken after those actions covered by paragraph (e)(1) of this section, the Federal agency makes a new determination as provided in paragraph (e)(1) of this section.

(f) Notwithstanding other requirements of this subpart, actions specified by individual Federal agencies that have met the criteria set forth in either paragraph (g)(1) or (g)(2) of this section and the procedures set forth in paragraph (h) of this section are presumed to conform, except as provided in paragraph (j) of this section.

(g) The Federal agency must meet the criteria for establishing activities that are presumed to conform by fulfilling the requirements set forth in either paragraph (g)(1) or (g)(2) of this section:

(1) The Federal agency must clearly demonstrate using methods consistent with this subpart that the total of direct and indirect emissions from the type of activities which would be presumed to conform would not:

(i) Cause or contribute to any new violation of any standard in any area;

(ii) Interfere with provisions in the applicable SIP for maintenance of any standard;

(iii) Increase the frequency or severity of any existing violation of any standard in any area; or

(iv) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area including, where applicable, emission levels specified in the applicable SIP for purposes of:

(A) A demonstration of reasonable further progress;

(B) A demonstration of attainment; or

(C) A maintenance plan; or

(2) The Federal agency must provide documentation that the total of direct and indirect emissions from such future actions would be below the emission rates for a conformity determination that are established in paragraph (b) of this section, based, for example, on similar actions taken over recent years.

(h) In addition to meeting the criteria for establishing exemptions set forth in paragraphs (g)(1) or (g)(2) of this section, the following procedures must also be complied with to presume that activities will conform:

(1) The Federal agency must identify through publication in the Federal Register its list of proposed activities that are presumed to conform and the basis for the presumptions;

(2) The Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, the agency designated under section 174 of the Act and the MPO and provide at least 30 days for the public to comment on the list of proposed activities presumed to conform;

(3) The Federal agency must document its response to all the comments received and make the comments, response, and final list of activities available to the public upon request; and

(4) The Federal agency must publish the final list of such activities in the Federal Register.

(i) Notwithstanding the other requirements of this subpart, when the total of direct and indirect emissions of any pollutant from a Federal action does not equal or exceed the rates specified in paragraph (b) of this section, but represents 10 percent or more of a nonattainment or maintenance area's total emissions of that pollutant, the action is defined as a regionally significant action and the requirements of § 93.150 and §§ 93.155 through 93.160 shall apply for the Federal action.

(j) Where an action otherwise presumed to conform under paragraph (f) of this section is a regionally significant action or does not in fact meet one of the criteria in paragraph (g)(1) of this section, that action shall not be presumed to conform and the requirements of § 93.150 and §§ 93.155 through 93.160 shall apply for the Federal action.

(k) The provisions of this subpart shall apply in all nonattainment and maintenance areas.

§ 93.154 Conformity analysis.

Any Federal department, agency, or instrumentality of the Federal government taking an action subject to this subpart must make its own conformity determination consistent with the requirements of this subpart. In making its conformity determination, a Federal agency must consider comments from any interested parties. Where multiple Federal agencies have jurisdiction for various aspects of a project, a Federal agency may choose to adopt the analysis of another Federal agency or develop its own analysis in order to make its conformity determination.

§ 93.155 Reporting requirements.

(a) A Federal agency making a conformity determination under § 93.158 must provide to the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected Federal land managers, the agency designated under section 174 of the Act and the MPO a 30 day notice which describes the proposed action and the Federal agency's draft conformity determination on the action.

(b) A Federal agency must notify the appropriate EPA Regional Office(s), State and local air quality agencies and, where applicable, affected Federal land managers, the agency designated under section 174 of the Clean Air Act and the MPO within 30 days after making a final conformity determination under § 93.158.

§ 93.156 Public participation.

(a) Upon request by any person regarding a specific Federal action, a Federal agency must make available for review its draft conformity determination under § 93.158 with supporting materials which describe the analytical methods and conclusions relied upon in making the applicability analysis and draft conformity determination.

