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June 26, 2020

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# **STORM WATER POLLUTION PREVENTION PLAN**

## **Middle DP Road Recovery Effort Los Alamos National Laboratory**

a requirement of the  
**NPDES GENERAL PERMIT**  
for Storm Water Discharges from Construction Activities

Prepared By:

Triad National Security, LLC (Triad)  
Environmental Protection & Compliance Division - Compliance Programs Group (EPC-CP)

**June 26, 2020**

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**STORM WATER POLLUTION PREVENTION PLAN  
MIDDLE DP ROAD RECOVERY EFFORT**

**LOS ALAMOS NATIONAL LABORATORY**

**PREFACE**

The United States Environmental Protection Agency (EPA) has issued a final 2017 Construction General Permit (CGP) that covers discharges of stormwater from construction sites.

The 2017 National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activity (Appendix D) includes the following requirements:

- conduct a critical habitat and threatened/endangered species study;
- develop and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with good engineering practices;
- submit a Notice of Intent (NOI);
- install and maintain erosion and stormwater controls;
- perform and document storm water inspections during construction and site stabilization;
- amend the SWPPP as necessary;
- submit a Notice of Termination (NOT) following project completion and final stabilization of disturbed areas.

Authorization to discharge storm water is required under this Permit for both large and small construction projects disturbing more than one (1) acre or part of a larger common plan of development that collectively disturbs more than one (1) acre.

All parties that meet the definition of Operator must be permitted. Each permittee is not required to develop and implement a separate SWPP Plan. It is required that there be at least one SWPP Plan for a site that incorporates the required elements for all Operators.

The 2017 CGP number for New Mexico (Region 6) is NMR100000. This Plan, which has been developed for Triad National Security, LLC (Triad), describes the nature and sequencing of construction activities, potential sources of pollution, and identifies the Best Management Practices (BMPs) to minimize the potential for erosion and storm water pollution. The Plan was developed in accordance with the provisions of the Clean Water Act (33 U.S.C. § 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4), and the regulations established by the U.S. Environmental Protection Agency (EPA) for National Pollutant Discharge Elimination System (NPDES) General Permits for Storm Water Discharges From Construction Activities.

**STORM WATER POLLUTION PREVENTION PLAN  
MIDDLE DP ROAD RECOVERY EFFORT**

**CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Delegation of Authority Letter, NOI in Appendix D.

**Organization: Triad National Security, LLC (Triad)**

**Contact: Jennifer Payne**

**Title: Project Manager**



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(Signature)

29 June 2020

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(Date)

## 1 OPERATORS

The “operator” of a storm water discharge associated with construction activity is the individual or party responsible for applying to the EPA for NPDES CGP coverage. The EPA defines an “operator” to be anyone who meets either of the following two criteria:

- 1) Has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications, or
- 2) Has day-to-day operational control of project activities.

The following permittee has day-to-day operational control over construction plan implementation and is authorized to make modifications to the plans and specifications as necessary:

**Triad National Security, LLC (Triad)**  
 Los Alamos National Laboratory (LANL)  
 Los Alamos, NM 87545  
 Contact: Jennifer Payne, Project Manager

The permittee with day-to-day operational control of project activities is:

**Triad National Security, LLC (Triad)**  
 Los Alamos National Laboratory (LANL)  
 Los Alamos, NM 87545  
 Contact: Will Gonzales, Construction Project Manager

Triad will be the active operator for utility trench excavation, management of potentially contaminated excavated material piles, and trench backfill. This scope is part of a larger common plan construction project managed by the Los Alamos County (LAC) Department of Public Utilities. LAC Department of Utilities is responsible for the remainder of the construction project.

The Operator with day-to-day operational control of project activities must implement and maintain BMPs in the manner specified in the SWPPP. Operators shall ensure that project plans and specifications meet the minimum requirements of this SWPP Plan. Operators shall comply with the terms and conditions of the Permit. Operators will implement the SWPPP until final stabilization is complete or the notice of termination (NOT) has been submitted along with another operator's NOI submission in accordance with Appendix I Section I.12.3 of the CGP addressing changes to authorization.

### 1.1 Stormwater Team

A Stormwater Team will be comprised of personnel who are responsible for overseeing the development of this SWPPP, any modifications to the SWPPP and for compliance with the requirements of the 2017 CGP. Each member of the stormwater team must have ready access to either an electronic or paper copy of applicable portions of the 2017 CGP and this SWPPP. SWPPP Preparer qualifications are included in Appendix I.

Operator	Name	Title	Contact	Responsible for:
LANL EPC-CP	See Inspector List App I	Inspector	665-5880	Preparing NOI/NOT, Inspections, SWPPP Modifications, Consultations as SMEs
Triad	Jennifer Payne	Recovery Project Manager	667 7912	Certifying SWPPP, implementing SWPPP, and signing inspection documents

Triad	Will Gonzales	Construction Project Manager	665 4489	Implementing SWPPP and Corrective Actions, and signing inspection documents
Triad	David Sarnowski	Project Superintendent	665-8106	Implementing SWPPP and Corrective Actions
Triad	Erik Chamberlain	Field Superintendent	505-695-4527	Implementing SWPPP and Corrective Actions

**SWPPP Preparer:**

Name	Title	Company	Contact
Tim Zimmerly	CISEC, CPESC	Triad	665-2397
Terrill Lemke	CISEC, CPESC, PE	Triad	665-2397
Alethea Banar	CISEC	Triad	699-5836

## 2 CONSTRUCTION ACTIVITIES AND CONTROLS

This section describes the nature of construction activities, design, installation and maintenance of stormwater controls, and stabilization measures for this project in order to minimize the discharge of pollutants in stormwater from construction activities. Site map(s) in Appendix B will show locations of controls, areas of earth disturbance, and other site features to be documented as required by the CGP. The Operator with day-to-day control will implement controls as needed and as required in this SWPPP and the CGP within required timeframes.

### 2.1 Nature of Construction Activities

#### Description of Construction Activities and Site Conditions

The project area is on Los Alamos County Property south of DP Road and south of the existing chain link fence established during the clean-up of Material Disposal Area B within the former Technical Area 21. This land was conveyed by the Department of Energy to Los Alamos County. Triad is working with Los Alamos County (LAC) Department of Public Utilities for access. Work will be coordinated with the site Superintendent and the Lead Radiation Control Technician for briefing on hazards.

Pursuant to letter from J. Jung to A. Martinez, *Additional Middle DP Road Recovery Effort, Triad National Security, LLC Support for Los Alamos County Department of Public Utilities Restart*, dated June 4, 2020 (MAI: 31PM-2020-001305-3), Triad has initiated critical work at the direction of the Department of Energy (DOE), National Nuclear Security Administration Los Alamos Field Office Contracting Officer. The work is deemed critical due to exposure of potentially hazardous material from former LANL operations.

The scope of this work is to complete excavation of a utility trenches for the LAC Department of Public Utilities. The utility trenches are part of a larger common plan construction project managed by the LAC Department of Public Utilities. Radioactive debris has been encountered in this area and is anticipated as excavation continues. Excavation will be to an approximate depth of 23 feet and is expected to generate approximately 600-800 cubic yards. All spoils from the excavation will be placed on tarps inside of the Land Conveyance and Transfer tract A-16-A fence. No spoils will be removed from the site. Some samples will be collected and sent to the Health Physics Analytic Laboratories at LANL for analysis. Radiological Control Technicians have been on site since February supporting work occurring in the area and continued support will be required. This area has an approved Radiological Work Permit. Once the trenching and the bench are in place, this project may include placement of a lift station into the trench using a hoist/crane.

Triad will backfill the trenches with material from the spoils piles. Spoils that cannot be placed back into a trench will be placed in the designated area within the boundary of the Middle DP Road Site and covered with visqueen/tarps and gravel/sand bags. Triad will manage these spoils piles until DOE-EM develops and implements a mitigation plan.

Final stabilization of the site associated with LAC construction will be accomplished by LAC.

Approximately 3 acres will be disturbed for this project.

#### Construction Support Activities

Staging of equipment and materials will be conducted on areas as proposed in the site map in Appendix B. Any other areas designated for staging and laydown activities will require updates to this SWPPP. Down gradient perimeter sediment controls will be required for potential pollutant generating activities.

#### Proposed Schedule

As soil disturbing construction activities commence, as construction activities temporarily or permanently cease on a portion of the site and as stabilization measures are initiated, actual dates will be added to the table below. The projected schedule for the project work is as follows:

Schedule Date (Estimated)	Activity	Actual Date
June 15, 2020	Mobilization	Jun 15, 2020
June 15, 2020	Layout, BMP installation	Jun 15, 2020
June 22, 2020	Excavate area for lift station	June 22, 2020
June 29, 2020 ASB 7/1/20	Excavate sewer and electrical line trenches	
July 6, 2020	Backfill/Compact trench excavated by Parker Construction earlier this year.	June 22, 2020 start date July 1, 2020 end date
July 21, 2020	Stabilize remaining spoils pile(s) ul tarps and gravel/sand bags.	June 22, 2020 start date July 21, 2020 end date
July 21, 2020	Plastic sheeting installed over former Parker Construction trench and covered w/ base course for stabilization	

Project Business days and hours:

Monday through Friday 7:30 – 5:00

## 2.2 Design Requirements

The New Mexico Environment Department State Certification of the NPDES CGP, as provided in Section 9.4.1 of the Permit, requires that this SWPPP identify site-specific stormwater, sediment, and erosion control measures that are designed to prevent an increase in the sediment yield and stormwater flow velocity from pre-construction, pre-development conditions. Any stormwater run-on to the site would also have to be factored into the design of these controls. If permanent drainage features are designed to divert water around the site, these features must also meet the State Certification requirements. These requirements apply to stormwater discharges both during construction and after construction operations have been completed.

## **Energy Independence and Security Act (EISA)**

This project is not being done as Federal Facility and EISA Section 438 is not applicable.

### **2.3 Control Measures**

See the site map in Appendix B for approximate locations of temporary controls. Appendix E has details and specs for installation of various sediment and erosion controls. Locations may change based on site conditions and planning. Identified controls are based on a preliminary assessment of the site and the existing conditions. Depending on how the work is completed, additional controls may be required as deemed necessary to meet Permit requirements. Before the project begins, the project personnel will meet with EPC-CP personnel to discuss the SWPPP and CGP requirements. The SWPPP will be updated and finalized with input from the project personnel, which may include alternative proposals for sediment and erosion controls. See Appendix F for any applicable design details.

#### **Rough Grading and Trenching Sediment and Erosion Controls**

- Install wire backed silt fence or Ertec S-Fence along all the down gradient perimeters of earth disturbing activities. Where bedrock prevents trenching of S-Fence or silt fence, gravel bags may be installed as perimeter controls.
- For areas impacted by trenching where concentrated flows are a concern, gravel bags or rock check dams constructed with NMDOT Class A angular rock (minimum 4 inch size) may be installed upgradient from the trench to dissipate flows and reduce impacts to disturbed soils. Sediments will be managed with the installation of gravel bags or rock check dams downgradient from the trench.
- When practicable, utilize grubbed material and soils from trenching activities for the installation of brush barriers and/or compacted earthen berms down slope of disturbed areas. These will be installed next to existing perimeter controls to serve as secondary perimeter controls.
- Install base course or other temporary control over the area disturbed by the existing trench excavated by Parker Construction for LAC Department of Public Utilities after backfilling.

#### **Permanent Controls**

- Los Alamos County is responsible for final site stabilization pending completion of the construction project.

#### **Soil Stockpile Controls**

- Excavated material that may contain potentially hazardous materials as indicated by field screening and analytical laboratory determination should be segregated, placed on tarps, covered by visqueen/tarps, and tarps secured by gravel/sand bags.
- Soil stockpiles on site will be protected with the site perimeter sediment controls which consist of berms, gravel bags or silt fence.
- If a stockpile or land clearing debris pile composed, in whole or in part, of sediment and/or soil not identified as potentially hazardous is inactive/unused for 14 or more days, provide cover (such as tarps) or appropriate stabilization such as soil tackifier or hydromulching.

#### **Trenching**

- When trenching, place soil upslope of trench if possible. Otherwise, perimeter sediment controls must be installed below the stockpiled soils.

#### **Sediment Tracking Controls**

- If tracking of sediment onto adjacent asphalt occurs it will be swept and removed by the end of the same work day.

- If tracking onto adjacent pavement becomes a problem install a stabilized construction entrance/exit per design details in Appendix E.

#### Waste Management Controls

- All concrete wash water, if applicable to this project, will be directed into a leak-proof container sized so that no overflows will occur.
- Construction and domestic waste will be contained within appropriate sized containers that are closed or covered (i.e., lids or tarps) when not in use and at the end of each workday. Any waste material that overflows or escapes a container will be cleaned up immediately.
- Material shall be transported in appropriate containers or vehicles so that facility locations outside the project boundaries and public roadways will not be adversely impacted through sediment tracking or waste spillage.

#### Pollution Prevention Controls

- Portable lavatories will be maintained and secured in accordance with manufacturer recommendations to prevent from tipping over in windy conditions or being knocked over; lavatory waste will be treated off-site. Lavatories will be placed on a level area.
- All vehicles and equipment will be observed for leaks and, if found, drip pans will be used until fixed. Leaks will be fixed as soon as practicable and leaking vehicles and equipment will be removed from service and repaired. Any leaks discovered shall be recorded in Appendix C. Spills of all products will be cleaned up and managed per applicable LANL procedures and state and federal regulations.
- Fueling operations will be completed such that head space is provided within fuel tanks to allow for fuel expansion. Secondary containment structures or other similarly effective means of preventing the discharge of spilled or leaked chemicals will be utilized.

#### Dust Control

- Where necessary, dust generation on-site shall be minimized with the application of water and/or an approved soil stabilizer. Water used to suppress dust generation will be applied at a rate to avoid discharge of water from the site.

#### Potholing

- Any water and sediment generated from potholing activities must be placed within a defined area (not within the boundary of a PRS) surrounded by compacted earthen berms or other appropriate controls. The washout must be sized with enough capacity to accommodate the project and prevent overflow discharge due to precipitation. Once liquids have evaporated and potholing is complete, spread the remaining solids onsite and stabilize per CGP and SWPPP requirements.

## 2.4 Stabilization Measures

**Stabilization shall be initiated immediately and completed no more than 14 days after construction activities have permanently or temporarily ceased in any portion of the project area.** The Operator with day-to-day control of Project activities is responsible for implementation and maintenance of temporary stabilization methods.

Stabilization may consist of base course, rolled erosion control products, revegetation/reseeding per LANL specifications and application of TRM on slopes and concentrated flow areas as applicable. All areas disturbed will be stabilized per CGP requirements.

Los Alamos County is responsible for final stabilization of the site pending completion of the construction project.

Once final stabilization is achieved temporary sediment controls (i.e., gravel bags/silt fence) will be removed.

## 2.5 Rationale for Selected BMPs

BMP	Rationale
Temporary gravel bag and rock check dams	Gravel bags and/or rock placed as check dams in small swales will reduce velocity of concentrated stormwater, reduce erosion, and allow for sediment retention.
Gravel bags for sediment control	Gravel bags are effective for sediment perimeter control if overlapped and placed correctly. They are easily moved for access and easily maintained.
Base Course	Base course will provide effective mulch cover to prevent erosion of soils.
Rolled Erosion Control Products	Turf Reinforcement Matting and Erosion Control Blankets will promote permanent vegetation growth by controlling erosion. It will stabilize and retain the soil on slopes and in swales where erosion is more likely to occur. May serve as permanent stabilization as well.
Earth Berms	Berms can be sized to slow stormwater runoff and reduce peak flows and as a run on diversion control. Especially useful in combination with swales.
S-Fence	S-Fence is effective as a sediment control perimeter and will intercept sheet flow and detain sediment from the disturbed area and decrease velocity of runoff. It requires minimal maintenance because it is rigid and is UV stable. It is not suitable for concentrated flow.
Hydromulch	When used in conjunction with seeding it will speed establishment of vegetation, maintain moisture and protect soil from erosion.
Tarps	Tarps will be used to minimize stormwater infiltration into spoils piles and erosion.

### 3 POLLUTION PREVENTION

#### 3.1 Potential Pollutants

Potential pollutants that could have an effect on the quality of storm water discharges from this project may include but are not limited to:

- Construction Equipment (i.e. graders, excavator, back hoe, trucks, compressors, generators, etc.)
- Sediment from exposed areas, excavations, and material or spoils stockpiles
- Construction materials (concrete, asphalt, base course)
- Vehicle fluids and fluids from construction equipment leaks (i.e. hydraulic fluid, motor oil, gasoline, and diesel fuel, and lubricants)
- Construction trash
- Portable lavatories

All equipment and materials used during the project will be stored upslope of the site's structural controls. Additional appropriate controls including, but not limited to: secondary containment, drip pans, berthing and covering; will be established based on site conditions and the type of equipment/materials used. If additional construction and waste materials are stored on site, these sections will be updated to reflect these materials, including a description of controls and storage practices, designed to minimize exposure of the materials to storm water, and spill prevention and response practices.

#### 3.2 Non-stormwater Discharges

Certain non-storm water discharges are allowed under the CGP provided they are not routed to disturbed areas of the site (unless used to control dust and irrigate vegetation in stabilized areas) or to a watercourse and that discharges comply with all applicable sediment and erosion control requirements. Consult with EPC-CP to ensure any discharges meet all applicable Permit requirements.

Anticipated non-stormwater discharges associated with this project include:

- Potable water including uncontaminated water line flushings
- Water used to control dust

The Operator with day-to-day control will ensure that if any activities listed above result in runoff, appropriate controls such as rock check structures and gravel bags will be established to ensure erosion is minimized and any sediment is contained.

If ground water is encountered during any soil disturbing activities, discharges are prohibited unless managed according to New Mexico Environment Department conditions and notifications. Contact EPC-CP personnel before discharging any ground water encountered during trenching or excavating.

#### 3.3 Dewatering

If stormwater accumulates in any trenches or excavations and dewatering is necessary, the discharge of pollutants will be minimized. Discharges are prohibited unless managed by appropriate controls:

- Controls such as a sediment basin, sediment trap, dewatering tank, weir tank, or filtration system designed to remove sediment will be utilized.
- To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water. Discharges to watercourses are prohibited.
- At points where dewatering water is discharged velocity dissipation requirements per Part 2.2.11 of the CGP will be implemented to prevent erosion.

### 3.4 Receiving Waters

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)

1. Los Alamos Canyon (DP Canyon to upper LANL bnd)

#### Impaired Waters / TMDLs (Answer the following for each surface water listed in Table above)

	Is this surface water listed as "impaired"?	If you answered yes, then answer the following:		
		What pollutant(s) are causing the impairment?	Tier 2 Waters?	Has a TMDL been completed?
1.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PCBs, Cyanide, Total Recoverable Selenium, Gross Alpha Adjusted, Mercury	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

### 3.5 Buffers

Activities involving soil disturbance will not occur within 50 feet of a watercourse.

### 3.6 Spill Prevention, Response & Reporting

Spill Prevention for this project includes inspecting equipment regularly for safety, cleanliness and leaks and implementation of appropriate controls at staging areas. Equipment found to be leaking will be removed from service and repaired. A spill kit will be staged on-site to respond to any spills or leaks. The site superintendent is responsible for ensuring all site personnel are aware of the procedures for responding to spills and the location of all spill kits.

Discharges of toxic or hazardous substances from a spill or other release are prohibited. Spills or releases shall be reported in accordance with LANL requirements. If fire or explosion is present, or if the potential for such exists, the situation will be reported by dialing 911.

Emergency Management & Response (EM&R) has been appointed by the Laboratory Director as the organization responsible for emergency management at the Laboratory. All uncontrollable spills or releases must be reported to the EM&R Office by calling 667-6211 or, after hours, at 667-7080. In the event of a spill, the EM&R Office will determine appropriate cleanup procedures and will notify the individuals or organization. If fire or explosion hazards are present, or if the potential for such exists, the situation must be reported by dialing 911 from a non-cellular phone or by activating a fire pull box. In accordance with LANL requirements, internal spill reporting will be completed in the event of any release. Spill reports will be completed by the LANL organization responsible for overseeing site operations, and copies of the reports will be maintained by both the responsible organization and EPC-CP. Federal and state reporting is the responsibility of EPC-CP, and the determination for such notification will be made by EPC-CP and the EM&R Office in accordance with Laboratory and DOE policies and federal and state regulatory reporting requirements.

In the event of a release equal to or in excess of a reportable quantity, the SWPP Plan will be amended. All spills over 1 quart will be documented in the Spill Tracking Table (Appendix C). As per LANL Procedures and EPA Regulations, any facility with a total aboveground fuel and oil storage capacity greater than 1,320 gallons including a de minimis container size of 55 gallons must have a Spill Prevention Control and Countermeasures Plan (SPCC).

## 4 PROCEDURES AND REQUIREMENTS

### 4.1 Inspections

Disturbed areas, structural control measures, staging areas, and areas that have been stabilized shall be inspected at least once every **seven (7) calendar days**, and within 24 hours or the next working day of the end of a storm event equal to or greater than  $\frac{1}{4}$  inch of precipitation. If the entire site has been temporarily stabilized, or during seasonal arid periods, inspections shall be conducted twice per month for the first month, no more than 14 days apart, then once per month in any stabilized area.

Inspections to be performed by qualified personnel shall include the following:

- All areas that have been cleared, graded, or excavated where stabilization has not yet been implemented.
- All stormwater controls (including pollution prevention measures) installed at the site to comply with this permit.
- Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit.
- All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater.
- All points of discharge from the site.
- All locations where stabilization measures have been implemented.

Areas considered unsafe at the time of the inspection are not required to be inspected.