(b) A Federal agency must make public its draft conformity determination under § 93.158 by placing a notice by prominent advertisement in a daily newspaper of general circulation in the area affected by the action and by providing 30 days for written public comment prior to taking any formal action on the draft determination. This comment period may be concurrent with any other public involvement, such as occurs in the NEPA process.

(c) A Federal agency must document its response to all the comments received on its draft conformity determination under § 93.158 and make the comments and responses available, upon request by any person regarding a specific Federal action, within 30 days of the final conformity determination.

(d) A Federal agency must make public its final conformity determination under § 93.158 for a Federal action by placing a notice by prominent advertisement in a daily newspaper of general circulation in the area affected by the action within 30 days of the final conformity determination.

§ 93.157 Frequency of conformity determinations.

(a) The conformity status of a Federal action automatically lapses 5 years from the date a final conformity determination is reported under § 93.155, unless the Federal action has been completed or a continuous program has been commenced to implement that Federal action within a reasonable time.

(b) Ongoing Federal activities at a given site showing continuous progress are not new actions and do not require periodic redeterminations so long as such activities are within the scope of the final conformity determination reported under § 93.155.

(c) If, after the conformity determination is made, the Federal action is changed so that there is an increase in the total of direct and indirect emissions, above the levels in § 93.153(b), a new conformity determination is required.

§ 93.158 Criteria for determining conformity of general Federal actions.

(a) An action required under § 93.153 to have a conformity determination for a specific pollutant, will be determined to conform to the applicable SIP if, for each pollutant that exceeds the rates in § 93.153(b), or otherwise requires a conformity determination due to the total of direct and indirect emissions from the action, the action meets the requirements of paragraph (c) of this section, and meets any of the following requirements:

(1) For any criteria pollutant, the total of direct and indirect emissions from the action are specifically identified and accounted for in the applicable SIP's attainment or maintenance demonstration;

(2) For ozone or nitrogen dioxide, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area through a revision to the applicable SIP or a similarly enforceable measure that effects emission reductions so that there is no net increase in emissions of that pollutant;

(3) For any criteria pollutant, except ozone and nitrogen dioxide, the total of direct and indirect emissions from the action meet the requirements:

(i) Specified in paragraph (b) of this section, based on areawide air quality modeling analysis and local air quality modeling analysis; or

(ii) Meet the requirements of paragraph (a)(5) of this section and, for local air quality modeling analysis, the requirement of paragraph (b) of this section;

(4) For CO or PM–10—

(i) Where the State agency primarily responsible for the applicable SIP determines that an areawide air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in paragraph (b) of this section, based on local air quality modeling analysis; or

(ii) Where the State agency primarily responsible for the applicable SIP determines that an areawide air quality modeling analysis is appropriate and that a local air quality modeling analysis is not needed, the total of direct and indirect emissions from the action meet the requirements specified in paragraph (b) of this section, based on areawide modeling, or meet the requirements of paragraph (a)(5) of this section; or

(5) For ozone or nitrogen dioxide, and for purposes of paragraphs (a)(3)(11) and (a)(4)(ii) of this section, each portion of the action or the action as a whole meets any of the following requirements:

(i) Where EPA has approved a revision to an area's attainment or maintenance demonstration after 1990 and the State makes a determination as provided in paragraph (a)(5)(i)(A) of this section or where the State makes a commitment as provided in paragraph (a)(5)(i)(B) of this section:

(A) The total of direct and indirect emissions from the action (or portion thereof) is determined and documented by the State agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable SIP;

(B) The total of direct and indirect emissions from the action (or portion thereof) is determined by the State agency responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed an emissions budget specified in the applicable SIP and the State Governor or the Governor's designee for SIP actions makes a written commitment to EPA which includes the following:

(*1*) A specific schedule for adoption and submittal of a revision to the SIP which would achieve the needed emission reductions prior to the time emissions from the Federal action would occur;

(*2*) Identification of specific measures for incorporation into the SIP which would result in a level of emissions which, together with all other emissions in the nonattainment or maintenance area, would not exceed any emissions budget specified in the applicable SIP;

(*3*) A demonstration that all existing applicable SIP requirements are being implemented in the area for the pollutants affected by the Federal action, and that local authority to

implement additional requirements has been fully pursued;

(4) A determination that the responsible Federal agencies have required all reasonable mitigation measures associated with their action; and

(5) Written documentation including all air quality analyses supporting the conformity determination;

(C) Where a Federal agency made a conformity determination based on a State commitment under paragraph (a)(5)(i)(B) of this section, such a State commitment is automatically deemed a call for a SIP revision by EPA under section 110(k)(5) of the Act, effective on the date of the Federal conformity determination and requiring response within 18 months or any shorter time within which the State commits to revise the applicable SIP;

(ii) The action (or portion thereof), as determined by the MPO, is specifically included in a current transportation plan and transportation improvement program which have been found to conform to the applicable SIP under 40 CFR part 51, subpart T, or 40 CFR part 93, subpart A;

(iii) The action (or portion thereof) fully offsets its emissions within the same nonattainment or maintenance area through a revision to the applicable SIP or an equally enforceable measure that effects emission reductions equal to or greater than the total of direct and indirect emissions from the action so that there is no net increase in emissions of that pollutant;

(iv) Where EPA has not approved a revision to the relevant SIP attainment or maintenance demonstration since 1990, the total of direct and indirect emissions from the action for the future years (described in § 93.159(d) do not increase emissions with respect to the baseline emissions:

(A) The baseline emissions reflect the historical activity levels that occurred in the geographic area affected by the proposed Federal action during:

(1) Calendar year 1990;

(2) The calendar year that is the basis for the classification (or, where the classification is based on multiple years, the most representative year), if a classification is promulgated in 40 CFR part 81; or

(3) The year of the baseline inventory in the PM–10 applicable SIP;

(B) The baseline emissions are the total of direct and indirect emissions calculated for the future years (described in § 93.159(d)) using the historic activity levels (described in paragraph (a)(5)(iv)(A) of this section) and appropriate emission factors for the future years; or

(v) Where the action involves regional water and/or wastewater projects, such projects are sized to meet only the needs of population projections that are in the applicable SIP.

(b) The areawide and/or local air quality modeling analyses must:

(1) Meet the requirements in § 93.159; and

(2) Show that the action does not:

(i) Cause or contribute to any new violation of any standard in any area; or

(ii) Increase the frequency or severity of any existing violation of any standard in any area.

(c) Notwithstanding any other requirements of this section, an action subject to this subpart may not be determined to conform to the applicable SIP unless the total of direct and indirect emissions from the action is in compliance or consistent with all relevant requirements and milestones contained in the applicable SIP, such as elements identified as part of the reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice requirements.

(d) Any analyses required under this section must be completed, and any mitigation requirements necessary for a finding of conformity must be identified before the determination of conformity is made.

§ 93.159 Procedures for conformity determinations of general Federal actions.

(a) The analyses required under this subpart must be based on the latest planning assumptions.

(1) All planning assumptions must be derived from the estimates of population, employment, travel, and congestion most recently approved by the MPO, or other agency authorized to make such estimates, where available.

(2) Any revisions to these estimates used as part of the conformity determination, including projected shifts in geographic location or level of population, employment, travel, and congestion, must be approved by the MPO or other agency authorized to make such estimates for the urban area.

(b) The analyses required under this subpart must be based on the latest and most accurate emission estimation techniques available as described below, unless such techniques are inappropriate. If such techniques are inappropriate and written approval of the EPA Regional Administrator is obtained for any modification or substitution, they may be modified or another technique substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program.