Inspections shall be documented on the inspection form provided in Appendix I and will be retained in the SWPPP under Appendix J. Operators shall certify each inspection report in accordance with Appendix I, Part I.11 of the CGP. Inspections shall be continued until final stabilization of the site is achieved.

Inspector qualifications are included in Appendix I.

Precipitation Event:

- The CGP requires that permittees complete inspections within 24 hours of a  $\frac{1}{4}$  inch or greater storm event, or the occurrence of runoff from snowmelt sufficient to cause a discharge.
- Inspections will only be conducted during the project's normal working hours as permitted by the CGP. Rain data will be taken from the LANL Met Tower TA-53. Rain gage at the LAC Airport will be used as a backup data source.

### 4.2 Maintenance

Stormwater controls must remain in effective operation condition during permit coverage and must be protected from activities that would reduce their effectiveness. Controls will be inspected as required and corrective actions will be documented on inspection forms and corrective action forms as discovered. Repairs or modifications must be made according to the following schedule:

- Where there is evidence of accumulated sediment adjacent to drop inlet protection measures, the deposited sediment must be removed by the end of the same work day.
- Initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.
- When installation of a new erosion or sediment control or significant repair is needed, installation or repair will be completed within 7 calendar days from the time of discovery where feasible. If it is infeasible, the reason it is infeasible and the schedule for installing the control measures or making it operational as soon as practicable after the 7-day timeframe will be documented. Where these actions result in changes to any of the stormwater controls or procedures

documented in this SWPPP, the SWPPP will be modified accordingly within 7 calendar days of completing the work.

#### **4.3 Corrective Action Reporting**

A corrective action report shall be completed for corrective actions taken in accordance with Part 5.4 of the CGP. A blank corrective action report will be kept in Appendix I. Completed corrective action reports will be kept in Appendix J. Corrective actions will be taken and documented for the following conditions:

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4 of the CGP);
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
- Site discharges are causing an exceedance of applicable water quality standards;
- A prohibited discharge has occurred; and
- Required routine maintenance has not been performed.

Within 24 hours of completing the corrective action, document the actions taken to address the condition, including whether any SWPPP modifications are required. Operators shall also certify each corrective action report in accordance with Appendix I, Part I.11 of the CGP and maintain such reports in Appendix J of this Plan.

#### **4.4 SWPPP Modifications**

This SWPP Plan, including site maps, will be modified within 7 calendar days under the following conditions:

- New operators become active in construction activities on the site or changes are made to the construction plans, stormwater control measures, pollution prevention measures, or other activities at the site that are no longer accurately reflected in the SWPPP. This includes changes made due to required corrective actions.
- Areas on the site map where operational control has been transferred (and the date of transfer) since permit coverage was initiated.
- Inspections or investigations by site staff, or by state or federal officials determine that SWPPP modifications are necessary for compliance with the CGP.
- EPA determines it is necessary to impose additional requirements on site discharges. The following must be included in the SWPPP:
  - A copy of any correspondence describing such requirements.
  - A description of the stormwater control measures that will be used to meet such requirements.
- To reflect any revisions to applicable federal or state requirements that affect the stormwater control measures implemented at the site.

A record of SWPPP modifications including a summary of the changes, authorization, dates and notifications to other operators will be maintained using the SWPPP Modification Tracking Log provided in Appendix A.

#### **4.5 Training**

The following personnel at a minimum must receive training in order to understand the requirements of the CGP and their specific responsibilities with respect to the requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention measures)

- Personnel responsible for the application and storage of treatment chemicals (if applicable)
- Personnel who are responsible for conducting inspections as required in Part 4 of the CGP
- Personnel who are responsible for taking corrective actions as required in Part 5 of the CGP.

Required project personnel must be trained to understand the following if related to the scope of their job duties:

- The location of all stormwater controls on the site required by this permit, and how they are to be maintained
- The proper procedures to follow with respect to the permit's pollution prevention requirements
- When and how to conduct inspections, record applicable findings and take corrective actions.

Records of training will be maintained in Appendix H.

#### **4.6 Record Keeping**

A copy of the SWPP Plan will be maintained onsite for the use of all operators and those identified in the SWPP Plan as having on-site responsibilities, the EPA, EPC-CP representatives, and state and federal agencies until the project is closed under the conditions of the CGP. The Plan will contain required signatures, a copy of permit language, all reports required by permit coverage, a copy of the complete NOI (once posted on EPA's website), and any other applicable documentation. Items that will be maintained and attached to the SWPP include:

- SWPPP Modification Records (Appendix A)
- Site Maps (Appendix B)
- Spill Tracking Form (Appendix C)
- SWPPP Training (Appendix H)
- Inspection Reports and Corrective Action Reports (Appendix J)

Copies of SWPP Plans, inspection records, spill reports, all reports required by NPDES permit coverage, and data used to complete the NOI shall be retained by the permittees for a period of at least three (3) years from the date of final stabilization. LANL will also retain records in accordance with DOE policy.

#### **4.7 Compliance with Other Federal Requirements**

This section contains summary information on documentation related to total maximum daily loads (TMDL) and documentation of permit eligibility related to threatened & endangered (T&E) species and critical habitat. Several tributaries to the Rio Grande are listed on the NM 303(d) list for assessed river/stream reaches requiring TMDLs; however, TMDLs pertaining to sediment have yet to be established for these waters.

Appendix G will include a Historical Properties, Wetland, Threatened and Endangered (T&E) Species, and Critical Habitat Evaluation for Construction Projects with detailed information.

Section 2.2 of this SWPPP describes Section 438 of the EISA, applicable to federal facilities such as LANL.

**NPDES Individual Permit (IP)**

This project is outside any Stormwater Site Monitoring Area drainage and therefore should not impact the IP. If project personnel suspect they have encountered and/or disturbed IP controls during field activities please contact Jeff Walterscheid (jeffw@lanl.gov).

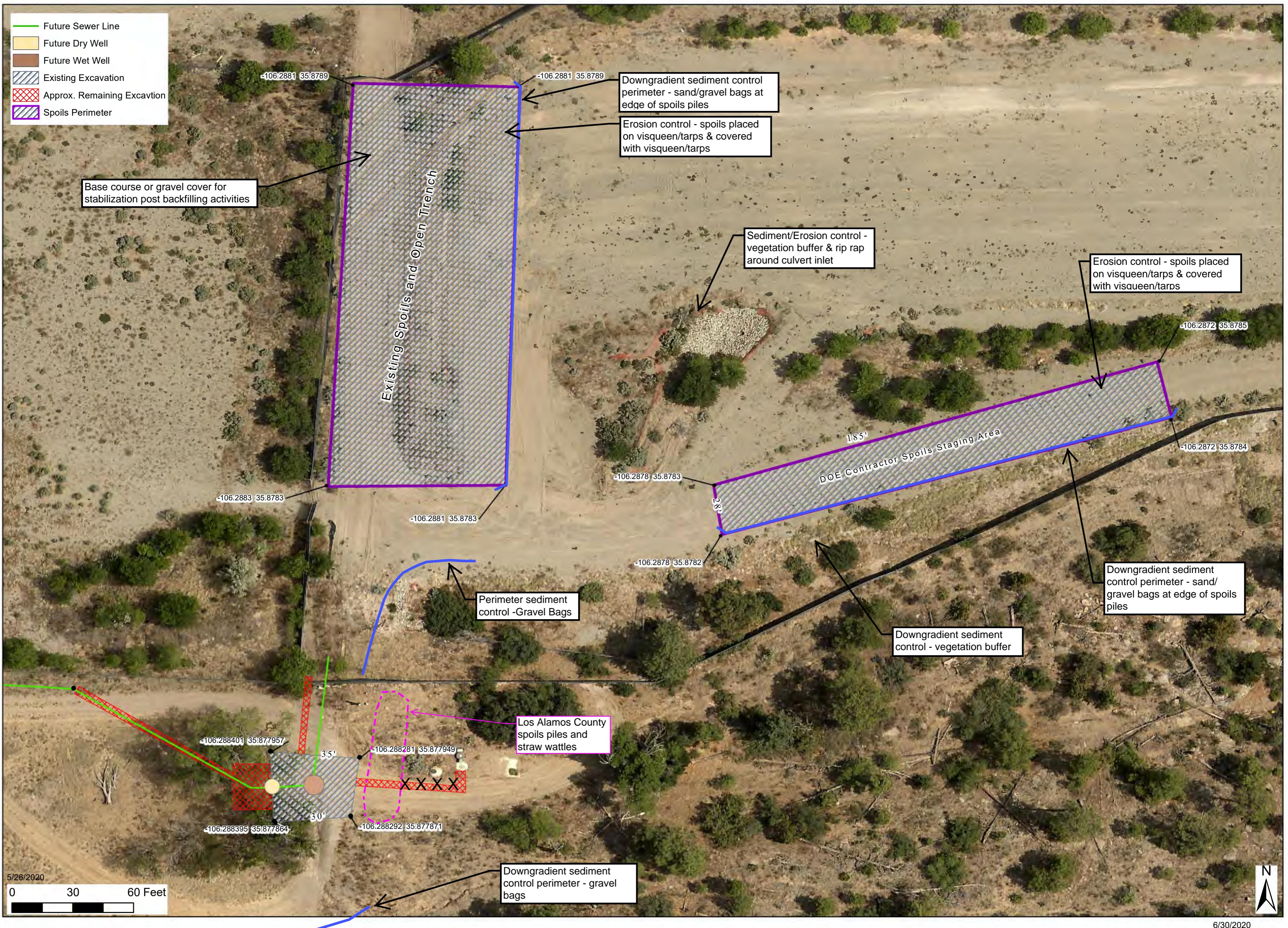
## APPENDIX A: SWPPP Modification Records - Tracking Table



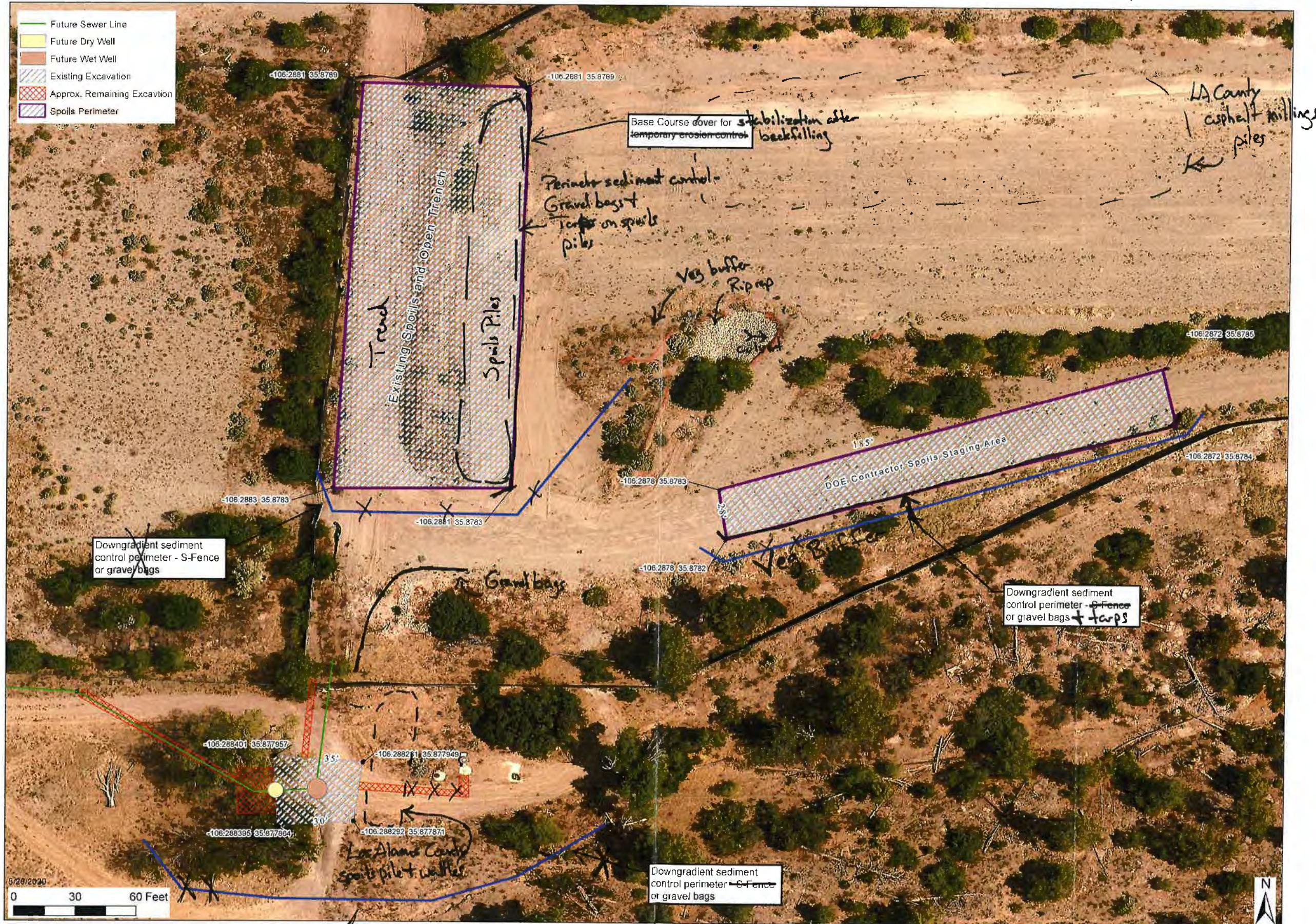
**APPENDIX B:**

**Site Maps**

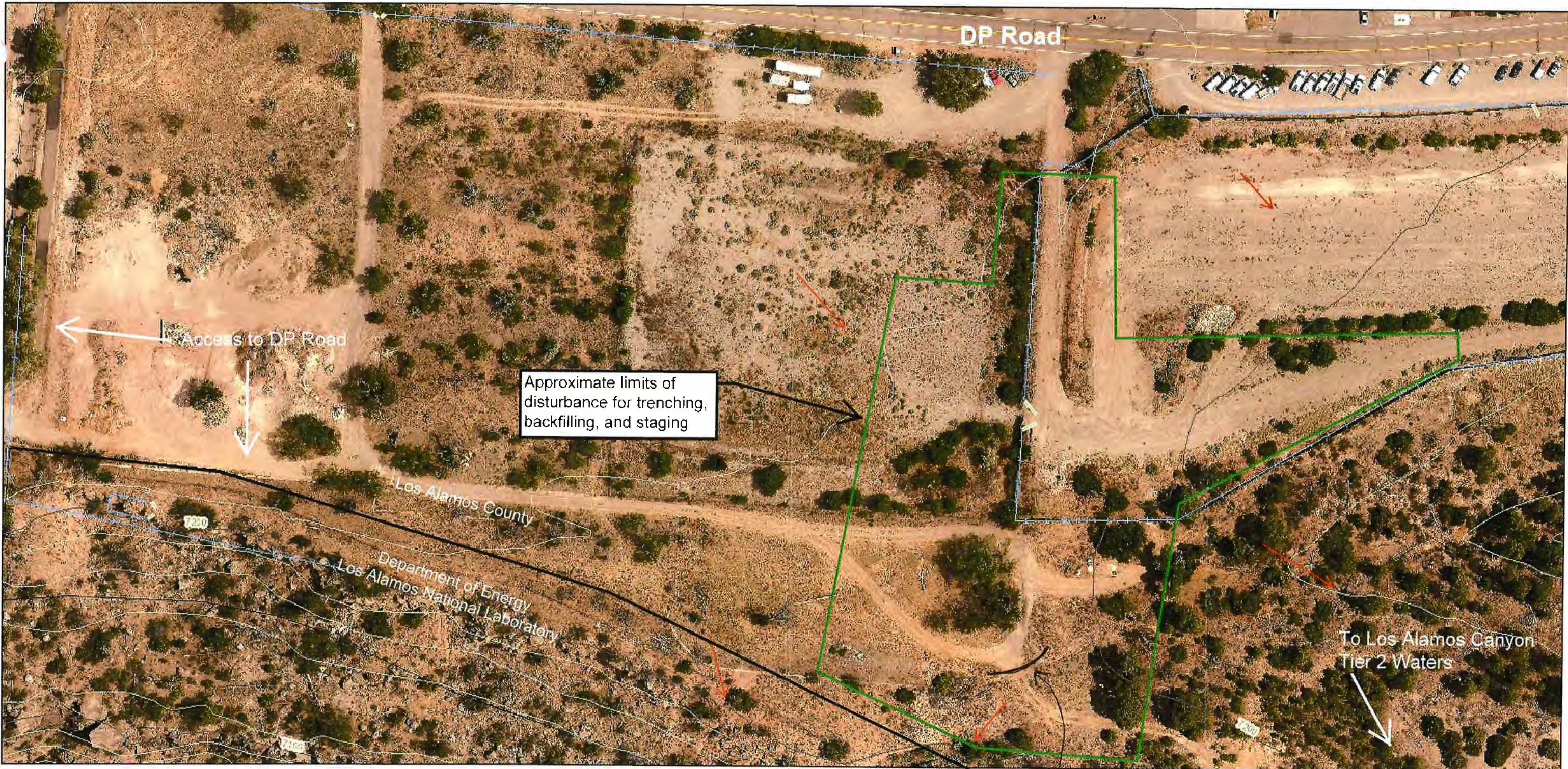
## Middle DP Road Recovery Effort SWPPP Site Map - Construction Areas and BMPs



Middle DP Road Recovery Effort SWPPP Site Map - Construction Areas and BMPs - Updates from field walkdown during SWPPP inspection 6/30/20



# Middle DP Road Recovery Effort SWPPP Site Map - Updates from field walkdown during SWPPP inspection 6/30/20



- Industrial Fence
- Industrial Gate
- Contours, 20 ft
- Contours, 100 ft
- Stormwater Flow
- Technical Areas

Install gravel bags as perimeter sediment control  
mucl3120

1:1,000  
0 0.01 0.02 0.04 0.07 mi  
0 0.02 0.04 0.07 km

## Middle DP Road Recovery Effort SWPPP Site Map



Industrial Fence

Stormwater Flow

Industrial Gate

Technical Areas

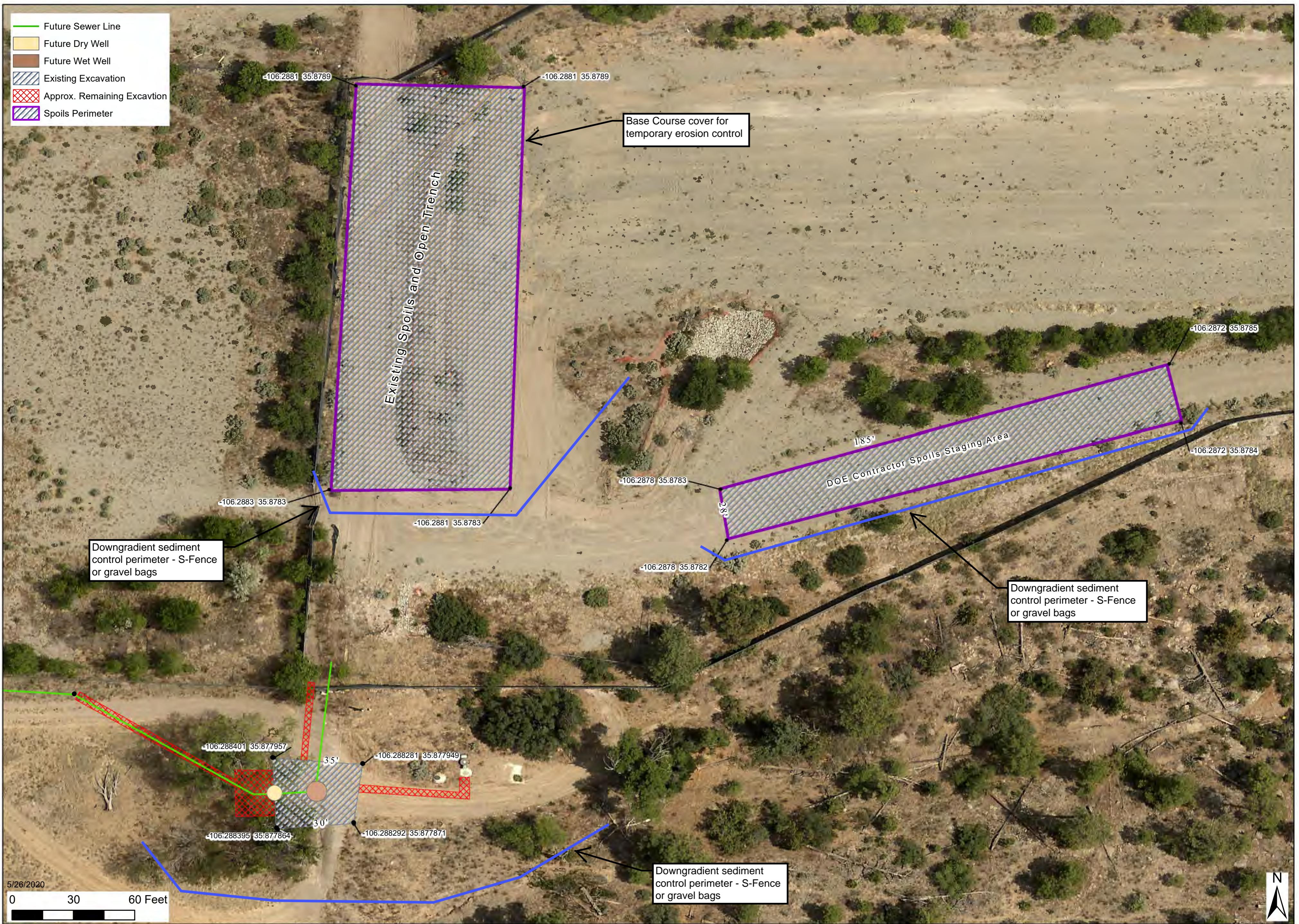
Contours, 20 ft

Contours, 100 ft

1:1,000  
0 0.01 0.02 0.04 0.07 km

6/29/2020

## Middle DP Road Recovery Effort SWPPP Site Map - Construction Areas and BMPs



## APPENDIX C: Spill Tracking Form

**APPENDIX D:**  
**Permit Regulations, NOI, Delegation of Authority Letter,**  
**EPA Acknowledgement**

**2017 Construction General Permit**

**National Pollutant Discharge Elimination System  
General Permit for Discharges from  
Construction Activities**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA), as amended by the Water Quality Act of 1987, P.L. 100-4, "operators" of construction activities (defined in Appendix A) that meet the requirements of Part 1.1 of this National Pollutant Discharge Elimination System (NPDES) general permit, are authorized to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of construction activities" (see Appendix A) until one of the conditions for terminating CGP coverage has been met (see Part 8.2).