(1) For motor vehicle emissions, the most current version of the motor vehicle emissions model specified by EPA and available for use in the preparation or revision of SIPs in that State must be used for the conformity analysis as specified in paragraphs (b)(1)(i) and (ii) of this section:

(i) The EPA must publish in the **Federal Register** a notice of availability of any new motor vehicle emissions model; and

(ii) A grace period of 3 months shall apply during which the motor vehicle emissions model previously specified by EPA as the most current version may be used. Conformity analyses for which the analysis was begun during the grace period or no more than 3 years before the **Federal Register** notice of availability of the latest emission model may continue to use the previous version of the model specified by EPA.

(2) For non-motor vehicle sources, including stationary and area source emissions, the latest emission factors specified by EPA in the "Compilation of Air Pollutant Emission Factors (AP–42)" [1] must be used for the conformity analysis unless more accurate emission data are available, such as actual stack test data from stationary sources which are part of the conformity analysis.

(c) The air quality modeling analyses required under this subpart must be based on the applicable air quality models, data bases, and other requirements specified in the most recent version of the "Guideline on Air Quality Models (Revised)" (1986), including supplements (EPA publication no. 450/2–78–027R) [2], unless:

(1) The guideline techniques are inappropriate, in which case the model may be modified or another model substituted on a case-by-case basis or, where appropriate, on a generic basis for a specific Federal agency program; and

(2) Written approval of the EPA Regional Administrator is obtained for any modification or substitution.

(d) The analyses required under this subpart, except § 93.158(a)(1), must be based on the total of direct and indirect emissions from the action and must reflect emission scenarios that are expected to occur under each of the following cases:

(1) The Act mandated attainment year or, if applicable, the farthest year for which emissions are projected in the maintenance plan;

[1] Copies may be obtained from the Technical Support Division of OAQPS, EPA, MD–14, Research Triangle Park, NC 27711.

[2] See footnote 1 at § 93.159(b)(2).

(2) The year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis; and

(3) Any year for which the applicable SIP specifies an emissions budget.

§ 93.160 Mitigation of air quality impacts.

(a) Any measures that are intended to mitigate air quality impacts must be identified and the process for implementation and enforcement of such measures must be described, including an implementation schedule containing explicit timelines for implementation.

(b) Prior to determining that a Federal action is in conformity, the Federal agency making the conformity determination must obtain written commitments from the appropriate persons or agencies to implement any mitigation measures which are identified as conditions for making conformity determinations.

(c) Persons or agencies voluntarily committing to mitigation measures to facilitate positive conformity determinations must comply with the obligations of such commitments.

(d) In instances where the Federal agency is licensing, permitting or otherwise approving the action of another governmental or private entity, approval by the Federal agency must be conditioned on the other entity meeting the mitigation measures set forth in the conformity determination.

(e) When necessary because of changed circumstances, mitigation measures may be modified so long as the new mitigation measures continue to support the conformity determination. Any proposed change in the mitigation measures is subject to the reporting requirements of § 93.156 and the public participation requirements of § 93.157.

(f) The implementation plan revision required in § 93.151 shall provide that written commitments to mitigation measures must be obtained prior to a positive conformity determination and that such commitments must be fulfilled.

(g) After a State revises its SIP to adopt its general conformity rules and EPA approves that SIP revision, any agreements, including mitigation measures, necessary for a conformity determination will be both State and federally enforceable. Enforceability through the applicable SIP will apply to all persons who agree to mitigate direct and indirect emissions associated with a Federal action for a conformity determination.

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Corrections

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Determining Conformity of General Federal Actions to State or Federal Implementation Plans

Correction

In rule document 93-28818 beginning on page 63214 in the issue of Tuesday, November 30, 1993, make the following correction:

§ 93.150 [Corrected]

On page 63253, in the second column, in § 93.150(c)(2)(i), in the first line, "December 30, 1993," should read "January 31, 1994,".

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