This permit becomes effective on **February 16, 2017**.

This permit and the authorization to discharge expire at 11:59pm, **February 16, 2022**.

Signed and issued this 11<sup>th</sup> day of January 2017

Deborah Szaro,  
Acting Regional Administrator, EPA Region 1

Signed and issued this 11<sup>th</sup> day of January 2017

Javier Laureano, Ph.D.,  
Director, Clean Water Division, EPA Region 2

Signed and issued this 11<sup>th</sup> day of January 2017

Jose C. Font,  
Acting Director, Caribbean Environmental  
Protection Division, EPA Region 2.

Signed and issued this 11<sup>th</sup> day of January 2017

Dominique Lueckenhoff,  
Acting Director, Water Protection Division, EPA  
Region 3

Signed and issued this 11<sup>th</sup> day of January 2017

César A. Zapata,  
Deputy Director, Water Protection Division, EPA  
Region 4

Signed and issued this 11<sup>th</sup> day of January 2017

Christopher Korleski,  
Director, Water Division, EPA Region 5

Signed and issued this 11<sup>th</sup> day of January 2017

William K. Honker, P.E.,  
Director, Water Division, EPA Region 6

Signed and issued this 11<sup>th</sup> day of January 2017

Karen Flournoy,  
Director, Water, Wetlands, and Pesticides Division,  
EPA Region 7

Signed and issued this 11<sup>th</sup> day of January 2017

Darcy O'Connor,  
Assistant Regional Administrator, Office of Water  
Protection, EPA Region 8

Signed and issued this 11<sup>th</sup> day of January 2017

Kristin Gullatt  
Deputy Director, Water Division, EPA Region 9

Signed and issued this 11<sup>th</sup> day of January 2017

Daniel D. Opalski,  
Director, Office of Water and Watersheds, EPA  
Region 10

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## 1 HOW TO OBTAIN COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT (CGP)

To be covered under this permit, you must meet the eligibility conditions and follow the requirements for obtaining permit coverage in this Part.

### 1.1 ELIGIBILITY CONDITIONS

**1.1.1** You are an “operator” of a construction site for which discharges will be covered under this permit. For the purposes of this permit and in the context of stormwater discharges associated with construction activity, an “operator” is any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g., *in most cases this is the owner of the site*); or
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., *they are authorized to direct workers at a site to carry out activities required by the permit; in most cases this is the general contractor (as defined in Appendix A) of the project*).

Where there are multiple operators associated with the same project, all operators must obtain permit coverage.<sup>1</sup> Subcontractors generally are not considered operators for the purposes of this permit.

**1.1.2** Your site's construction activities:

- Will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land; or
- Have been designated by EPA as needing permit coverage under 40 CFR 122.26(a)(1)(v) or 40 CFR 122.26(b)(15)(ii);

**1.1.3** Your site is located in an area where EPA is the permitting authority (see Appendix B);

**1.1.4** Discharges from your site are not:

- Already covered by a different NPDES permit for the same discharge; or
- In the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.<sup>2,3</sup>

**1.1.5** You are able to demonstrate that you meet one of the criteria listed in Appendix D with respect to the protection of species that are federally listed as endangered or threatened under the Endangered Species Act (ESA) and federally designated critical habitat;

<sup>1</sup> If the operator of a “construction support activity” (see Part 1.2.1c) is different than the operator of the main site, that operator must also obtain permit coverage. See Part 7.1 for clarification on the sharing of liability between and among operators on the same site and for conditions that apply to developing a SWPPP for multiple operators associated with the same site.

<sup>2</sup> Parts 1.1.4a and 1.1.4b do not include sites currently covered under the 2012 CGP that are in the process of obtaining coverage under this permit, nor sites covered under this permit that are transferring coverage to a different operator.

<sup>3</sup> Notwithstanding a site being made ineligible for coverage under this permit because it falls under the description of Parts 1.1.4a or 1.1.4b, above, EPA may waive the applicable eligibility requirement after specific review if it determines that coverage under this permit is appropriate.

- 1.1.6** You have completed the screening process in Appendix E relating to the protection of historic properties; and
- 1.1.7** You have complied with all requirements in Part 9 imposed by the applicable state, Indian tribe, or territory in which your construction activities and/or discharge will occur.
- 1.1.8** For "new sources" (as defined in Appendix A) only:
  - a. EPA has not, prior to authorization under this permit, determined that discharges from your site will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3, will result in discharges that will not cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.
  - b. Discharges from your site to a Tier 2, Tier 2.5, or Tier 3 water<sup>4</sup> will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3.2, will result in discharges that will not lower the water quality of such waters.
- 1.1.9** If you plan to add "cationic treatment chemicals" (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your Notice of Intent (NOI) unless and until you notify your applicable EPA Regional Office (see Appendix L) in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to discharges that cause an exceedance of water quality standards.

## **1.2 TYPES OF DISCHARGES AUTHORIZED<sup>5</sup>**

- 1.2.1** The following stormwater discharges are authorized under this permit provided that appropriate stormwater controls are designed, installed, and maintained (see Parts 2 and 3):
  - a. Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR 122.26(b)(14) or 122.26(b)(15)(i);

---

<sup>4</sup> Note: Your site will be considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water to which you discharge is identified by a state, tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

<sup>5</sup> See "Discharge" as defined in Appendix A. Note: Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the SWPPP, or during an inspection.

- b. Stormwater discharges designated by EPA as needing a permit under 40 CFR 122.26(a)(1)(v) or 122.26(b)(15)(ii);
- c. Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that:
  - i. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
  - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated construction sites;
  - iii. The support activity does not continue to operate beyond the completion of the construction activity at the site it supports; and
  - iv. Stormwater controls are implemented in accordance with Part 2 and Part 3 for discharges from the support activity areas.
- d. Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining.

**1.2.2** The following non-stormwater discharges associated with your construction activity are authorized under this permit provided that, with the exception of water used to control dust and to irrigate vegetation in stabilized areas, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Parts 2 and 3:

- a. Discharges from emergency fire-fighting activities;
- b. Fire hydrant flushings;
- c. Landscape irrigation;
- d. Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
- e. Water used to control dust;
- f. Potable water including uncontaminated water line flushings;
- g. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));
- h. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
- i. Uncontaminated air conditioning or compressor condensate;
- j. Uncontaminated, non-turbid discharges of ground water or spring water;
- k. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and
- l. Construction dewatering water discharged in accordance with Part 2.4.

**1.2.3** Also authorized under this permit are discharges of stormwater listed above in Part 1.2.1, or authorized non-stormwater discharges listed above in Part 1.2.2, commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

### **1.3 PROHIBITED DISCHARGES<sup>6</sup>**

**1.3.1** Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 2.3.4;

**1.3.2** Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;

**1.3.3** Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

**1.3.4** Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

**1.3.5** Toxic or hazardous substances from a spill or other release.

To prevent the above-listed prohibited non-stormwater discharges, operators must comply with the applicable pollution prevention requirements in Part 2.3.

### **1.4 SUBMITTING YOUR NOTICE OF INTENT (NOI)**

All “operators” (as defined in Appendix A) associated with your construction site, who meet the Part 1.1 eligibility requirements, and who seek coverage under this permit, must submit to EPA a complete and accurate NOI in accordance with the deadlines in **Table 1** prior to commencing construction activities.

**Exception:** If you are conducting construction activities in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, you may discharge on the condition that a complete and accurate NOI is submitted within 30 calendar days after commencing construction activities (see Table 1) establishing that you are eligible for coverage under this permit. You must also provide documentation in your Stormwater Pollution Prevention Plan (SWPPP) to substantiate the occurrence of the public emergency.

#### **1.4.1 Prerequisite for Submitting Your NOI**

You must develop a SWPPP consistent with Part 7 before submitting your NOI for coverage under this permit.

#### **1.4.2 How to Submit Your NOI**

You must use EPA’s NPDES eReporting Tool (NeT) to electronically prepare and submit your NOI for coverage under the 2017 CGP, unless you received a waiver from your EPA Regional Office.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

<sup>6</sup> EPA includes these prohibited non-stormwater discharges here as a reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.2.2. Any unauthorized non-stormwater discharges must be covered under an individual permit or alternative general permit.

Waivers from electronic reporting may be granted based on one of the following conditions:

- a. If your operational headquarters is physically located in a geographic area (i.e., ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or
- b. If you have limitations regarding available computer access or computer capability.

If the EPA Regional Office grants you approval to use a paper NOI, and you elect to use it, you must complete the form in Appendix J.

#### 1.4.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage

Table 1 provides the deadlines for submitting your NOI and the official start date of your permit coverage, which differ depending on when you commence construction activities.

**Table 1 NOI Submittal Deadlines and Official Start Date for Permit Coverage.**

Type of Operator	NOI Submittal Deadline <sup>7</sup>	Permit Authorization Date <sup>8</sup>
<b>Operator of a new site</b> (i.e., a site where construction activities commence on or after February 16, 2017)	At least 14 calendar days before commencing construction activities.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.
<b>Operator of an existing site</b> (i.e., a site with 2012 CGP coverage where construction activities commenced prior to February 16, 2017)	No later than <b>May 17, 2017</b> .	
<b>New operator of a permitted site</b> (i.e., an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a “new site” or an “existing site”)	At least 14 calendar days before the date the transfer to the new operator will take place.	
<b>Operator of an “emergency-related project”</b> (i.e., a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services)	No later than 30 calendar days after commencing construction activities.	You are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.

<sup>7</sup> If you miss the deadline to submit your NOI, any and all discharges from your construction activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

<sup>8</sup> Discharges are not authorized if your NOI is incomplete or inaccurate or if you are not eligible for permit coverage.

#### **1.4.4 Modifying your NOI**

If after submitting your NOI you need to correct or update any fields, you may do so by submitting a “Change NOI” form using NeT. Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office has granted you approval to submit a paper NOI modification, you may indicate any NOI changes on the same NOI form in Appendix J.

When there is a change to the site’s operator, the new operator must submit a new NOI, and the previous operator must submit a Notice of Termination (NOT) form as specified in Part 8.3.

#### **1.4.5 Your Official End Date of Permit Coverage**

Once covered under this permit, your coverage will last until the date that:

- a. You terminate permit coverage consistent with Part 8; or
- b. You receive permit coverage under a different NPDES permit or a reissued or replacement version of this permit after expiring on February 16, 2022; or
- c. You fail to submit an NOI for coverage under a revised or replacement version of this permit before the deadline for existing construction sites where construction activities continue after this permit has expired.

### **1.5 REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE**

You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way.<sup>9</sup> At a minimum, the notice must include:

- a. The NPDES ID (*i.e.*, permit tracking number assigned to your NOI);
- b. A contact name and phone number for obtaining additional construction site information;
- c. The Uniform Resource Locator (URL) for the SWPPP (if available), or the following statement: “If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at [include the appropriate CGP Regional Office contact information found at <https://www.epa.gov/npdes/contact-us-stormwater#regional>]”; and
- d. The following statement “If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: <https://www.epa.gov/enforcement/report-environmental-violations>.”

---

<sup>9</sup> If the active part of the construction site is not visible from a public road, then place the notice of permit coverage in a position that is visible from the nearest public road and as close as possible to the construction site.

## 2 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

You must comply with the following technology-based effluent limitations in this Part for all authorized discharges.<sup>10</sup>

### 2.1 GENERAL STORMWATER CONTROL DESIGN, INSTALLATION, AND MAINTENANCE REQUIREMENTS

You must design, install, and maintain stormwater controls required in Parts 2.2 and 2.3 to minimize the discharge of pollutants in stormwater from construction activities. To meet this requirement, you must:

#### 2.1.1 Account for the following factors in designing your stormwater controls:

- a. The expected amount, frequency, intensity, and duration of precipitation;
- b. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and
- c. The soil type and range of soil particle sizes expected to be present on the site.

#### 2.1.2 Design and install all stormwater controls in accordance with good engineering practices, including applicable design specifications.<sup>11</sup>

#### 2.1.3 Complete installation of stormwater controls by the time each phase of construction activities has begun.

- a. By the time construction activity in any given portion of the site begins, install and make operational any downgradient sediment controls (e.g., buffers, perimeter controls, exit point controls, storm drain inlet protection) that control discharges from the initial site clearing, grading, excavating, and other earth-disturbing activities.<sup>12</sup>
- b. Following the installation of these initial controls, install and make operational all stormwater controls needed to control discharges prior to subsequent earth-disturbing activities.

---

<sup>10</sup> For each of the effluent limits in Part 2, as applicable to your site, you must include in your SWPPP (1) a description of the specific control(s) to be implemented to meet the effluent limit; (2) any applicable design specifications; (3) routine maintenance specifications; and (4) the projected schedule for its (their) installation/implementation. See Part 7.2.6.

<sup>11</sup> Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practices and must be explained in your SWPPP. You must also comply with any additional design and installation requirements specified for the effluent limits in Parts 2.2 and 2.3.

<sup>12</sup> Note that the requirement to install stormwater controls prior to each phase of construction activities for the site does not apply to the earth disturbance associated with the actual installation of these controls. Operators should take all reasonable actions to minimize the discharges of pollutants during the installation of stormwater controls.

**2.1.4 Ensure that all stormwater controls are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.**

- a. Comply with any specific maintenance requirements for the stormwater controls listed in this permit, as well as any recommended by the manufacturer.<sup>13</sup>
- b. If at any time you find that a stormwater control needs routine maintenance, you must immediately initiate the needed maintenance work, and complete such work by the close of the next business day.
- c. If at any time you find that a stormwater control needs repair or replacement, you must comply with the corrective action requirements in Part 5.

**2.2 EROSION AND SEDIMENT CONTROL REQUIREMENTS**

You must implement erosion and sediment controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities.

**2.2.1 Provide and maintain natural buffers and/or equivalent erosion and sediment controls when a water of the U.S. is located within 50 feet of the site's earth disturbances.**

- a. **Compliance Alternatives.** For any discharges to waters of the U.S. located within 50 feet of your site's earth disturbances, you must comply with one of the following alternatives:
  - i. Provide and maintain a 50-foot undisturbed natural buffer; or
  - ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve, in combination, the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
  - iii. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

See Appendix G, Part G.2 for additional conditions applicable to each compliance alternative.

- b. **Exceptions.** See Appendix G, Part G.2 for exceptions to the compliance alternatives.

**2.2.2 Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharges, unless infeasible.**

**2.2.3 Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.<sup>14</sup>**

- a. Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- b. **Exception.** For areas at "linear construction sites" (as defined in Appendix A) where perimeter controls are infeasible (e.g., due to a *limited or restricted right-of-way*),

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<sup>13</sup> Any departures from such maintenance recommendations made by the manufacturer must reflect good engineering practices and must be explained in your SWPPP.

<sup>14</sup> Examples of perimeter controls include filter berms, silt fences, vegetative strips, and temporary diversion dikes.

implement other practices as necessary to minimize pollutant discharges to perimeter areas of the site.

#### **2.2.4 Minimize sediment track-out.**

- a. **Restrict vehicle use to properly designated exit points;**
- b. Use appropriate stabilization techniques<sup>15</sup> at all points that exit onto paved roads.
  - i. **Exception:** Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls<sup>16</sup> are implemented to minimize sediment track-out;
- c. Implement additional track-out controls<sup>17</sup> as necessary to ensure that sediment removal occurs prior to vehicle exit; and
- d. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.<sup>18</sup>

#### **2.2.5 Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil:**

- a. Locate the piles outside of any natural buffers established under Part 2.2.1 and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;
- b. Install a sediment barrier along all downgradient perimeter areas;<sup>19</sup>
- c. For piles that will be unused for 14 or more days, provide cover<sup>20</sup> or appropriate temporary stabilization (consistent with Part 2.2.14);
- d. You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or water of the U.S.

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<sup>15</sup> Examples of appropriate stabilization techniques include the use of aggregate stone with an underlying geotextile or non-woven filter fabric, and turf mats.

<sup>16</sup> Examples of other exit point controls include preventing the use of exit points during wet periods; minimizing exit point use by keeping vehicles on site to the extent possible; limiting exit point size to the width needed for vehicle and equipment usage; using scarifying and compaction techniques on the soil; and avoiding establishing exit points in environmentally sensitive areas (e.g., karst areas; steep slopes).

<sup>17</sup> Examples of additional track-out controls include the use of wheel washing, rumble strips, and rattle plates.

<sup>18</sup> Fine grains that remain visible (i.e., staining) on the surfaces of off-site streets, other paved areas, and sidewalks after you have implemented sediment removal practices are not a violation of Part 2.2.4.

<sup>19</sup> Examples of sediment barriers include berms, dikes, fiber rolls, silt fences, sandbags, gravel bags, or straw bale.

<sup>20</sup> Examples of cover include tarps, blown straw and hydroseeding.

**2.2.6 Minimize dust.** On areas of exposed soil, minimize the generation of dust through the appropriate application of water or other dust suppression techniques.

**2.2.7 Minimize steep slope disturbances.** Minimize the disturbance of “steep slopes” (as defined in Appendix A).

**2.2.8 Preserve native topsoil, unless infeasible.**<sup>21</sup>

**2.2.9 Minimize soil compaction.**<sup>22</sup> In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed:

- Restrict vehicle and equipment use in these locations to avoid soil compaction; and
- Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.

**2.2.10 Protect storm drain inlets.**

- Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a water of the U.S., provided you have authority to access the storm drain inlet;<sup>23</sup> and
- Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

**2.2.11 Minimize erosion of stormwater conveyance channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters.** Use erosion controls and velocity dissipation devices<sup>24</sup> within and along the length of any stormwater conveyance channel and at any outlet to slow down runoff to minimize erosion.

**2.2.12 If you install a sediment basin or similar impoundment:**

- Situate the basin or impoundment outside of any water of the U.S. and any natural buffers established under Part 2.2.1;
- Design the basin or impoundment to avoid collecting water from wetlands;
- Design the basin or impoundment to provide storage for either:

<sup>21</sup> Stockpiling topsoil at off-site locations, or transferring topsoil to other locations, is an example of a practice that is consistent with the requirements in Part 2.2.8. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. For example, some sites may be designed to be highly impervious after construction, and therefore little or no vegetation is intended to remain, or may not have space to stockpile native topsoil on site for later use, in which case, it may not be feasible to preserve topsoil.

<sup>22</sup> Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.

<sup>23</sup> Inlet protection measures can be removed in the event of flood conditions or to prevent erosion.

<sup>24</sup> Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.

- ii. The calculated volume of runoff from a 2-year, 24-hour storm (see Appendix H); or
- iii. 3,600 cubic feet per acre drained.
- d. Utilize outlet structures that withdraw water from the surface of the sediment basin or similar impoundment, unless infeasible;<sup>25</sup>
- e. Use erosion controls and velocity dissipation devices to prevent erosion at inlets and outlets; and
- f. Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

**2.2.13 If using treatment chemicals (e.g., polymers, flocculants, coagulants):**

- a. **Use conventional erosion and sediment controls before and after the application of treatment chemicals.** Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g., sediment basin, perimeter control) before discharge.
- b. **Select appropriate treatment chemicals.** Chemicals must be appropriately suited to the types of soils likely to be exposed during construction and present in the discharges being treated (i.e., the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or area).
- c. **Minimize discharge risk from stored chemicals.** Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill).
- d. **Comply with state/local requirements.** Comply with applicable state and local requirements regarding the use of treatment chemicals.
- e. **Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier.** Use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document in your SWPPP specific departures from these specifications and how they reflect good engineering practice.
- f. **Ensure proper training.** Ensure that all persons who handle and use treatment chemicals at the construction site are provided with appropriate, product-specific training. Among other things, the training must cover proper dosing requirements.
- g. **Perform additional measures specified by the EPA Regional Office for the authorized use of cationic chemicals.** If you have been authorized to use cationic chemicals at your site pursuant to Part 1.1.9, you must perform all additional measures as

<sup>25</sup> The circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include areas with extended cold weather, where using surface outlets may not be feasible during certain time periods (although they must be used during other periods). If you determine that it is infeasible to meet this requirement, you must provide documentation in your SWPPP to support your determination, including the specific conditions or time periods when this exception will apply.

conditioned by your authorization to ensure that the use of such chemicals will not cause an exceedance of water quality standards.

**2.2.14** Stabilize exposed portions of the site. Implement and maintain stabilization measures (e.g., seeding protected by erosion controls until vegetation is established, sodding, mulching, erosion control blankets, hydromulch, gravel) that minimize erosion from exposed portions of the site in accordance with Parts 2.2.14a and 2.2.14b.

a. **Stabilization Deadlines:**<sup>26</sup>

Total Amount of Land Disturbance Occurring At Any One Time <sup>27</sup>	Deadline
i. <b>Five acres or less (<math>\leq 5.0</math>)</b> <b>Note: this includes sites disturbing more than five acres (<math>&gt;5.0</math>) total over the course of a project, but that limit disturbance at any one time (i.e., phase the disturbance) to five acres or less (<math>\leq 5.0</math>)</b>	<ul style="list-style-type: none"> <li>Initiate the installation of stabilization measures immediately<sup>28</sup> in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;<sup>29</sup> and</li> <li>Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.<sup>30</sup></li> </ul>

<sup>26</sup> EPA may determine, based on an inspection carried out under Part 4.8 and corrective actions required under Part 5.3, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing stormwater controls, EPA may require stabilization to correct this problem.

<sup>27</sup> Limiting disturbances to five (5) acres or less at any one time means that at no time during the project do the cumulative earth disturbances exceed five (5) acres. The following examples would qualify as limiting disturbances at any one time to five (5) acres or less:

1. The total area of disturbance for a project is five (5) acres or less.
2. The total area of disturbance for a project will exceed five (5) acres, but the operator ensures that no more than five (5) acres will be disturbed at any one time through implementation of stabilization measures. In this way, site stabilization can be used to "free up" land that can be disturbed without exceeding the five (5)-acre cap to qualify for the 14-day stabilization deadline. For instance, if an operator completes stabilization of two (2) acres of land on a five (5)-acre disturbance, then two (2) additional acres could be disturbed while still qualifying for the longer 14-day stabilization deadline.

<sup>28</sup> The following are examples of activities that would constitute the immediate initiation of stabilization:

1. Prepping the soil for vegetative or non-vegetative stabilization as long as seeding, planting, and/or installation of non-vegetative stabilization products takes place as soon as practicable, but no later than one (1) calendar day of completing soil preparation;
2. Applying mulch or other non-vegetative product to the exposed area;
3. Seeding or planting the exposed area;
4. Starting any of the activities in # 1 – 3 on a portion of the entire area that will be stabilized; and
5. Finalizing arrangements to have stabilization product fully installed in compliance with the deadlines for completing stabilization.

<sup>29</sup> The requirement to initiate stabilization immediately is triggered as soon as you know that construction work on a portion of the site is temporarily ceased and will not resume for 14 or more days, or as soon as you know that construction work is permanently ceased. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the next business day, following the day when the construction activities have temporarily or permanently ceased.

<sup>30</sup> If vegetative stabilization measures are being implemented, stabilization is considered "installed" when all activities necessary to seed or plant the area are completed. If non-vegetative stabilization measures are being implemented, stabilization is considered "installed" when all such measures are implemented or applied.

Total Amount of Land Disturbance Occurring At Any One Time <sup>27</sup>	Deadline
ii. More than five acres (>5.0)	<ul style="list-style-type: none"> <li>Initiate the installation of stabilization measures immediately<sup>31</sup> in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;<sup>32</sup> and</li> <li>Complete the installation of stabilization measures as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.<sup>33</sup></li> </ul>

**iii. Exceptions:**

**(a) Arid, semi-arid, and drought-stricken areas** (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, and vegetative stabilization measures are being used:

- (i) Immediately initiate and, within 14 calendar days of a temporary or permanent cessation of work in any portion of your site, complete the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion;
- (ii) As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed or plant the area to be stabilized; and
- (iii) If construction is occurring during the seasonally dry period, indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions. Also include the schedule you will follow for initiating and completing vegetative stabilization.

**(b) Operators that are affected by unforeseen circumstances<sup>34</sup> that delay the initiation and/or completion of vegetative stabilization:**

- (i) Immediately initiate and, within 14 calendar days, complete the installation of temporary non-vegetative stabilization measures to prevent erosion;
- (ii) Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on your site; and
- (iii) Document in the SWPPP the circumstances that prevent you from meeting the deadlines in Part 2.2.14a and the schedule you will follow for initiating and completing stabilization.

**(c) Discharges to a sediment- or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes.** Complete stabilization as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.

<sup>31</sup> See footnote 27

<sup>32</sup> See footnote 28

<sup>33</sup> See footnote 29

<sup>34</sup> Examples include problems with the supply of seed stock or with the availability of specialized equipment and unsuitability of soil conditions due to excessive precipitation and/or flooding.

b. **Final Stabilization Criteria** (for any areas not covered by permanent structures):

- i. Establish uniform, perennial vegetation (*i.e.*, evenly distributed, without large bare areas) that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
- ii. Implement permanent non-vegetative stabilization measures<sup>35</sup> to provide effective cover.
- iii. **Exceptions:**
  - (a) **Arid, semi-arid, and drought-stricken areas** (as defined in Appendix A). Final stabilization is met if the area has been seeded or planted to establish vegetation that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas within three (3) years and, to the extent necessary to prevent erosion on the seeded or planted area, non-vegetative erosion controls have been applied that provide cover for at least three years without active maintenance.
  - (b) **Disturbed areas on agricultural land that are restored to their preconstruction agricultural use.** The Part 2.2.14b final stabilization criteria does not apply.
  - (c) **Areas that need to remain disturbed.** In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed, and only the minimum area needed remains disturbed (*e.g.*, dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials).

## 2.3 POLLUTION PREVENTION REQUIREMENTS<sup>36</sup>

You must implement pollution prevention controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities.

### 2.3.1 For equipment and vehicle fueling and maintenance:

- a. Provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuels and oils, from these activities;<sup>37</sup>

<sup>35</sup> Examples of permanent non-vegetative stabilization measures include riprap, gravel, gabions, and geotextiles.

<sup>36</sup> Under this permit, you are not required to minimize exposure for any products or materials where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

<sup>37</sup> Examples of effective means include:

- Locating activities away from waters of the U.S. and stormwater inlets or conveyances so that stormwater coming into contact with these activities cannot reach waters of the U.S.;
- Providing secondary containment (*e.g.*, spill berms, decks, spill containment pallets) and cover where appropriate; and
- Having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill.

- b. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA;
- c. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
- d. Use drip pans and absorbents under or around leaky vehicles;
- e. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements; and
- f. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

### **2.3.2 For equipment and vehicle washing:**

- a. Provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters;<sup>38</sup>
- b. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and
- c. For storage of soaps, detergents, or solvents, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these detergents to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

### **2.3.3 For storage, handling, and disposal of building products, materials, and wastes:**

- a. For building materials and building products<sup>39</sup>, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.
- b. For pesticides, herbicides, insecticides, fertilizers, and landscape materials:
  - i. In storage areas, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these chemicals to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas; and
  - ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Part 2.3.5).
- c. For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:
  - i. Store chemicals in water-tight containers, and provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these containers to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas (e.g., having a spill kit available on site and ensuring personnel are available to respond expeditiously in

<sup>38</sup> Examples of effective means include locating activities away from waters of the U.S. and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

<sup>39</sup> Examples of building materials and building products typically present at construction sites include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles.

*the event of a leak or spill), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and*

- ii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- d. For hazardous or toxic wastes:<sup>40</sup>
  - i. Separate hazardous or toxic waste from construction and domestic waste;
  - ii. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;
  - iii. Store all outside containers within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in a covered area, having a spill kit available on site);
  - iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements;
  - v. Clean up spills immediately, using dry clean-up methods, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and
  - vi. Follow all other federal, state, tribal, and local requirements regarding hazardous or toxic waste.
- e. For construction and domestic wastes:<sup>41</sup>
  - i. Provide waste containers (e.g., dumpster, trash receptacle) of sufficient size and number to contain construction and domestic wastes;
  - ii. Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either (1) cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or (2) a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
  - iii. On business days, clean up and dispose of waste in designated waste containers; and
  - iv. Clean up immediately if containers overflow.

<sup>40</sup> Examples of hazardous or toxic waste that may be present at construction sites include paints, caulk, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.

<sup>41</sup> Examples of construction and domestic waste include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris; and other trash or building materials.

- f. For sanitary waste, position portable toilets so that they are secure and will not be tipped or knocked over, and located away from waters of the U.S. and stormwater inlets or conveyances.

**2.3.4 For washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials:**

- a. Direct wash water into a leak-proof container or leak-proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation;
- b. Handle washout or cleanout wastes as follows:
  - i. Do not dump liquid wastes in storm sewers or waters of the U.S.;
  - ii. Dispose of liquid wastes in accordance with applicable requirements in Part 2.3.3; and
  - iii. Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 2.3.3; and
- c. Locate any washout or cleanout activities as far away as possible from waters of the U.S. and stormwater inlets or conveyances, and, to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.

**2.3.5 For the application of fertilizers:**

- a. Apply at a rate and in amounts consistent with manufacturer's specifications, or document in the SWPPP departures from the manufacturer specifications where appropriate in accordance with Part 7.2.6.b. ix;
- b. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
- c. Avoid applying before heavy rains that could cause excess nutrients to be discharged;
- d. Never apply to frozen ground;
- e. Never apply to stormwater conveyance channels; and
- f. Follow all other federal, state, tribal, and local requirements regarding fertilizer application.

**2.3.6 Emergency Spill Notification Requirements**

Discharges of toxic or hazardous substances from a spill or other release are prohibited, consistent with Part 1.3.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. State, tribal, or local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

## **2.4 CONSTRUCTION DEWATERING REQUIREMENTS**

Comply with the following requirements to minimize the discharge of pollutants in ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, in accordance with Part 1.2.2.<sup>42</sup>

- 2.4.1** Treat dewatering discharges with controls to minimize discharges of pollutants;<sup>43</sup>
- 2.4.2** Do not discharge visible floating solids or foam;
- 2.4.3** Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering water is found to contain these materials;
- 2.4.4** To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharge. You are prohibited from using waters of the U.S. as part of the treatment area;
- 2.4.5** At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11;
- 2.4.6** With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and
- 2.4.7** Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

## **3 WATER QUALITY-BASED EFFLUENT LIMITATIONS**

### **3.1 GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS**

Discharges must be controlled as necessary to meet applicable water quality standards. Discharges must also comply with any additional state or tribal requirements that are in Part 9.

In the absence of information demonstrating otherwise, EPA expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Parts 5.1 and 5.2, and document the corrective actions as required in Part 5.4.

EPA may insist that you install additional controls (to meet the narrative water quality-based effluent limit above) on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality

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<sup>42</sup> Uncontaminated, clear (non-turbid) dewatering water can be discharged without being routed to a control.

<sup>43</sup> Appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, filtration systems (e.g., bag or sand filters), and passive treatment systems that are designed to remove sediment. Appropriate controls to use downstream of dewatering controls to minimize erosion include vegetated buffers, check dams, riprap, and grouted riprap at outlets.

standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA-established or approved TMDL.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of your coverage under this permit.

### **3.2 DISCHARGE LIMITATIONS FOR SITES DISCHARGING TO SENSITIVE WATERS<sup>44</sup>**

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes, you must comply with the inspection frequency specified in 4.3 and you must comply with the stabilization deadline specified in Part 2.2.14.a.iii.(c).<sup>45</sup>

If you discharge to a water that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform you if any additional controls are necessary for your discharge to be controlled as necessary to meet water quality standards, including for it to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL, or if coverage under an individual permit is necessary.

In addition, on a case-by-case basis, EPA may notify operators of new sites or operators of existing sites with increased discharges that additional analyses, stormwater controls, or other measures are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary.

If you discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

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<sup>44</sup> Sensitive waters include waters that are impaired and Tier 2, Tier 2.5, and Tier 3 waters.

"Impaired waters" are those waters identified by the state, tribe, or EPA as not meeting an applicable water quality standard and (1) requires development of a TMDL (pursuant to section 303(d) of the CWA); or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1). Your construction site will be considered to discharge to an impaired water if the first water of the U.S. to which you discharge is an impaired water for the pollutants contained in the discharge from your site. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. For assistance in determining whether your site discharges to impaired waters, EPA has developed a tool that is available both within the electronic NOI form in NeT, and at <https://water.epa.gov/polwaste/npdes/stormwater/discharge.cfm>.

Tiers 2, 2.5 and 3 refer to waters either identified by the state as high quality waters or Outstanding National Resource Waters under 40 CFR 131.12(a)(2) and (3). For the purposes of this permit, you are considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3. For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

EPA may determine on a case-by-case basis that a site discharges to a sensitive water.

<sup>45</sup> If you qualify for any of the reduced inspection frequencies in Part 4.4, you may conduct inspections in accordance with Part 4.4 for any portion of your site that discharges to a sensitive water.

- a. Implement controls<sup>46</sup> to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, to precipitation and to stormwater; and
- b. Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

## **4 SITE INSPECTION REQUIREMENTS**

### **4.1 PERSON(S) RESPONSIBLE FOR INSPECTING SITE**

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person."<sup>47</sup>

### **4.2 FREQUENCY OF INSPECTIONS.<sup>48</sup>**

At a minimum, you must conduct a site inspection in accordance with one of the two schedules listed below, unless you are subject to the Part 4.3 site inspection frequency for discharges to sensitive waters or qualify for a Part 4.4 reduction in the inspection frequency:

- 4.2.1** At least once every seven (7) calendar days; or
- 4.2.2** Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.<sup>49</sup> To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

### **4.3 INCREASE IN INSPECTION FREQUENCY FOR SITES DISCHARGING TO SENSITIVE WATERS.**

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.2), instead of the inspection frequency specified in

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<sup>46</sup> Examples of controls to minimize exposure of PCBs to precipitation and stormwater include separating work areas from non-work areas and selecting appropriate personal protective equipment and tools, constructing a containment area so that all dust or debris generated by the work remains within the protected area, using tools that minimize dust and heat (<212°F). For additional information, refer to Part 2.3.3 of the CGP Fact Sheet.

<sup>47</sup> A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

<sup>48</sup> Inspections are only required during the site's normal working hours.

<sup>49</sup> "Within 24 hours of the occurrence of a storm event" means that you must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24-hour period, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in accordance with Part 4.2.2 and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

Part 4.2, you must conduct inspections in accordance with the following inspection frequencies:

Once every seven (7) calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

## **4.4 REDUCTIONS IN INSPECTION FREQUENCY**

### **4.4.1 Stabilized areas.**

- a. You may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, then once per month in any area of your site where the stabilization steps in 2.2.14a have been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3, as applicable. You must document the beginning and ending dates of this period in your SWPPP.
- b. **Exception.** For "linear construction sites" (as defined in Appendix A) where disturbed portions have undergone final stabilization at the same time active construction continues on others, you may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, in any area of your site where the stabilization steps in 2.2.14a have been completed. After the first month, inspect once more within 24 hours of the occurrence of a storm event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, you may suspend further inspections. If "wash-out" of stabilization materials and/or sediment is observed, following re-stabilization, inspections must resume at the inspection frequency required in Part 4.4.1a. Inspections must continue until final stabilization is visually confirmed following a storm event of 0.25 inches or greater.

### **4.4.2 Arid, semi-arid, or drought-stricken areas** (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, you may reduce the frequency of inspections to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. You must document that you are using this reduced schedule and the beginning and ending dates of the seasonally dry period in your SWPPP. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

### **4.4.3 Frozen conditions:**

- a. If you are suspending construction activities due to frozen conditions, you may temporarily suspend inspections on your site until thawing conditions (as defined in Appendix A) begin to occur if:

- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable;
- ii. Land disturbances have been suspended; and
- iii. All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

- b. If you are still conducting construction activities during frozen conditions, you may reduce your inspection frequency to once per month if:
  - i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable; and
  - ii. Except for areas in which you are actively conducting construction activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

You must document the beginning and ending dates of this period in your SWPPP.

#### **4.5 AREAS THAT MUST BE INSPECTED**

During your site inspection, you must at a minimum inspect the following areas of your site:

- 4.5.1** All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 2.2.14a;
- 4.5.2** All stormwater controls (including pollution prevention controls) installed at the site to comply with this permit;<sup>50</sup>
- 4.5.3** Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;
- 4.5.4** All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;
- 4.5.5** All points of discharge from the site; and
- 4.5.6** All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are considered unsafe to your inspection personnel.

#### **4.6 REQUIREMENTS FOR INSPECTIONS**

During your site inspection, you must at a minimum:

- 4.6.1** Check whether all stormwater controls (*i.e.*, erosion and sediment controls and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;

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<sup>50</sup> This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part 2.2.4.

- 4.6.2** Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- 4.6.3** Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3;
- 4.6.4** Check for signs of visible erosion and sedimentation (*i.e.*, sediment deposits) that have occurred and are attributable to your discharge at points of discharge and, if applicable, the banks of any waters of the U.S. flowing within or immediately adjacent to the site;
- 4.6.5** Identify any incidents of noncompliance observed;
- 4.6.6** If a discharge is occurring during your inspection:
  - a. Identify all discharge points at the site; and
  - b. Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.
- 4.6.7** Based on the results of your inspection, complete any necessary maintenance under Part 2.1.4 and corrective action under Part 5.

#### **4.7 INSPECTION REPORT**

- 4.7.1** You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:
  - a. The inspection date;
  - b. Names and titles of personnel making the inspection;
  - c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.6, including any necessary maintenance or corrective actions;
  - d. If you are inspecting your site at the frequency specified in Part 4.2.2, Part 4.3, or Part 4.4.1b, and you conducted an inspection because of rainfall measuring 0.25 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and
  - e. If you determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.
- 4.7.2** Each inspection report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 4.7.3** You must keep a copy of all inspection reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 4.7.4** You must retain all inspection reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

#### **4.8 INSPECTIONS BY EPA**

You must allow EPA, or an authorized representative of EPA, to conduct the following activities at reasonable times. To the extent that you are utilizing shared controls that are not on site to comply with this permit, you must make arrangements for EPA to have access at all reasonable times to those areas where the shared controls are located.

- 4.8.1** Enter onto all areas of the site, including any construction support activity areas covered by this permit, any off-site areas where shared controls are utilized to comply with this permit, discharge locations, adjoining waterbodies, and locations where records are kept under the conditions of this permit;
- 4.8.2** Access and copy any records that must be kept under the conditions of this permit;
- 4.8.3** Inspect your construction site, including any construction support activity areas covered by this permit (see Part 1.2.1c), any stormwater controls installed and maintained at the site, and any off-site shared controls utilized to comply with this permit; and
- 4.8.4** Sample or monitor for the purpose of ensuring compliance.

### **5 CORRECTIVE ACTIONS**

#### **5.1 CONDITIONS TRIGGERING CORRECTIVE ACTION.**

You must take corrective action to address any of the following conditions identified at your site:

- 5.1.1** A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- 5.1.2** A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- 5.1.3** Your discharges are causing an exceedance of applicable water quality standards; or
- 5.1.4** A prohibited discharge has occurred (see Part 1.3).

#### **5.2 CORRECTIVE ACTION DEADLINES**

For any corrective action triggering conditions in Part 5.1, you must:

- 5.2.1** Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events;
- 5.2.2** When the problem does not require a new or replacement control or significant repair, the corrective action must be completed by the close of the next business day;
- 5.2.3** When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, by no later than seven (7) calendar days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP,

you must modify your SWPPP accordingly within seven (7) calendar days of completing this work.

### **5.3 CORRECTIVE ACTION REQUIRED BY EPA**

You must comply with any corrective actions required by EPA as a result of permit violations found during an inspection carried out under Part 4.8.

### **5.4 CORRECTIVE ACTION REPORT**

For each corrective action taken in accordance with this Part, you must complete a report in accordance with the following:

- 5.4.1** Within 24 hours of identifying the corrective action condition, document the specific condition and the date and time it was identified.
- 5.4.2** Within 24 hours of completing the corrective action (in accordance with the deadlines in Part 5.2), document the actions taken to address the condition, including whether any SWPPP modifications are required.
- 5.4.3** Each corrective action report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 5.4.4** You must keep a copy of all corrective action reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 5.4.5** You must retain all corrective action reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

## **6 STAFF TRAINING REQUIREMENTS**

Each operator, or group of multiple operators, must assemble a "stormwater team" to carry out compliance activities associated with the requirements in this permit.

- 6.1** Prior to the commencement of construction activities, you must ensure that the following personnel<sup>51</sup> on the stormwater team understand the requirements of this permit and their specific responsibilities with respect to those requirements:
  - a. Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention controls);
  - b. Personnel responsible for the application and storage of treatment chemicals (if applicable);
  - c. Personnel who are responsible for conducting inspections as required in Part 4.1; and
  - d. Personnel who are responsible for taking corrective actions as required in Part 5.

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<sup>51</sup> If the person requiring training is a new employee who starts after you commence construction activities, you must ensure that this person has the proper understanding as required above prior to assuming particular responsibilities related to compliance with this permit.

For emergency-related projects, the requirement to train personnel prior to commencement of construction activities does not apply, however, such personnel must have the required training prior to NOI submission.

**6.2** You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers, but you must ensure that such personnel understand any requirements of this permit that may be affected by the work they are subcontracted to perform.

**6.3** At a minimum, members of the stormwater team must be trained to understand the following if related to the scope of their job duties (e.g., *only personnel responsible for conducting inspections need to understand how to conduct inspections*):

- a. The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
- b. The location of all stormwater controls on the site required by this permit and how they are to be maintained;
- c. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- d. When and how to conduct inspections, record applicable findings, and take corrective actions.

**6.4** Each member of the stormwater team must have easy access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

## **7 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)**

### **7.1 GENERAL REQUIREMENTS**

All operators associated with a construction site under this permit must develop a SWPPP consistent with the requirements in Part 7 prior to their submittal of the NOI.<sup>52, 53</sup> The SWPPP must be kept up-to-date throughout coverage under this permit.

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<sup>52</sup> The SWPPP does not establish the effluent limits that apply to your site's discharges; these limits are established in this permit in Parts 2 and 3.

<sup>53</sup> You have the option of developing a group SWPPP where you are one of several operators at your site. For instance, if both the owner and the general contractor of the construction site are operators and thus are both required to obtain a permit, the owner may be the party undertaking SWPPP development, and the general contractor (or any other operator at the site) can choose to use this same SWPPP, as long as the SWPPP addresses the general contractor's (or other operator's) scope of construction work and functions to be performed under the SWPPP. Regardless of whether there is a group SWPPP or several individual SWPPPs, all operators would be jointly and severally liable for compliance with the permit.

Where there are multiple operators associated with the same site through a common plan of development or sale, operators may assign to themselves various permit-related functions under the SWPPP provided that each SWPPP, or a group SWPPP, documents which operator will perform each function under the SWPPP. However, dividing the functions to be performed under each SWPPP, or a single group SWPPP, does not relieve an individual operator from liability for complying with the permit should another operator fail to implement any measures that are necessary for that individual operator to comply with the permit, e.g., the installation and maintenance of any shared controls. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not cause a violation and/or render any other operators' controls and/or any shared controls ineffective. All operators who rely on a shared control to comply with the permit are jointly and severally liable for violations of the permit resulting from the failure to properly install, operate and/or maintain the shared control.

If a SWPPP was prepared under a previous version of this permit, the operator must review and update the SWPPP to ensure that this permit's requirements are addressed prior to submitting an NOI for coverage under this permit.

## 7.2 SWPPP CONTENTS

At a minimum, the SWPPP must include the information specified in this Part and as specified in other parts of this permit.

**7.2.1 All Site Operators.** Include a list of all other operators who will be engaged in construction activities at the site, and the areas of the site over which each operator has control.

**7.2.2 Stormwater Team.** Identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities, including which members are responsible for conducting inspections.

**7.2.3 Nature of Construction Activities.**<sup>54</sup> Include the following:

- a. A description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition;
- b. The size of the property (in acres or length in miles if a linear construction site);
- c. The total area expected to be disturbed by the construction activities (to the nearest quarter acre or nearest quarter mile if a linear construction site);
- d. A description of any on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c);
- e. The maximum area expected to be disturbed at any one time, including on-site and off-site construction support activity areas;
- f. A description and projected schedule for the following:
  - i. Commencement of construction activities in each portion of the site, including clearing and grubbing, mass grading, demolition activities, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
  - ii. Temporary or permanent cessation of construction activities in each portion of the site;
  - iii. Temporary or final stabilization of exposed areas for each portion of the site; and
  - iv. Removal of temporary stormwater controls and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.
- g. A list and description of all pollutant-generating activities<sup>55</sup> on the site. For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents (e.g., sediment, fertilizers, pesticides, paints, caulk, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels) associated with that activity, which could be discharged in stormwater from your construction site. You must take

<sup>54</sup> If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these dates. When departures from initial projections are necessary, this should be documented in the SWPPP itself, or in associated records, as appropriate.

<sup>55</sup> Examples of pollutant-generating activities include paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations.

into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed or removed during construction;

- h. Business days and hours for the project;
- i. If you are conducting construction activities in response to a public emergency (see Part 1.4), a description of the cause of the public emergency (e.g., mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services), information substantiating its occurrence (e.g., state disaster declaration or similar state or local declaration), and a description of the construction necessary to reestablish affected public services.

**7.2.4 Site Map.** Include a legible map, or series of maps, showing the following features of the site:

- a. Boundaries of the property;
- b. Locations where construction activities will occur, including:
  - i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
  - ii. Approximate slopes before and after major grading activities (note any steep slopes (as defined in Appendix A));
  - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
  - iv. Any water of the U.S. crossings;
  - v. Designated points where vehicles will exit onto paved roads;
  - vi. Locations of structures and other impervious surfaces upon completion of construction; and
  - vii. Locations of on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c).
- c. Locations of all waters of the U.S. within and one mile downstream of the site's discharge point. Also identify if any are listed as impaired, or are identified as a Tier 2, Tier 2.5, or Tier 3 water;
- d. Areas of federally listed critical habitat within the site and/or at discharge locations;
- e. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);
- f. Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;
- g. Stormwater and authorized non-stormwater discharge locations, including:
  - i. Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets;<sup>56</sup> and
  - ii. Locations where stormwater or authorized non-stormwater will be discharged directly to waters of the U.S.
- h. Locations of all potential pollutant-generating activities identified in Part 7.2.3g;

<sup>56</sup> The requirement to show storm drain inlets in the immediate vicinity of the site on your site map only applies to those inlets that are easily identifiable from your site or from a publicly accessible area immediately adjacent to your site.

- i. Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit; and
- j. Locations where polymers, flocculants, or other treatment chemicals will be used and stored.

**7.2.5 Non-Stormwater Discharges.** Identify all authorized non-stormwater discharges in Part 1.2.2 that will or may occur.

**7.2.6 Description of Stormwater Controls.**

- a. For each of the Part 2.2 erosion and sediment control effluent limits, Part 2.3 pollution prevention effluent limits, and Part 2.4 construction dewatering effluent limits, as applicable to your site, you must include the following:
  - i. A description of the specific control(s) to be implemented to meet the effluent limit;
  - ii. Any applicable stormwater control design specifications (including references to any manufacturer specifications and/or erosion and sediment control manuals/ordinances relied upon);<sup>57</sup>
  - iii. Routine stormwater control maintenance specifications; and
  - iv. The projected schedule for stormwater control installation/implementation.
- b. You must also include any of the following additional information as applicable.
  - i. **Natural buffers and/or equivalent sediment controls** (see Part 2.2.1 and Appendix G). You must include the following:
    - (a) The compliance alternative to be implemented;
    - (b) If complying with alternative 2, the width of natural buffer retained;
    - (c) If complying with alternative 2 or 3, the erosion and sediment control(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency;
    - (d) If complying with alternative 3, a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size;
    - (e) For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed; and
    - (f) A description of any disturbances that are exempt under Part 2.2.1 that occur within 50 feet of a water of the U.S.
  - ii. **Perimeter controls for a "linear construction site"** (see Part 2.2.3). For areas where perimeter controls are not feasible, include documentation to support this determination and a description of the other practices that will be implemented to minimize discharges of pollutants in stormwater associated with construction activities.

Note: Routine maintenance specifications for perimeter controls documented in the SWPPP must include the Part 2.2.3a requirement that sediment be removed

<sup>57</sup> Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP.

before it has accumulated to one-half of the above-ground height of any perimeter control.

- iii. **Sediment track-out controls** (see Parts 2.2.4b and 2.2.4c). Document the specific stabilization techniques and/or controls that will be implemented to remove sediment prior to vehicle exit.
- iv. **Sediment basins** (see Part 2.2.12). In circumstances where it is infeasible to utilize outlet structures that withdraw water from the surface, include documentation to support this determination, including the specific conditions or time periods when this exception will apply.
- v. **Treatment chemicals** (see Part 2.2.13), you must include the following:
  - (a) A listing of the soil types that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction;
  - (b) A listing of all treatment chemicals to be used at the site and why the selection of these chemicals is suited to the soil characteristics of your site;
  - (c) If the applicable EPA Regional Office authorized you to use cationic treatment chemicals for sediment control, include the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards;
  - (d) The dosage of all treatment chemicals to be used at the site or the methodology to be used to determine dosage;
  - (e) Information from any applicable Safety Data Sheet (SDS);
  - (f) Schematic drawings of any chemically enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;
  - (g) A description of how chemicals will be stored consistent with Part 2.2.13c;
  - (h) References to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems; and
  - (i) A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.
- vi. **Stabilization measures** (see Part 2.2.14). You must include the following:
  - (a) The specific vegetative and/or non-vegetative practices that will be used;
  - (b) The stabilization deadline that will be met in accordance with Part 2.2.14.a.i-ii;
  - (c) If complying with the deadlines for sites in arid, semi-arid, or drought-stricken areas, the beginning and ending dates of the seasonally dry period and the schedule you will follow for initiating and completing vegetative stabilization; and
  - (d) If complying with deadlines for sites affected by unforeseen circumstances that delay the initiation and/or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization.

vii. **Spill prevention and response procedures** (see Part 1.3.5 and Part 2.3). You must include the following:

- (a) Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and
- (b) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.6 and established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available to all employees.

You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.<sup>58</sup>

viii. **Waste management procedures** (see Part 2.3.3). Describe the procedures you will follow for handling, storing and disposing of all wastes generated at your site consistent with all applicable federal, state, tribal, and local requirements, including clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

ix. **Application of fertilizers** (see Part 2.3.5). Document any departures from the manufacturer specifications where appropriate.

**7.2.7** Procedures for Inspection, Maintenance, and Corrective Action. Describe the procedures you will follow for maintaining your stormwater controls, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 2.1.4, Part 4, and Part 5 of this permit. Also include:

- a. The inspection schedule you will follow, which is based on whether your site is subject to Part 4.2 or Part 4.3, or whether your site qualifies for any of the reduced inspection frequencies in Part 4.4;
- b. If you will be conducting inspections in accordance with the inspection schedule in Part 4.2.2, Part 4.3, or Part 4.4.1b, the location of the rain gauge or the address of the weather station you will be using to obtain rainfall data;
- c. If you will be reducing your inspection frequency in accordance with Part 4.4.1b, the beginning and ending dates of the seasonally defined arid period for your area or the valid period of drought;
- d. If you will be reducing your inspection frequency in accordance with Part 4.4.3, the beginning and ending dates of frozen conditions on your site; and
- e. Any maintenance or inspection checklists or other forms that will be used.

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<sup>58</sup> Even if you already have an SPCC or other spill prevention plan in existence, your plans will only be considered adequate if they meet all of the requirements of this Part, either as part of your existing plan or supplemented as part of the SWPPP.

**7.2.8 Staff Training.** Include documentation that the required personnel were, or will be, trained in accordance with Part 6.

**7.2.9 Compliance with Other Requirements.**

- a. **Threatened and Endangered Species Protection.** Include documentation required in Appendix D supporting your eligibility with regard to the protection of threatened and endangered species and designated critical habitat.
- b. **Historic Properties.** Include documentation required in Appendix E supporting your eligibility with regard to the protection of historic properties.
- c. **Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls.** If you are using any of the following stormwater controls at your site, document any contact you have had with the applicable state agency<sup>59</sup> or EPA Regional Office responsible for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR 144 -147. Such controls would generally be considered Class V UIC wells:
  - i. Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
  - ii. Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
  - iii. Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).

**7.2.10 SWPPP Certification.** You must sign and date your SWPPP in accordance with Appendix I, Part I.11.

**7.2.11 Post-Authorization Additions to the SWPPP.** Once you are authorized for coverage under this permit, you must include the following documents as part of your SWPPP:

- a. A copy of your NOI submitted to EPA along with any correspondence exchanged between you and EPA related to coverage under this permit;
- b. A copy of the acknowledgment letter you receive from NeT assigning your NPDES ID (*i.e.*, permit tracking number);
- c. A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

**7.3 ON-SITE AVAILABILITY OF YOUR SWPPP**

You must keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by EPA; a state, tribal, or local agency approving stormwater management plans; the operator of a storm sewer system receiving discharges from the site; or representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

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<sup>59</sup> For state UIC program contacts, refer to the following EPA website: <https://www.epa.gov/uic>.

EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from EPA, USFWS, or NMFS.<sup>60</sup>

If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

#### **7.4 SWPPP MODIFICATIONS**

**7.4.1** You must modify your SWPPP, including the site map(s), within seven (7) days of any of the following conditions:

- a. Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater controls, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part 5. You do not need to modify your SWPPP if the estimated dates in Part 7.2.3f change during the course of construction;
- b. To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
- c. If inspections or investigations by EPA or its authorized representatives determine that SWPPP modifications are necessary for compliance with this permit;
- d. Where EPA determines it is necessary to install and/or implement additional controls at your site in order to meet the requirements of this permit, the following must be included in your SWPPP:
  - i. A copy of any correspondence describing such measures and requirements; and
  - ii. A description of the controls that will be used to meet such requirements.
- e. To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater controls implemented at the site; and
- f. If applicable, if a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.

**7.4.2** You must maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 7.2.10 above) and a brief summary of all changes.

**7.4.3** All modifications made to the SWPPP consistent with Part 7.4 must be authorized by a person identified in Appendix I, Part I.11.b.

**7.4.4** Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

<sup>60</sup> Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the CWA. The authorized representatives, including employees of other executive branch agencies, may review CBI during the course of reviewing draft regulations.

## **8 HOW TO TERMINATE COVERAGE**

Until you terminate coverage under this permit, you must comply with all conditions and effluent limitations in the permit. To terminate permit coverage, you must submit to EPA a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part 8.

### **8.1 MINIMUM INFORMATION REQUIRED IN NOT**

- 8.1.1** NPDES ID (*i.e.*, permit tracking number) provided by EPA when you received coverage under this permit;
- 8.1.2** Basis for submission of the NOT (see Part 8.2);
- 8.1.3** Operator contact information;
- 8.1.4** Name of site and address (or a description of location if no street address is available); and
- 8.1.5** **NOT certification.**

### **8.2 CONDITIONS FOR TERMINATING CGP COVERAGE**

You must terminate CGP coverage only if one or more of the following conditions has occurred:

- 8.2.1** You have completed all construction activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.2.1c), and you have met the following requirements:
  - a. For any areas that (1) were disturbed during construction, (2) are not covered over by permanent structures, and (3) over which you had control during the construction activities, you have met the requirements for final vegetative or non-vegetative stabilization in Part 2.2.14b;
  - b. You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;
  - c. You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable; and
  - d. You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage; or
- 8.2.2** You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or
- 8.2.3** Coverage under an individual or alternative general NPDES permit has been obtained.

### **8.3 HOW TO SUBMIT YOUR NOT**

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOT for the 2017 CGP.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office grants you approval to use a paper NOT, and you elect to use it, you must complete the form in Appendix K.

#### **8.4 DEADLINE FOR SUBMITTING THE NOT**

You must submit your NOT within 30 calendar days after any one of the conditions in Part 8.2 occurs.

#### **8.5 EFFECTIVE DATE OF TERMINATION OF COVERAGE**

Your authorization to discharge under this permit terminates at midnight of the calendar day that a complete NOT is submitted to EPA.

### **9 PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES**

The provisions in this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and areas in certain states subject to construction projects by Federal Operators. States, Indian country, and areas subject to construction by Federal Operators not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

#### **9.1 EPA REGION 1**

##### **9.1.1 NHR100000 State of New Hampshire**

- a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for an Alteration of Terrain (AoT) permit from DES pursuant to RSA 485- A:17 and Env-Wq 1500. This requirement also applies to a lower disturbance threshold of 50,000 square feet or more when construction occurs within the protected shoreline under the Shoreland Water Quality Protection Act (see RSA 483-B and Env-Wq 1400). A permit application must also be filed if your project disturbs an area of greater than 2,500 square feet, is within 50 feet of any surface water, and has a flow path of 50 feet or longer disturbing a grade of 25 percent or greater. Project sites with disturbances smaller than those discussed above, that have the potential to adversely affect state surface waters, are subject to the conditions of an AoT General Permit by Rule.
- b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-stormwater discharge under this permit (see Part 1.2.2). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the groundwater dewatering location. Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://des.nh.gov/> by using the One Stop Data Mapper at <http://des.nh.gov/onestop/gis.htm>. If it is determined that the groundwater to be dewatered is near a remediation or other waste site you must

apply for the Remediation General Permit (see <https://www3.epa.gov/region1/npdes/rgp.html>.)

- c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at least once per week during weeks when discharges occur. Samples must be analyzed for total suspended solids (TSS) or turbidity and must meet monthly average and daily maximum limits of 50 milligrams per liter (mg/L) and 100 mg/L, respectively for TSS or 33 mg/l and 67 mg/l, respectively for turbidity. TSS (a.k.a. Residue, Nonfilterable) or turbidity sampling and analysis must be performed in accordance with Tables IB and II in 40 CFR 136.3 ([http://www.ecfr.gov/cgi-bin/text-idx?SID=0243e3c4283cbd7d8257eb6afc7ce9a2&mc=true&node=se40.25.136\\_13&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=0243e3c4283cbd7d8257eb6afc7ce9a2&mc=true&node=se40.25.136_13&rgn=div8)). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
- d. Construction site owners and operators must consider opportunities for post-construction groundwater recharge using infiltration best management practices (BMPs) during site design and preparation of the SWPPP. If your construction site is in a town that is required to obtain coverage under the NPDES General Permit for discharges from Municipal Separate Storm Sewer Systems (MS4) you may be required to use such practices. The SWPPP must include a description of any on-site infiltration that will be installed as a post-construction stormwater management measure or reasons for not employing such measures such as 1) The facility is located in a wellhead protection area as defined in RSA 485-C:2; or 2) The facility is located in an area where groundwater has been reclassified to GAA, GAI or GA2 pursuant to RSA 485-C and Env-DW 901; or 3) Any areas that would be exempt from the groundwater recharge requirements contained in Env-Wq 1507.04(e), including all land uses or activities considered to be a "High-load Area" (see Env-Wq 1502.26). For design considerations for infiltration measures see Volume II of the NH Stormwater Manual.
- e. Appendix F contains a list of Tier 2, or high quality waters. Although there is no official list of tier 2 waters, it can be assumed that all NH surface waters are tier 2 for turbidity unless 1) the surface water that you are proposing to discharge into is listed as impaired for turbidity in the states listing of impaired waters (see Surface Water Quality - Watershed Report Cards at [http://des.nh.gov/organization/divisions/water/wmb/swqa/report\\_cards.htm](http://des.nh.gov/organization/divisions/water/wmb/swqa/report_cards.htm)) or 2) sampling upstream of the proposed discharge location shows turbidity values greater than 10 NTU. A single grab sample collected during dry weather (no precipitation within 48 hours) is acceptable.
- f. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 1700 and Env-Wq 302, the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.4 (g).
  - i. A site map required in Part 7.2.4, showing the type and location of all post-construction infiltration BMPs utilized at the facility or the reason(s) why none were installed;
  - ii. A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (see Part 1.2.2).

- iii. Records of sampling and analysis of TSS required for construction dewatering discharges (see Part 9.1.4 (c)).
- g. All required or requested documents must be sent to:

NH Department of Environmental Services, Wastewater Engineering Bureau,  
Permits & Compliance Section  
P.O. Box 95  
Concord, NH 03302-0095

## **9.2 EPA REGION 3**

### **9.2.1 DCR100000 District of Columbia**

- a. The permittee must comply with the District of Columbia Water Pollution Control Act of 1984, as amended, (D.C. Official Code §8-103.01 et seq.) and its implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.
- b. The permittee must comply with the District of Columbia Stormwater Management, and Soil Erosion and Sediment Control in Chapter 5 of Title 21 of the District of Columbia Municipal Regulations.
- c. The permittee must comply with the District of Columbia Flood Management control in Chapter 31 of Title 20 of the District of Columbia Municipal Regulations.
- d. The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department with 14 days of such request. The Department may conduct an inspection of any facility covered by this permit to ensure compliance with District's law requirements including water quality.

### **9.2.2 DER10F000 Areas in the State of Delaware subject to construction by a Federal Operator**

- a. Federal agencies engaging in construction activities must submit, to DNREC, a sediment and stormwater management (S&S) plan and obtain approval from DNREC in accordance with 7 Del. C. §4010, 7 DE Admin. Code 5101, and 7 DE Admin. Code 7201.
- b. Federal agencies engaging in construction activities must provide for construction review by a certified construction reviewer in accordance with 7 Del. C. §§4010 & 4013 and 7 DE Admin. Code 5101, subsection 6.1.6.
- c. Federal agencies engaging in construction activities must certify that all responsible personnel involved in the construction project will have attended the blue card training prior to initiation of any land disturbing activity – see 7 Del. C. §§ 4002 & 4014 and 7 DE Admin. Code 5101.

## **9.3 EPA REGION 5**

### **9.3.1 MNR10I000 Indian country within the State of Minnesota**

**9.3.1.1 Fond du Lac Band of Lake Superior Chippewa.** The following conditions apply only to discharges on the Fond du Lac Band of Lake Superior Chippewa Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the Office of Water Protection at least fifteen (15) days in advance of sending the Notice of Intent (NOI) to EPA. The SWPPP can be submitted electronically to [richardgitar@FDLREZ.com](mailto:richardgitar@FDLREZ.com) or by hardcopy sent to:

Fond du Lac Reservation  
Office of Water Protection  
1720 Big Lake Road  
Cloquet, MN 55720

CGP applicants are encouraged to work with the FDL Office of Water Protection in the identification of all proposed receiving.

- b. Copies of the Notice of Intent (NOI) and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.
- c. The turbidity limit shall NOT exceed 10% of natural background within the receiving water(s) as determined by Office of Water Protection staff.
- d. Turbidity sampling must take place within 24 hours of a ½-inch or greater rainfall event. The results of the sampling must be reported to the Office of Water Protection within 7 days of the sample collection. All sample reporting must include the date and time, location (GPS: UTM/Zone 15), and NTU. CGP applicants are encouraged to work with the Office of Water Protection in determining the most appropriate location(s) for sampling.
- e. Receiving waters with open water must be sampled for turbidity prior to any authorized discharge as determined by Office of Water Protection staff. This requirement only applies to receiving waters in which no ambient turbidity data exists.
- f. This Certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in §105 b.3. of the Fond du Lac Water Quality Standards (Ordinance #12/98, as amended). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit from EPA for stormwater discharges from large and small construction activities.
- g. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm water fisheries, cold water fisheries, subsistence fishing (netting), primary contact recreation, secondary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, and commercial.
- h. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management

agency (National Response Center AND the State Duty Officer), and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac Reservation, including groundwater. The Fond du Lac Office of Water Protection must also be notified immediately of any spill regardless of size.

- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

**9.3.1.2 Grand Portage Band of Lake Superior Chippewa.** The following conditions apply only to discharges on the Grand Portage Band of Lake Superior Chippewa Reservation:

- a. The CGP authorization is for construction activities that may occur within the exterior boundaries of the Grand Portage Reservation in accordance to the Grand Portage Land Use Ordinance. The CGP regulates stormwater discharges associated with construction sites of one acre or more in size. Only those activities specifically authorized by the CGP are authorized by this certification (the "Certification"). This Certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for listing as such.
- b. All construction stormwater discharges authorized by the CGP must comply with the Water Quality Standards and Water Resources Ordinance, as well as Applicable Federal Standards (as defined in the Water Resources Ordinance). As such, appropriate steps must be taken to ensure that petroleum products or other chemical pollutants are prevented from entering the Waters of the Reservation (as defined in the Water Resources Ordinance). All spills must be reported to the appropriate emergency-management agency, and measures must be taken to prevent the pollution of the Waters of the Reservation, including groundwater.
- c. The 2017 CGP requires inspections and monitoring reports of the construction site stormwater discharges by a qualified person. Monitoring and inspection reports must comply with the minimum requirements contained in the 2017 CGP. The monitoring plan must be prepared and incorporated into the Stormwater Pollution Prevention Plan (the "SWPPP"). A copy of the SWPPP must be submitted to the Board at least 30 days in advance of sending the requisite Notice of Intent to EPA. The SWPPP should be sent to:

Grand Portage Environmental Resources Board  
P.O. Box 428  
Grand Portage, MN 55605

Copies of the Notice of Intent and Notice of Termination required under the CGP must be submitted to the Board at the address above at the same time they are submitted to the EPA.

- d. If requested by the Grand Portage Environmental Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Water Quality Standards and any Applicable Federal Standards.
- e. Discharges that the Board has determined to be or that may reasonably be expected to be contributing to a violation of Water Quality Standards or Applicable Federal Standards are not authorized by this Certification.

- f. The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and to enforce the provisions of the Water Resource Ordinance and Water Quality Standards, Applicable Federal Standards, and these Certification conditions.
- g. Appeals related to Board actions taken in accordance with any of the preceding conditions may be heard by the Grand Portage Tribal Court.

### **9.3.2 WIR10I000 Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community**

**9.3.2.1 Bad River Band of Lake Superior Tribe of Chippewa Indians:** The following conditions apply only to discharges on the Bad River Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by this Certification. This Certification does not authorize impacts to cultural properties, or historical sites, or properties that may be eligible for listing as such.<sup>61, 62</sup>
- b. Operators are not eligible to obtain authorization under the CGP for all new discharges to an Outstanding Tribal Resource Water (or Tier 3 water).<sup>63</sup> Outstanding Tribal Resource Waters, or Tier 3 waters, include the following: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River.<sup>64</sup>
- c. Projects utilizing cationic treatment chemicals<sup>65</sup> within the Bad River Reservation boundaries are not eligible for coverage under the CGP.<sup>66</sup>
- d. All projects which are eligible for coverage under the CGP and are located within the exterior boundaries of the Bad River Reservation shall be implemented in such a manner that is consistent with the Tribe's Water Quality Standards (WQS).<sup>67</sup>
- e. An operator proposing to discharge to an Outstanding Resource Water (or Tier 2.5 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Outstanding Resource Waters, or Tier 2.5 waters, include the following: a portion of Bad River, from downstream the confluence with the White River to Lake Superior, White River, Marengo River, Graveyard Creek, Bear Trap Creek, Wood Creek, Brunsweiler River, Tyler Forks, Bell Creek, and Vaughn Creek.<sup>68</sup> The antidegradation

<sup>61</sup> Bad River Band of Lake Superior Tribe of Chippewa Indians Water Quality Standards adopted by Resolution No. 7-6-11-441 (hereafter, Tribe's WQS).

<sup>62</sup> 36 C.F.R. § 800.16(l)(2).

<sup>63</sup> Tribe's WQS: See provisions E.3.ii. and E.4.iv.

<sup>64</sup> Tribe's WQS: See provision E.2.iii.

<sup>65</sup> See definition of cationic treatment chemicals in Appendix A of the CGP.

<sup>66</sup> Tribe's WQS: See provisions E.6.ii.a. and E.6.ii.c.

<sup>67</sup> See footnote 61.

<sup>68</sup> Tribe's WQS: See provision E.2.ii.

demonstration materials described in provision E.4.iii. must be submitted to the following address:

Bad River Tribe's Natural Resources Department  
Attn: Water Resources Specialist  
P.O. Box 39  
Odanah, WI 54861

f. An operator proposing to discharge to an Exceptional Resource Water (or Tier 2 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Exceptional Resource Waters, or Tier 2 waters, include the following: any surface water within the exterior boundaries of the Reservation that is not specifically classified as an Outstanding Resource Water (Tier 2.5 water) or an Outstanding Tribal Resource Water (Tier 3 water).<sup>69</sup> The antidegradation demonstration materials described in provision E.4.ii. must be submitted to the following address:

Bad River Tribe's Natural Resources Department  
Attn: Water Resources Specialist  
P.O. Box 39  
Odanah, WI 54861

g. A discharge to a surface water within the Bad River Reservation boundaries shall not cause or contribute to an exceedance of the turbidity criterion included in the Tribe's WQS, which states: Turbidity shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10% when the background turbidity is more than 50 NTU.<sup>70</sup>

h. All projects which are eligible for coverage under the CGP within the exterior boundaries of the Bad River Reservation must comply with the Bad River Reservation Wetland and Watercourse Protection Ordinance, or Chapter 323 of the Bad River Tribal Ordinances, including the erosion and sedimentation control, natural buffer, and stabilization requirements. Questions regarding Chapter 323 and requests for permit applications can be directed to the Wetlands Specialist in the Tribe's Natural Resources Department at (715) 682-7123 or [wetlands@badriver-nsn.gov](mailto:wetlands@badriver-nsn.gov).

i. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must notify the Tribe prior to the commencing earth-disturbing activities.<sup>71, 72</sup> The operator must submit a copy of the Notice of Intent (NOI) to the following addresses at the same time it is submitted to the U.S. EPA:

Bad River Tribe's Natural Resources Department  
Attn: Water Resources Specialist  
P.O. Box 39  
Odanah, WI 54861

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<sup>69</sup> Tribe's WQS: See provision E.2.i.

<sup>70</sup> Tribe's WQS: See provision E.7.iii.

<sup>71</sup> See footnote 61.

<sup>72</sup> See footnote 62.

Bad River Tribe's Natural Resources Department  
Attn: Tribal Historic Preservation Officer (THPO)  
P.O. Box 39  
Odanah, WI 54861

The operator must also submit a copy of the Notice of Termination (NOT) to the above addresses at the same time it is submitted to the U.S. EPA.

- j. The THPO must be provided 30 days to comment on the project.<sup>73</sup>
- k. The operator must obtain THPO concurrence in writing. This written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800. A best practice for an operator is to consult with the THPO during the planning stages of an undertaking.<sup>74</sup>
- l. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the following address at the same time as submitting the NOI:<sup>75</sup>

Bad River Tribe's Natural Resources Department  
Attn: Water Resources Specialist  
P.O. Box 39  
Odanah, WI 54861

- m. Any corrective action reports that are required under the CGP must be submitted to the following address within one (1) working day of the report completion:<sup>76</sup>

Bad River Tribe's Natural Resources Department  
P.O. Box 39  
Odanah, WI 54861

- n. An operator shall be responsible for meeting any additional permit requirements imposed by the U.S. EPA necessary to comply with the Tribe's antidegradation policies if the discharge point is located upstream of waters designated by the Tribe.<sup>77</sup>

**9.3.2.2 Lac du Flambeau Band of Lake Superior Tribe of Chippewa Indians:** The following conditions apply only to discharges on the Lac du Flambeau Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office, for the Traival environmental review process, at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Lac du Flambeau  
Tribal Land Management

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<sup>73</sup> 36 C.F.R. § 800.3(c)(4).

<sup>74</sup> 36 C.F.R. § 800.3(b).

<sup>75</sup> See footnote 61.

<sup>76</sup> See footnote 61.

<sup>77</sup> See footnote 61.

P.O. Box 279  
Lac du Flambeau, WI 54538

CGP applicants are encouraged to work with the LdF Water Resources Program in the identification of all proposed receiving waters.

- b. Copies of the NOI and the Notice of Termination (NOT) must be sent to the LdF Water Resources Program at the same time they are submitted to EPA.
- c. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Lac du Flambeau Reservation. This includes, but is not limited to, the prevention of any discharge that cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Lac du Flambeau Reservation for any of the uses designated in the Water Quality Standards of the Lac du Flambeau Reservation.
- d. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Lac du Flambeau Reservation. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the Lac du Flambeau reservation, including groundwater.
- e. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.
- f. Due to the significant ecological and cultural importance of the Lac du Flambeau Reservation, any operator requesting a permit for a point source discharge of pollutants (i.e., discharge) associated with the Stormwater Discharge will need a stormwater pollution prevention plan in place that does not violate Lac du Flambeau Water Quality Standards to protect Reservation Waters.

#### **9.4 EPA REGION 6**

##### **9.4.1 NMR100000 State of New Mexico, except Indian country**

- a. If construction dewatering activities are anticipated at a site, permittees must complete the following steps:
  - i. Investigative information must be documented in the facility SWPPP.
  - ii. Refer to the GWQB Mapper at <https://gis.web.env.nm.gov/GWQB/> AND the PSTB Mapper (Go Mapper) at <https://gis.web.env.nm.gov/GoNM/> and check if the following sources are located within the noted distance from your anticipated construct site groundwater dewatering activity:

<b>Project Location Relative to a Source of Potential Groundwater Contamination</b>	<b>Constituents likely to be required for testing</b>
Within 0.5 mile of an open Leaking Underground Storage Tank (LUST) site	BTEX (Benzene, Toluene, Ethylbenzene, and Xylene) plus additional parameters depending on site conditions.*

<b>Project Location Relative to a Source of Potential Groundwater Contamination</b>	<b>Constituents likely to be required for testing</b>
Within 0.5 mile of an open Voluntary Remediation site	
Within 0.5 mile of an open RCRA Corrective Action Site	
Within 0.5 mile of an open Abatement Site	
Within 0.5 mile of an open Brownfield Site	
Within 1.0 mile or more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination.	All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)**

\*For further assistance determining whether dewatering may encounter impacted groundwater, the permittee may contact the NMED Ground Water Quality Bureau at: 505-827-2965.

\*\*EPA approved-sufficiently sensitive methods must be used - approved methods are listed in 40 CFR Part 136.3.

- iii. If dewatering activities are anticipated, information on flow and potential to encounter impacted groundwater must be provided directly to NMED at the following address:

Program Manager, Point Source Regulation Section  
NMED Surface Water Quality Bureau  
PO Box 5469, Santa Fe, NM 87502

Information may also be emailed - the contact information for the program manager is located on the website at: [www.env.nm.gov/swqb/PSR](http://www.env.nm.gov/swqb/PSR).

- iv. Permittee must test the quality of the water being considered for discharge. Permittees must contact the Point Source Regulation Section Program Manager for information on constituents that must be monitored.
- v. Permittee must send test result data to EPA Region 6 and the NMED Surface Water Quality Bureau. If the test data exceed standards, it cannot be discharged from the construction site into surface waters under this permit. Discharge to surface waters must be conducted under a separate NPDES individual permit to ensure proper treatment and disposal.
- vi. If disposal will be to the ground surface or in an unlined pond, the permittee must submit an NO/ to the NMED Ground Water Quality Bureau.
- b. Operators are not eligible to obtain authorization under this permit for all new and existing storm water discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3" waters.)
  - i. Although state WQS provide for temporary and short-term degradation of water quality in an ONRW under very limited circumstances if approved by the Water Quality Control Commission as specified at 20.6.4.8.A NMAC, the approval process required for these activities does not lend itself for use for projects covered under this general permit. This condition is necessary to ensure that no degradation is allowed in ONRWs by requiring proposed storm water discharges to be reviewed under the individual permit process. Tier 3 waters are defined in Appendix F of the proposed permit.

c. Operators who intend to obtain authorization under this permit for new and existing storm water discharges from construction sites must satisfy the following condition: The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4.NMAC, including the antidegradation policy, or TMDL waste load allocations (WLAs) are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, and expected performance and longevity of these BMPs. For sites greater than 5 acres in size, BMP selection must be made based on the use of appropriate soil loss prediction models (i.e. SEDCAD, RUSLE, SEDIMOT, MULTISED, etc.) OR equivalent generally accepted (by professional erosion control specialists) soil loss prediction tools.

- i. For all sites, the operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or TMDL WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from preconstruction, pre-development conditions.
- ii. All SWPPPs must be prepared in accordance with good engineering practices by qualified (e.g. CPESC certified, engineers with appropriate training) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). Qualifications of the preparer (e.g., professional certifications, description of appropriate training) must be documented in the SWPPP. The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.

d. State regulations at 20.6.2.1203 NMAC state: *With respect to any discharge from any facility of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, the following notifications and corrective actions are required:*

- i. As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, any person in charge of the facility shall orally notify the Chief of the Ground Water Quality Bureau of the department, or his counterpart in any constituent agency delegated responsibility for enforcement of these rules as to any facility subject to such delegation.

Permittees can call 505-827-9329 for emergencies at any time and 505-476-6000 for non-emergencies during business hours from 5am-5pm, Monday through Friday.

- e. NMED does not allow permittees to use the Equivalent Analysis Waiver.

**9.4.2 NMR10I000 Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.**

**9.4.2.1 Pueblo of Isleta.** The following conditions apply only to discharges on the Pueblo of Isleta Reservation:

- a. CGP at 1.3 Prohibited discharges: Stormwater discharges associated with construction activity that EPA or the Pueblo of Isleta, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or may reasonably be expected to contribute to a violation or excursion of any applicable water quality standard, including the antidegradation policy, or the impairment of a designated use of receiving waters are not authorized by this permit.
- b. CGP at 1.4.1 How to Submit Your NOI: The operator shall provide a copy of the Notice of Intent ("NOI") to the Pueblo of Isleta at the same time it is submitted to the U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of the Pueblo of Isleta. The operator shall also notify the Pueblo of Isleta when it has submitted the Notice of Termination ("NOT"). The NOI and NOT shall be sent to the Pueblo of Isleta at the following address:

Water Quality Control Officer  
Pueblo of Isleta  
Environment Division  
PO Box 1270  
Isleta, NM 87022  
(505) 869-7565  
E-mail: [POI36871@isletapueblo.com](mailto:POI36871@isletapueblo.com)

Overnight/Express Mail Delivery  
Pueblo of Isleta  
Environment Division  
6 Sagebrush St.  
Albuquerque, NM 87105

- c. CGP at 1.5 Requirement to post a notice of your permit coverage: Amend to read: "You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road or tribal road that is nearest to the active part of the construction site..."
- d. CGP at 7.2.6 Description of stormwater controls: The SWPPP will be considered to be incomplete if the operator has not coordinated requirements under this Part with the Pueblo of Isleta Public Services Department.
- e. CGP I.12.6.1 at pg.I-6 of 8. The Pueblo of Isleta requests notification within 10 hours (rather than 24 hrs.) if health or the environment become endangered.
- f. CGP at I.12.2 Anticipated noncompliance: Amend to read: "You must give advance notice to EPA and the Pueblo of Isleta at the address indicated in 1.4.1(a) of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements."
- g. CGP at I.12.6.1: Any noncompliance for projects within the exterior boundaries of the Pueblo of Isleta which may endanger health or the environment shall be reported directly to the EPA Regional Office [(see contacts at <https://www.epa.gov/npdes/contact-us-stormwater#regional>)] and to the Pueblo of Isleta Water Quality Control Officer. Any information must be provided orally within 12 hours of the time you become aware of the circumstances. Other requirements of

this Part for a written submission apply. Electronic communication (E-mail) shall be provided as soon as practical. Verbal notice shall be provided to:

Water Quality Control Officer  
Pueblo of Isleta  
E-mail: [PO136871@isletapueblo.com](mailto:PO136871@isletapueblo.com)  
(505) 869-7565  
(505) 263-5425 cellular  
(505) 869-3030 Police Dispatch

- h. CGP at 2.2 Erosion and sediment control requirements: Erosion and sediment controls shall be designed to retain sediment on-site.
- i. CGP at 2.2 Under Sediment control requirements, Standard Permit Condition Duty to Mitigate Volumes of sediment at or over (five) 5 cubic yards must be removed and placed for disposal within a tribally approved sediment Disposal Site, located on Pueblo of Isleta lands. CGP 2.2 at pg. 8.
- j. Under Minimize erosion, a permittee must secure permission from the Pueblo or affected Pueblo of Isleta land assignment owner if a dissipation device needs to be placed up- or down- elevation of a given construction site. CGP 2.2.11 at pg. 11.
- k. CGP at 2.3.6 Emergency spill notification requirements: You must notify the Pueblo of Isleta Water Quality Control Officer and National Response Center (NRC) [at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302] as soon as you have knowledge of the release. Verbal and electronic notice shall be provided as specified in I.12.6.1
- l. CGP at C.3 Equivalent analysis waiver: Parties wishing to apply for an Equivalent Analysis Waiver (see Appendix D, Section C) must provide a copy of the waiver analysis to the Pueblo of Isleta Water Quality Control Officer at the address indicated in 1.4.1 (a).

**9.4.2.2 Pueblo of Sandia.** The following conditions apply only to discharges on the Pueblo of Sandia Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by the Pueblo of Sandia's Water Quality certification. The Pueblo of Sandia's Water Quality Certification does not authorize impact to cultural properties, historical sites or properties that may be eligible as such.
- b. Copies of all Notices of Intent (NOI) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia at the following address. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia, either by mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department  
Attention: Scott Bulgrin, Water Quality Manager  
481 Sandia Loop  
Bernalillo, New Mexico 87004

Electronically:

[sbulgrin@sandiapueblo.nsn.us](mailto:sbulgrin@sandiapueblo.nsn.us)

- c. Any correspondences between the applicant and EPA related to analytical data, written reports, corrective action, enforcement, monitoring, or an adverse incident written reports should likewise be routed to the Pueblo of Sandia at the above address.
- d. The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment Department either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Pueblo staff time to become familiar with the project site, prepare for construction site inspections, and determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in the delay or denial of the construction project.
- e. If requested by the Pueblo of Sandia Environment Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Pueblo of Sandia Water Quality Standards and/or applicable Federal Standards not authorized by this certification.
- f. An "Authorization to Proceed Letter" with site specific mitigation requirements may be sent out to the permittee when a review of the NOI and SWPPP, on a case- by-case basis is completed by the Pueblo of Sandia Environment Department. This approval will allow the application to proceed if all mitigation requirements are met.
- g. The Pueblo of Sandia will not allow Small construction Waivers (Appendix C) or the Rainfall Erosivity Waiver (Appendix C.1) to be granted for any small construction activities.
- h. Before submitting a Notice of Termination (NOT) to the EPA, permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed. A short letter stating the NOT is acceptable and all requirements have been met will be sent to the permittee to add to the permittee's NOT submission to EPA.
- i. Copies of all NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia through the mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department  
Attention: Scott Bulgrin, Water Quality Manager 481 Sandia Loop  
Bernalillo, New Mexico 87004

Electronically:

[sbulgrin@sandiapueblo.nsn.us](mailto:sbulgrin@sandiapueblo.nsn.us)

- j. The Pueblo of Sandia may require the permittee to perform water quality monitoring for pH, turbidity, and total suspended solids (TSS) during the permit term if the discharge is to a surface water leading to the Rio Grande for the protection of public health and the environment.

**9.4.2.3 Pueblo of Santa Ana.** The following conditions apply only to discharges on the Pueblo of Santa Ana Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Santa Ana (the Pueblo), at the same time it is submitted to the U.S. Environmental Protection Agency (EPA), for projects with discharges onto the lands of the Pueblo as defined in the Pueblo of Santa Ana Water Quality Standards.

- b. The operator shall provide a copy of the Stormwater Pollution Prevention Plan (SWPPP), at the same time that an NOI is submitted to the EPA, to the Pueblo for projects with discharges onto the lands of the Pueblo as defined in the Pueblo of Santa Ana Water Quality Standards.
- c. The operator shall provide a copy of the SWPPP, copies of inspections reports, and copies of corrective action reports to the Pueblo at the address below for review, upon request.
- d. The NOI, SWPPP and Notice of Termination (NOT) shall be sent to the Pueblo at the following address:

Pueblo of Santa Ana Department of Natural Resources,  
Attention: Water Quality Program Specialist  
2 Dove Road  
Santa Ana Pueblo, NM, 87004

- e. Discharges are not authorized by this permit unless an accurate and complete NOI and SWPPP have been submitted to the Pueblo. Failure to provide an accurate and complete NOI and SWPPP may result in a denial of the discharge permit or groundbreaking or construction delay.
- f. The operator will not proceed with site work until authorized by the Pueblo. The Pueblo requires review of the complete and final SWPPP by the Pueblo before authorization to proceed. The Pueblo will provide an "authorization to proceed" notice after review and approval of the SWPPP.
- g. Before submitting a NOT, permittees must certify to the Pueblo's Department of Natural Resources in writing that requirements for site stabilization have been met, and any temporary erosion control structures have been removed. Documentation of the Pueblo's review that such requirements have been reviewed and met will be provided for the permittee to add to the permittee's NOT submission to EPA. Copies of all NOT submitted to the EPA must also be sent to the Pueblo at the address provided above.

**9.4.2.4 Pueblo of Santa Clara.** The following conditions apply only to discharges on the Pueblo of Santa Clara Reservation:

- a. The operator must provide a copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Santa Clara Pueblo Governor's Office at the same time it is provided to the US Environmental Protection Agency.
- b. A copy of the Storm water Pollution Prevention Plan shall be made available to the Pueblo of Santa Clara staff upon request.

**9.4.2.5 Pueblo of Tesuque.** The following conditions apply only to discharges on the Pueblo of Tesuque Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Tesuque Governor's Office and Environment Department at same time it is submitted to the Environmental Protection Agency, for projects occurring within the exterior boundaries of our tribal lands. The operator shall also notify the Pueblo of Tesuque Governor's Office and Environment Department when it submitted the Notice of Termination. The NOI and NOT shall be sent to the Pueblo of Tesuque Governor's Office and Environment Department at the following address:

Pueblo of Tesuque  
Office of the Governor  
Route 42 Box 360-T  
Santa Fe, NM 87506 or  
email: [governor@pueblooftesuque.org](mailto:governor@pueblooftesuque.org)

- b. The operator shall also provide a copy of the Stormwater Pollution Prevention Plan, copies of inspections reports, and copies of corrective action reports to staff in the Pueblo of Tesuque Environment Department.

**9.4.2.6 Taos Pueblo.** The following conditions apply only to discharges on the Taos Pueblo Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Taos Pueblo Governor's Office, War Chief's Office and Environmental Office, at the same time it is submitted to the U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of Taos Pueblo. The operator shall also notify Taos Pueblo when it has submitted the Notice of Termination (NOT). The NOI and NOT shall be sent to the Taos Pueblo at the following addresses:
  - i. Taos Pueblo Governor's Office  
P.O. Box 1846  
Taos NM 87571
  - ii. Taos Pueblo War Chief's Office  
P.O. Box 2596  
Taos NM 87571
  - iii. Environmental Office  
Attn: Program Manager  
P.O. Box 1846  
Taos NM 87571
- b. Taos Pueblo requests that in the event Indian artifacts or human remains are inadvertently discovered on projects occurring near or on Taos Pueblo lands that consultation with the tribal Governor's Office occur at the earliest possible time.
- c. The operator shall provide a copy of the Stormwater Pollution Prevention Plan, copies of inspections reports, and copies of corrective action reports to staff in the Taos Pueblo Environmental Office for review and copy, upon request.

**9.4.2.7 Ohkay Owingeh.** The following conditions apply only to discharges on the Ohkay Owingeh Reservation:

- a. Prior to commencement of any construction activity on Ohkay Owingeh Lands requiring permit coverage under EPA's Construction General Permit, the operator(s) shall submit to Ohkay Owingeh Office of Environmental Affairs, a copy of the electronic "Notice of Intent," submitted to the Environmental Protection Agency, immediately following EPA's electronic notification that the NOI has been received. A copy of the Stormwater Pollution Prevention Plan(s) must be made available to the Ohkay Owingeh Office of Environmental Affairs upon the tribe's request either electronically or hard copy. Operator(s) shall also submit to Ohkay Owingeh Office of Environmental Affairs a copy of the electronic Notice of Termination (NOT) submitted to the Environmental Protection Agency. Documents shall be submitted to Ohkay Owingeh at the following address:

Ohkay Owingeh Office of Environment Affairs  
Attention: Environmental Programs Manager  
P.O. Box 717  
Ohkay Owingeh, New Mexico 87566  
Office # 505.852.4212  
Fax # 505.852.1432  
Electronic mail: [naomi.archuleta@ohkay.org](mailto:naomi.archuleta@ohkay.org)

- b. Ohkay Owingeh will not allow the Rainfall Erosivity Waivers (see Appendix C) to be granted for any small construction activities.
- c. All vegetation used to prevent soil loss, seeding or planting of the disturbed area(s) to meet the vegetative stabilization requirements must utilize native seeds/vegetation commonly known to the area. All temporary erosion control structures, such as silt fences must be removed as soon as stabilization requirements are met.

#### **9.4.3 OKR10I000 Indian country within the State of Oklahoma**

##### **9.4.3.1 Pawnee Nation.** The following conditions apply only to discharges within Pawnee Indian country:

- a. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time it is submitted to the Environmental Protection Agency to the following address:

Pawnee Nation Department of Environmental Conservation and Safety  
P.O. Box 470  
Pawnee, OK 74058  
Or email to [mmatlock@pawneenation.org](mailto:mmatlock@pawneenation.org)
- b. The Storm Water Pollution Prevention Plan must be available to Departmental inspectors upon request.
- c. The Department must be notified at 918.762.3655 immediately upon discovery of any noncompliance with any provision of the permit conditions.

#### **9.4.4 OKR10F000 Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).**

- a. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Certification is denied for any on-going activities such as sand and gravel mining or any other mineral mining.
- b. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, certification is denied for any discharges originating from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.

- c. In order to comply with Oklahoma's Water Quality Standards, these conditions and restrictions also apply to any construction projects located wholly or partially on Indian Country lands within the State of Oklahoma.

## **9.5 EPA REGION 8**

### **9.5.1 MTR10I000 Indian country within the State of Montana**

**9.5.1.1 The Confederated Salish and Kootenai Tribes of the Flathead Nation.** The following conditions apply only to discharges on the Confederated Salish and Kootenai Tribes of the Flathead Nation Reservation:

- a. Permittees must submit the Stormwater Pollution Prevention Plan (SWPPP) to the Confederated Salish and Kootenai Tribes at least 30 days before construction starts.
- b. Before submitting the Notice of Termination (NOT), permittees must clearly demonstrate to an appointed Tribal staff person during an onsite inspection that requirements for site stabilization have been met.
- c. The permittee must send a copy of the Notice of Intent (NOI) and the NOT to CSKT.
- d. Permittees may submit their SWPPPs, NOIs and NOTs electronically to: [clintf@cskt.org](mailto:clintf@cskt.org).
- e. Written SWPPPs, NOIs and NOTs may be mailed to:

Clint Folden, Water Quality Regulatory Specialist  
Confederated Salish and Kootenai Tribes  
Natural Resources Department  
P.O. Box 278  
Pablo, MT 59855

## **9.6 EPA REGION 9**

### **9.6.1 CAR10I000 Indian country within the State of California**

**9.6.1.1 Twenty-Nine Palms Band of Mission Indians.** The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians Reservation:

- a. At the time the applicant submits its Notice of Intent (NOI) to the EPA, the applicant must concurrently submit written notification of the NOI and a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Twenty-Nine Palms Band of Mission Indians at the address below:

Tribal Environmental Coordinator  
Twenty-Nine Palms Band of Mission Indians  
46-200 Harrison Place  
Coachella, CA 92236
- b. The applicant must also concurrently submit to the Tribal Environmental Coordinator written notification of any other forms or information submitted to the EPA, including waivers, reporting, and Notice of Termination (NOT).
- c. Permitted entities under the CGP must keep the Tribal EPA informed of authorized discharges under the CGP by submitting written information about the type, quantity, frequency and location, intended purpose, and potential human health and/or environmental effects of their activities. These requirements are pursuant to Section 4 of the Twenty-Nine Palms Band of Mission Indians Water Pollution Control Ordinance (022405A). This information may be submitted to Tribal EPA in the form of Stormwater Pollution Prevention Plans (SWPPPs), monitoring reports, or other reports as required

under the CGP. Spills, leaks, or unpermitted discharges must be reported in writing to Tribal EPA within 24 hours of the incident.

**9.6.2 GUR100000 Island of Guam.** The following conditions apply only to discharges on the Island of Guam:

- a. Any earth-moving operations which require a permit must be obtained from the Department of Public Works (DPW) with clearance approval from various Government of Guam Agencies including Guam EPA prior to the start of any earth-moving activity.
- b. In the event that the construction sites are within the Guam Sole Source Aquifer, the construction site owner and operator must consider opportunities to facilitate groundwater recharge for construction and post-construction implementing infiltration Best Management Practices. Stormwater disposal systems shall be designed and operated within the boundaries of the project. Stormwater systems shall not be permitted within any Wellhead Protection Zone unless the discharge meets the Guam Water Quality Standards within the zone. Waters discharged within the identified category G-2 recharge zone shall receive treatment to the degree required to protect the drinking water quality prior to it entering the category G-1 resource zone.
- c. All conditions and requirements set forth in the 22 Guam Administrative Rules and Regulations (GARR), Division II, Water Control, Chapter 10, Guam Soil Erosion and Sediment Control Regulations (GSESCR) that are more protective than the CGP regarding construction activities must be complied with.
- d. All standards and requirements set forth in the 22 GARR, Division II, Water Control, Chapter 5, *Guam Water Quality Standards (GWQS) 2001 Revisions*, must be complied with to include reporting GWQS exceedance to Guam EPA.
- e. All operators/owners of any property development or earth moving activities shall comply with the erosion control pre-construction and post-construction BMP design performance standards and criteria set forth in the 2006 CNMI and Guam Stormwater Management Manual.
- f. All conditions and requirements regarding dewatering activities set forth in 22 Guam Administrative Rules and Regulations Chapter 7, Water Resources Development and Operating Regulations must be complied with to include securing permits with Guam EPA prior to the start of any dewatering activities.
- g. If a project to be developed is covered under the Federal Stormwater Regulations (40 CFR Parts 122 & 123), a Notice of Intent (NOI) to discharge stormwater to the surface and marine waters of Guam must be submitted to the U.S. EPA and a copy furnished to Guam EPA, pursuant to Section 10, 104(B)(5)(d) 22GAR, Division II, Chapter 10.
- h. Guam EPA shall apply the Buffer Requirements listed in Appendix G of the CGP NPDES Permit for construction activities as it pertains to Waters of the U.S. in Guam. Guam EPA shall also apply the same buffer requirements for sinkholes in Guam.
- i. When Guam EPA, through its permit review process, identifies that the proposed construction activity is close proximity to marine waters, contractors and owners will be informed that any activity that may impair water quality are required to stop

during peak coral spawning periods as per the Guam Coral Spawning Construction Moratoriums.

- j. The Proposed Construction General Permit must set appropriate measures and conditions to protect Guam's Threatened and Endangered Species and Outstanding Resource Waters of exceptional recreational or ecological significance as determined by the Guam EPA Administrator as per *Guam Water Quality Standards 2001 Revisions*, §5102, Categories of Waters, D. Outstanding Resource Waters.
- k. When Guam EPA through its permit review process identifies that proposed construction activity is in close proximity to any Section 303d impaired waters, which includes marine waters and surface waters, shall ensure that construction activity does not increase the impaired water's ambient parameters.
- l. When Rainfall Erosivity and TMDL Waivers reflected in the CGP, Appendix C, are submitted to the U.S. EPA, Guam EPA will review waivers on a project by project basis.
- m. Prior to submission of the Notice of Termination (NOT) to the U.S. EPA, permittees must clearly demonstrate to Guam EPA that the project site has met all soil stabilization requirements and removal of any temporary erosion control as outlined in the GSECSR.

## **9.7 EPA REGION 10**

### **9.7.1 IDR100000 State of Idaho, except Indian country**

- a. *Idaho's Antidegradation Policy*. The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).
  - 1. Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.05).
  - 2. Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
  - 3. Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).  
DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).
- b. *Pollutants of Concern*. The primary pollutants of concern associated with stormwater discharges from construction activities are sediment, typically measured as total suspended solids and turbidity. Other potential pollutants include the following:

phosphorus, nitrogen, pesticides, organics, metals, PCBs, petroleum products, construction chemicals, and solid wastes.

- c. Receiving Water Body Level of Protection. The CGP provides coverage to construction activities throughout the entire State of Idaho. Because of the statewide applicability, all of the jurisdictional waters within Idaho could potentially receive discharges either directly or indirectly from activities covered under the CGP. DEQ applies a water body by water body approach to determine the level of antidegradation a water body will receive.

All waters in Idaho that receive discharges from activities authorized under the CGP will receive, at minimum Tier I antidegradation protection because Idaho's antidegradation policy applies to all waters of the state. Water bodies that fully support their aquatic life or recreational uses are considered to be *high quality* waters and will receive Tier II antidegradation protection.

Although Idaho does not currently have any Tier III designated outstanding resource waters (ORWs) designated, it is possible for a water body to be designated as an ORW during the life of the CGP. Because of this potential, the antidegradation review also assesses whether the permit complies with the outstanding resource water requirements of Idaho's antidegradation policy.

To determine the support status of the receiving water body, persons filing a Notice of Intent (NOI) for coverage under this general permit must use the most recent EPA-approved Integrated Report, available on Idaho DEQ's website:

<http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/>.

High quality waters are identified in Categories 1 and 2 of the Integrated Report. If a water body is in either Category 1 or 2, it is a Tier II water body.

Unassessed waters are identified as Category 3 of DEQ's Integrated Report. These waters require a case-by-case determination to be made by DEQ based on available information at the time of the application for permit coverage. If a water body is unassessed, the applicant is directed to contact DEQ for assistance in filing the NOI.

Impaired waters are identified in Categories 4 and 5 of the Integrated Report. Category 4(a) contains impaired waters for which a TMDL has been approved by EPA. Category 4(b) contains impaired waters for which controls other than a TMDL have been approved by EPA. Category 5 contains waters which have been identified as "impaired," for which a TMDL is needed. These waters are Tier I waters, for the use which is impaired. With the exception, if the aquatic life uses are impaired for any of these three pollutants—dissolved oxygen, pH, or temperature—and the biological or aquatic habitat parameters show a health, balanced biological community, then the water body shall receive Tier II protection, in addition to Tier I protection, for aquatic life uses (IDAPA 58.01.02.052.05.c.i.).

DEQ's webpage also has a link to the state's map-based Integrated Report which presents information from the Integrated Report in a searchable, map-based format: <http://www.deq.idaho.gov/assistance-resources/maps-data/>.

Water bodies can be in multiple categories for different causes. If assistance is needed in using these tools, or if additional information/clarification regarding the

support status of the receiving water body is desired, the operator is directed to make contact with the appropriate DEQ regional office or the State office in the table below:

Regional and State Office	Address	Phone Number	Email
Boise	1445 N. Orchard Rd., Boise 83706	208-373-0550	<a href="mailto:Kati.carberry@deq.idaho.gov">Kati.carberry@deq.idaho.gov</a>
Coeur d'Alene	2110 Ironwood Parkway, Coeur D'Alene 83814	208-769-1422	<a href="mailto:June.bergquist@deq.idaho.gov">June.bergquist@deq.idaho.gov</a>
Idaho Falls	900 N. Skyline, Suite B., Idaho Falls 83402	208-528-2650	<a href="mailto:Troy.saffle@deq.idaho.gov">Troy.saffle@deq.idaho.gov</a>
Lewiston	1118 "F" St., Lewiston 83501	208-799-4370	<a href="mailto:Mark.sellet@deq.idaho.gov">Mark.sellet@deq.idaho.gov</a>
Pocatello	444 Hospital way, #300 Pocatello 83201	208-236-6160	<a href="mailto:Lynn.vanevery@deq.idaho.gov">Lynn.vanevery@deq.idaho.gov</a>
Twin Falls	650 Addison Ave., W., Suite 110, Twin Falls 83301	208-736-2190	<a href="mailto:Balthasar.buhidar@deq.idaho.gov">Balthasar.buhidar@deq.idaho.gov</a>
State Office	1410 N. Hilton Rd., Boise 83706	208-373-0502	<a href="mailto:Nicole.deinarowicz@deq.idaho.gov">Nicole.deinarowicz@deq.idaho.gov</a>

d. Turbidity Monitoring. The permittee must conduct turbidity monitoring during construction activities and thereafter on days where there is a direct discharge of pollutants from an unstabilized portion of the site which is causing a visible plume to a water of the U.S.

A properly and regularly calibrated turbidimeter is required for measurements analyzed in the field (preferred method), but grab samples may be collected and taken to a laboratory for analysis. If the permittee can demonstrate that there will be no direct discharge from the construction site, then turbidity monitoring is not required. When monitoring is required, a sample must be taken at an undisturbed area immediately upstream of the project area to establish background turbidity levels for the monitoring event. Background turbidity, location, date and time must be recorded prior to monitoring downstream of the project area. A sample must also be taken immediately downstream from any point of discharge and within any visible plume. The turbidity, location, date and time must be recorded. The downstream sample must be taken immediately following the upstream sample in order to obtain meaningful and representative results.

Results from the compliance point sampling or observation<sup>78</sup> must be compared to the background levels to determine whether project activities are causing an exceedance of state WQS. If the downstream turbidity is 50 NTUs or more than the upstream turbidity, then the project is causing an exceedance of WQS. Any exceedance of the turbidity standard must be reporting to the appropriate DEQ regional office within 24 hours. The following six (6) steps should be followed to ensure compliance with the turbidity standard:

1. If a visible plume is observed, quantify the plume by collecting turbidity measurements from within the plume and compare the results to Idaho's instantaneous numeric turbidity criterion (50 NTU over the background).
2. If turbidity is less than 50 NTU instantaneously over the background turbidity; continue monitoring as long as the plume is visible. If turbidity exceeds background turbidity by more than 50 NTU instantaneously then stop all earth disturbing construction activities and proceed to step 3.
3. Take immediate action to address the cause of the exceedance. That may include inspection the condition of project BMPs. If the BMPs are functioning to their fullest capability, then the permittee must modify project activities and/or BMPs to correct the exceedance.
4. Notify the appropriate DEQ regional office within 24 hours.
5. Possibly increase monitoring frequency until state water quality standards are met.
6. Continue earth disturbing construction activities once turbidity readings return to within 50 NTU instantaneously and 25 NTU for more than ten consecutive days over the background turbidity.

Copies of daily logs for turbidity monitoring must be available to DEQ upon request. The report must describe all exceedances and subsequent actions taken, including the effectiveness of the action.

e. Reporting of Discharges Containing Hazardous Materials or Petroleum Products. All spills of hazardous material, deleterious material or petroleum products which may impact waters (ground and surface) of the state shall be immediately reported. Call 911 if immediate assistance is required to control, contain or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office in the table below during normal working hours or Idaho State Communications Center after normal working hours. If the spilled volume is above federal reportable quantities, contact the National Repose Center.

For immediate assistance: Call 911

National Response Center: (800) 424-8802

Idaho State Communications Center: (208) 632-8000

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<sup>78</sup> A visual observation is only acceptable to determine whether BMPs are functioning properly. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must collect turbidity data and inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability and the turbidity is 50 NTUs or more than the upstream turbidity, then the permittee must modify the activity or implement additional BMPs (this may also include modifying existing BMPs).

Regional office	Toll Free Phone Number	Phone Number
Boise	888-800-3480	208-373-0321
Coeur d' Alene	877-370-0017	208-769-1422
Idaho Falls	800-232-4635	208-528-2650
Lewiston	977-547-3304	208-799-4370
Pocatello	888-655-6160	208-236-6160
Twin Falls	800-270-1663	208-736-2190

**9.7.2 IDR10I000 Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)**

**9.7.2.1 Shoshone-Bannock Tribes.** The following conditions apply only to discharges on the Shoshone-Bannock Reservation:

- f. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Shoshone-Bannock Tribes Water Resources Department at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Shoshone-Bannock Tribes Water Resources Department the acknowledgement of receipt of the NOI from the EPA within 7 calendar days of receipt from the EPA.

**9.7.3 WAR10F000 Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator.** The following conditions apply only to discharges on federal facilities in the State of Washington:

- a. Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), groundwater quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.
- b. Prior to the discharge of stormwater and non-storm water to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- c. Permittees who discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, phosphorus, or pH must comply with the following numeric effluent limits:

Parameter Identified in 303(d) Listing	Parameter Sampled	Unit	Analytical Method	Numeric Effluent Limit
• Turbidity • Fine Sediment • Phosphorus	Turbidity	NTU	SM2130 or EPA 180.1	25 NTUs at the point where the stormwater is discharged from the site.
High pH	pH	Su	pH meter	In the range of 6.5 – 8.5

- d. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current EPA approved listing of impaired waters that exists on February 16, 2017, or the date when the operator's complete permit application is received by EPA, whichever is later.
- e. Discharges to waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.
  - i. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements establish by the applicable TMDL.
  - ii. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.
  - iii. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.
  - iv. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
  - v. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to February 16, 2017, or prior to the date the operator's complete NOI is received by EPA, whichever is later.

#### **9.7.4 WAR10I000 Indian country within the State of Washington**

**9.7.4.1 Confederated Tribes of the Colville Reservation.** The following conditions apply only to discharges on the Colville Indian Reservation (CIR) and on other Tribal trust lands or allotments of the Confederated Tribes of the Colville Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Environmental Trust Department  
Confederated Tribes of the Colville Reservation  
PO Box 150  
Nespelem, WA 99155
- b. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be sent to the ETD at the same time they are submitted to EPA.
- c. Discharges to Omak Creek, the Okanogan River, and Columbia River downstream of Chief Joseph Dam may affect threatened or endangered species, and shall only be permitted in adherence with Appendix D of the CGP.
- d. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Chapter 4-8 Water Quality Standards of the Colville Law and Order Code, as amended.

- e. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the CIR. All spills must be reported to the appropriate emergency management agency and the ETD, and measures shall be taken immediately to prevent the pollution of waters of the CIR, including groundwater.
- f. Stormwater site inspections shall be conducted at least once every 7 calendar days, within 24-hours of the occurrence of a rain event of 0.25 inches or greater in a 24-hour period, and daily during periods of saturated ground surface or snowmelt with accompanying surface runoff.
- g. Results of discharge sampling must be reported to the ETD within 7 days of sample collection. All sample reporting must include the date and time, location, and individual performing the sampling.
- h. Any corrective action reports that are required under the CGP must be submitted to the ETD at the above address within one (1) working day of the report completion.
- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

**9.7.4.2 Lummi Nation.** The following conditions apply only to discharges on the Lummi Reservation:

- a. The Lummi Nation reserves the right to modify this 401 certification if the final version of the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (CGP) on tribal lands in the State of Washington (Permit No. WAR101000) is substantively different than the draft version of the proposed permit that was made available for public comments during April 2016. The Lummi Nation will determine if the final version of the NPDES CGP is substantively different than the draft version following review of the final version once the EPA makes it available.
- b. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
- c. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
- d. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210 together with supplements and amendments thereto).
- e. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Lummi Water Resources Division at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Lummi Water Resources Division the acknowledgement of receipt of the NOI from the EPA and the associated NPDES tracking number provided by the EPA within 7 calendar days of receipt from the EPA.

- f. Each operator shall submit a signed hard copy of the Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted electronically to the EPA and shall provide the Lummi Water Resources Division the EPA acknowledgement of receipt of the NOT.
- g. Storm Water Pollution Prevention Plans, Notice of Intent, Notice of Termination and associated correspondence with the EPA shall be submitted to:

Lummi Natural Resources Department  
ATTN: Water Resources Manager  
2665 Kwina Road  
Bellingham, WA 98226-9298

**9.7.4.3 Makah Tribe.** The following conditions apply only to discharges on the Makah Reservation:

- a. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.
- b. The operator shall submit a Storm Water Pollution Prevention Plan to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.
- c. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.
- d. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Aaron Parker  
Makah Fisheries Management Water Quality Specialist  
(360) 645-3162  
Cell 206-356-0319  
[Aaron.parker@makah.com](mailto:Aaron.parker@makah.com)  
PO Box 115  
Neah Bay WA 98357

**9.7.4.4 Puyallup Tribe of Indians.** The following conditions apply only to discharges on the Puyallup Tribe of Indians Reservation:

- a. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to lower water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures. The Tribe may also impose additional controls on a site-specific basis, or request EPA to require the operator obtain coverage under an individual permit, if information in the NOI or from other sources indicates that the operator's discharges are not controlled as necessary to meet applicable water quality standards.
- b. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.

- c. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to Char Naylor ([char.naylor@puyalluptribe.com](mailto:char.naylor@puyalluptribe.com)) and Russ Ladley ([russ.ladley@puyalluptribe.com](mailto:russ.ladley@puyalluptribe.com)) by email or at the address listed below at the same time it is submitted to EPA.

Puyallup Tribe of Indians  
3009 E. Portland Avenue  
Tacoma, WA 98404  
ATTN: Russ Ladley and Char Naylor

- d. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Tribe's Resource Protection Manager ([russ.ladley@puyalluptribe.com](mailto:russ.ladley@puyalluptribe.com)) and Char Naylor ([char.naylor@puyalluptribe.com](mailto:char.naylor@puyalluptribe.com)) for review.
- e. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Russ Ladley and Char Naylor at the address listed above.
- f. The permittee shall submit all stormwater pollution prevention plans to Char Naylor for review and approval prior to beginning any activities resulting in a discharge to tribal waters.
- g. The permittee shall conduct benchmark monitoring for turbidity (or transparency) and, in the event of significant concrete work or engineered soils, pH monitoring as well. Monitoring, benchmarks, and reporting requirements contained in Condition S.4. (pp.13-20) of the Washington State Construction Stormwater General Permit, effective January 1, 2016, shall apply, as applicable.
- h. The permittee shall notify Char Naylor (253-680-5520) and Russ Ladley (253-680-5560) prior to conducting inspections at construction sites generating storm water discharged to tribal waters.
- i. Treat dewatering discharges with controls necessary to minimize discharges of pollutants in order to minimize the discharge of pollutants to groundwater or surface waters from stormwater that is removed from excavations, trenches, foundations, vaults, or other storage areas. Examples of appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, and filtration systems (e.g., bag or sand filters) that are designed to remove sediment. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11 of EPA's 2016 General Construction Stormwater Permit. Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.
- j. The permittee shall provide and maintain natural buffers to the maximum extent possible (and/or equivalent erosion and sediment controls) when tribal waters are located within 100 feet of the site's earth disturbances. If infeasible to provide and maintain an undisturbed 100 foot natural buffer, erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot undisturbed natural buffer shall be required.

**9.7.4.5 Spokane Tribe of Indians.** The following conditions apply only to discharges on the Spokane Tribe Reservation:

- a. Pursuant to Tribal Law and Order Code (TLOC) Chapter 30 each operator shall be responsible for achieving compliance with the Surface Water Quality Standards of the Spokane Tribe. The operator shall notify the Spokane Tribe, Water Control Board (WCB) of any spills of hazardous material and;
- b. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the WCB at the same time it is submitted to EPA.
- c. The permittee shall allow the Tribal Water Control Board or its designee to inspect and sample at the construction site as needed.
- d. Each operator shall submit a signed copy of the Notice of Termination (NOT) to the WCB at the same time it is submitted to EPA.

The correspondence address for the Spokane Tribe Water Control Board is:

Water Control Board  
c/o. Brian Crossley  
P0 Box 480  
Wellpinit WA 99040  
(509)626-4409  
[crossley@spokanetribe.com](mailto:crossley@spokanetribe.com)

**9.7.4.6 Swinomish Indian Tribal Community.** The following conditions apply only to discharges on the Swinomish Reservation:

- a. Owners and operators seeking coverage under this permit who intend to discharge to Regulated Surface Waters must submit a copy of the Notice of Intent (NOI) to the DEP at the same time the NOI is submitted to EPA.
- b. Owners and operators seeking coverage under this permit must also submit a Stormwater Pollution Prevention Plan to the DEP for review and approval by DEP prior to beginning any discharge activities.
- c. Owners and operators must also submit to the DEP Changes in NOI and/or Notices of Termination at the same time they are submitted to EPA.

**9.7.4.7 Tulalip Tribes.** The following conditions apply only to discharges on the Tulalip Reservation:

- a. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Tulalip tribal agencies. Pursuant to Tulalip Tribes code of law, the operator must also obtain a land use permit from the Tulalip Tribes Planning Department as provided in Title 7 of the Tulalip Tribal Code (<http://www.codepublishing.com/WA/Tulalip/?Tulalip02/Tulalip0205.html>).
- b. Each CGP operator shall be responsible for achieving compliance with Tulalip Tribes Water Quality Standards.
- c. Each CGP operator shall submit their Stormwater Pollution Prevention Plan (SWPPP) to the:

Tulalip Natural & Cultural Resources Department  
Tulalip Tribes  
6406 Marine Drive  
Tulalip, WA 98271

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section III of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section II of this form. Submission of this NOI also constitutes notice that the operator identified in Section III of this form meets the eligibility requirements of Part 1.1 CGP for the project identified in Section IV of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

Permit Information

NPDES ID: NMR10033S

State where your construction site is located: NM

Is your project/site located on federally recognized Indian Country lands? No

Are you requesting coverage under this NOI as a "Federal Operator" as defined in Appendix A ([https://www.epa.gov/sites/production/files/2019-05/documents/final\\_2017\\_cgp\\_appendix\\_a\\_-definitions.pdf](https://www.epa.gov/sites/production/files/2019-05/documents/final_2017_cgp_appendix_a_-definitions.pdf))?

Yes

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? No

Will you use polymers, flocculants, or other treatment chemicals at your construction site? No

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? Yes

Are you able to demonstrate that you meet one of the criteria listed in Appendix D ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_d\\_-endangered\\_species\\_reqs\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_d_-endangered_species_reqs_508.pdf)) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?

Yes

Have you completed the screening process in Appendix E ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_e\\_-historic\\_properties\\_reqs\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-historic_properties_reqs_508.pdf)) relating to the protection of historic properties?

Yes

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA state or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.

Yes

Operator Information

Operator Information

Operator Name: TRIAD NATIONAL SECURITY, LLC

Operator Mailing Address:

Address Line 1: PO BOX 1663 MS K490

Address Line 2:

City: Los Alamos

ZIP/Postal Code: 87545

State: NM

County or Similar Division: LOS ALAMOS

Operator Point of Contact Information

First Name Tim Middle Initial T Last Name: Lenke

Title: Team Leader

Phone: 505-665-2397

Ext.:

Email: tlenke@anl.gov

NOI Preparer Information

This NOI is being prepared by someone other than the certifier.

First Name Tim Middle Initial T Last Name: Zimmerly

Organization: TRIAD NATIONAL SECURITY

Phone: 505-664-0105

Ext.:

Email: [tzimmer@lanl.gov](mailto:tzimmer@lanl.gov)

Project/Site Information

Project/Site Name: Middle DP Road Recovery Effort

Project/Site Address

Address Line 1: DP Road

Address Line 2:

City: Los Alamos

ZIP/Postal Code: 87544

State: NM

County or Similar Division: LOS ALAMOS

Latitude/Longitude: 35.878537°N, 106.288205°W

Latitude/Longitude Data Source: Map

Horizontal Reference Datum: WGS 84

Project Start Date: 06/15/2020

Project End Date: 09/01/2020

Estimated Area to be Disturbed: 3

Types of Construction Sites:

- Utility

Will there be demolition of any structure built or renovated before January 1, 1980? No

Was the pre-development land use used for agriculture? No

Have earth-disturbing activities commenced on your project/site? Yes

➔ Is your project an "emergency-related project"? Yes

Is your project/site located on federally recognized Indian Country lands? No

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? No

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? No

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Appendix F ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_f\\_-\\_tier\\_3\\_tier\\_2\\_and\\_tier\\_2.5\\_waters\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_f_-_tier_3_tier_2_and_tier_2.5_waters_508.pdf))

Yes

**001: Los Alamos Canyon South end of site**

Latitude/Longitude: 35.877074°N, 106.287498°W

Tier Designation: Tier 2

Is this receiving water impaired (on the CWA 303(d) list)? Yes

Impaired Pollutants:

- Mercury
- Gross alpha, adjusted
- Selenium
- Cyanide
- PCB contaminated debris

Has a TMDL been completed for this receiving waterbody? No

Stormwater Pollution Prevention Plan (SWPPP)

First Name Middle Initial Last Name: Terrill Lemke

Organization:

Title: Team Leader

Phone: 505-665-2397

Ext.:

Email: tlemke@lanl.gov

#### Endangered Species Protection

Using the Instructions in Appendix D of the CGP, under which criterion listed in Appendix D are you eligible for coverage under this permit? Criterion E

Provide a brief summary of the basis for criterion selection listed above (the necessary content for a supportive basis statement is provided under the criterion you selected.):

Criterion E is applicable for this action because the land where this action is occurring was transferred from LANL to Los Alamos County. That action was consulted on with the USFWS in 2001 and the resulting biological opinion is attached.

Copies of any letters or other communications between you and the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

Name	Created Date	Size
Final Biological Opinion Land Transfer.pdf	06/26/2020	1.20 MB

#### Historic Preservation

Are you installing any stormwater controls as described in Appendix E ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_e\\_-historic\\_properties\\_reqs\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-historic_properties_reqs_508.pdf)) that require subsurface earth disturbances? (Appendix E ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_e\\_-historic\\_properties\\_reqs\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-historic_properties_reqs_508.pdf)), Step 1)

Yes

➤ Have prior surveys or evaluations conducted on the site already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix E ([https://www.epa.gov/sites/production/files/2017-02/documents/2017\\_cgp\\_final\\_appendix\\_e\\_-historic\\_properties\\_reqs\\_508.pdf](https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-historic_properties_reqs_508.pdf)), Step 2):

Yes

#### Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Certified By: Jennifer payne

Certifier Title: Manager

Certifier Email: [jpayne@lanl.gov](mailto:jpayne@lanl.gov)

Certified On: 06/30/2020 6:36 PM ET



**Environmental Protection & Compliance  
Division**

Los Alamos National Laboratory  
PO Box 1663, K490  
Los Alamos, NM 87545  
505-667-0666

*Symbol:* EPC-DO: 18-453  
*LAUR:* 18-31574  
*Date:* DEC 11 2018

Ms. Anne L. Idsal, Regional Administrator  
U.S. Environmental Protection Agency, Region 6  
1445 Ross Avenue, Suite 1200  
Mail Code: 6RA  
Dallas, TX 75202-2733

**Subject: Notification of Triad National Security, LLC, Signatory Officials and  
Authorized Representatives for NPDES Permits**

Dear Ms. Idsal:

The purpose of this letter is to provide an update to the U. S. Environmental Protection Agency (EPA) Region 6 on the Triad National Security, LLC delegation of authority for signature of documents associated with the various Los Alamos National Laboratory (LANL) NPDES Permits, pursuant to 40 CFR 122.22(c). This letter supersedes and replaces the signatory authority letter dated March 14, 2018 (ADESH: 18-017).

The positions of Associate Laboratory Director of Environment, Safety, Health & Quality and Safeguards & Security (ESHQSS), and Division Leader of the Environmental Protection & Compliance Division (EPC-DO) are identified as Triad's primary signatory officials under 40 CFR 122.22(a) for certifying and signing permit applications (including Notice of Intents (NOIs)) required under the LANL NPDES Industrial Point Source Outfall Permit (Permit No. NM0028355), the NPDES Storm Water Construction General Permit, the NPDES Multi-Sector General Permit (Permit No. NMR050013), and the NPDES Pesticide General Permit (Permit No. NMG87B113).

The following positions are hereby designated as authorized representatives under 40 CFR 122.22(b) to sign reports, Storm Water Pollution Prevention Plans, Discharge Monitoring Reports, Pesticide Discharge Management Plans, and any other compliance documentation required by the permits:

**NPDES Industrial Point Source Outfall Permit (No. NM0028355)**

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Responsible Facility Operations Director (FOD).

**NPDES Construction General Permit:**

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Cognizant Project Manager, Construction Manager, or Subcontractor Technical Representative for the regulated construction activity.

**NPDES Multi-Sector General Permit (ID No. NMR053195)**

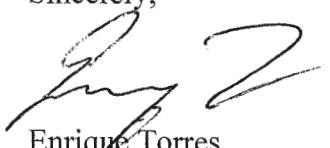
- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.
- Division Leader, Deputy Division Leader, or Group Leader of the LANL division responsible for the overall operation of the regulated facility or activity.
- Responsible FOD; Deputy FOD, Operations Manager; or Deployed Environment, Safety, & Health Manager responsible for the overall operation of the regulated facility or activity.

**NPDES Pesticide General Permit (No. NM687A041)**

- Positions listed as primary signatory officials above.
- Group Leader or Team Leaders within the Environmental Compliance Programs Group.

If you have questions, please contact me at (505) 667-7269 or at [etorres@lanl.gov](mailto:etorres@lanl.gov).

Sincerely,



Enrique Torres  
Division Leader  
Environmental Protection & Compliance Division

ET/TWL/MTS:jdm

Attachment(s): None.

Copy: Nancy Williams, USEPA, Region 6, [williams.nancy@epa.gov](mailto:williams.nancy@epa.gov), (E-File)  
Brent E. Larsen, USEPA, Region 6, [Larsen.brent@epa.gov](mailto:Larsen.brent@epa.gov), (E-File)  
Robert Houston, USEPA, Region 6, [Houston.robert@epa.gov](mailto:Houston.robert@epa.gov), (E-File)  
Sarah Holcomb, NMED, [sarah.holcomb@state.nm.us](mailto:sarah.holcomb@state.nm.us), (E-File)  
Karen E. Armijo, LASO-MA-LS, [Karen.armijo@nnsa.doe.gov](mailto:Karen.armijo@nnsa.doe.gov), (E-File)  
Jody Pugh, NA-LA, [jody.pugh@nnsa.doe.gov](mailto:jody.pugh@nnsa.doe.gov), (E-File)  
Michael W. Hazen, ESHQSS, [mhazen@lanl.gov](mailto:mhazen@lanl.gov), (E-File)  
William R. Mairson, ESHQSS, [wrmaison@lanl.gov](mailto:wrmaison@lanl.gov), (E-File)  
Enrique Torres, EPC-DO, [etorres@lanl.gov](mailto:etorres@lanl.gov), (E-File)  
Taunia Van Valkenburg, EPC-CP, [tauniav@lanl.gov](mailto:tauniav@lanl.gov), (E-File)  
Michael T. Saladen, EPC-CP, [saladen@lanl.gov](mailto:saladen@lanl.gov), (E-File)  
Terrill W. Lemke, EPC-CP, [tlemke@lanl.gov](mailto:tlemke@lanl.gov), (E-File)  
Tim Dolan, GC-ESH, [tdolan@lanl.gov](mailto:tdolan@lanl.gov), (E-File)  
[emla.docs@em.doe.gov](mailto:emla.docs@em.doe.gov), (E-File)  
[locatesteam@lanl.gov](mailto:locatesteam@lanl.gov), (E-File)  
[epc-correspondence@lanl.gov](mailto:epc-correspondence@lanl.gov), (E-File)  
[adesh-records@lanl.gov](mailto:adesh-records@lanl.gov), (E-File)

**APPENDIX E:**  
**BMP Guidance, Details, and Specifications**

1. Berms
2. Fiber Rolls/Gravel bags
3. Check Dams
4. Silt Fence
5. Base Course (Temporary Stabilization)
6. Rolled Erosion Control Products
7. Construction Entrance/Exit
8. Good Housekeeping
9. Revegetation
10. Dust Control
11. Inlet Protection
12. Seeding Specification

## Berms and Channels



### Options and Alternatives

- Swale/berm combination
- Rock berms
- Log berms
- Triangular Silt Dike®

### BMP Objectives

- Runoff Control
- Run-on Diversion

#### Description

Berms and channels are most often used to prevent run-on from eroding an exposed or disturbed area, and to divert sediment-laden runoff to a sediment trap, sediment basin or other suitable, stabilized discharge outlet. When used as a temporary control, berms are most often constructed from compacted soil or loose gravel, stone, or crushed rock. Berms may serve as a permanent structural control when constructed from asphalt, concrete, or other similar material. Channels can be incorporated into a berm design or function as a stand-alone BMP, and are typically constructed from compacted soil or lined with a suitable material.

#### Applications

Effective in diverting run-on away from unprotected areas and reducing flow velocities; effective to retain small amounts of runoff and sediment onsite.

#### Limitations

- A berm with a height of over 2 feet or located in an area where failure of the berm would result in damage to facilities, the environment or other safety issues requires an engineered design.
- Increased potential for failure if the upslope gradient is too great, resulting in high velocity flows.
- Earth berms may require vegetative stabilization to prevent erosion of the berm itself.
- Excessive sediment accumulation on upslope side of berm needs frequent clean-out.
- Channels may require engineering calculations to ensure the channel material is adequate to withstand flow velocity and shear stress.

#### Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention		x	
Sediment Control		x	
Runoff Control			x
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Earth and base course	x	x		
Asphalt and concrete			x	
Prefabricated channels and culverts	x	x	x	x
Prefabricated barriers	x			x

#### Design and Construction Guidance

- Berms should be constructed during initial land-disturbing activities and must be operational prior to upslope land disturbance.
- A shallow trench or swale to contain the diverted run-on/runoff can be incorporated into the berm design.
- Where applicable, on-site material should be used for berm construction.
- Berm material needs to meet requirements for gravelly clay or sandy clay. Do not use gravelly sand or gravelly loam to construct berms.
- When used as a perimeter or down slope control, berms should divert runoff to a sediment trapping control such as a sediment trap or basin.
- Berms should be located so as to minimize damage by construction operations and traffic.
- Triangular Silt Dike® berms can be used in locations subject to minor traffic flow.
- Earth berms must be adequately compacted to prevent failure.
- Logs must be delimbed, trenched in and backfilled. If necessary, secure with wooden stakes on either side of the log.
- Rock berms must be constructed of large angular rock. Height and depth of the berm is dependent on the expected storm water flow. Ends of berm should be brought forward to help contain the flow.
- Channel material must be adequate to withstand flow velocity and shear stress.
- Ensure channels are designed and constructed with a defined flow line adequate to convey flows.
- Spillways on berms should be at least 6 inches in depth and should be protected against scour. Use rock or TRM for stabilization of the spillway.

#### Inspection and Maintenance

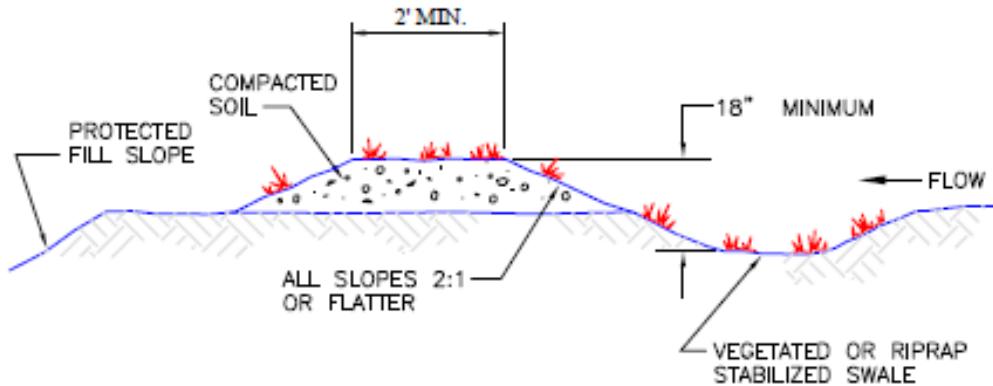
- Seeded areas which fail to establish a vegetative cover shall be reseeded as necessary.
- Damage from vehicle or construction traffic shall be repaired prior to the end of each working day or prior to the next storm event, whichever is sooner.
- Conduct required repairs immediately.
- Temporary berms may be removed when the site has been finally stabilized or when drainage patterns changed so that the berms are no longer functional.
- Berms that are designed to trap sediment should be cleaned out as necessary or after each storm event.
- Inspect for erosion or other damage, and repair.

## What not to do...

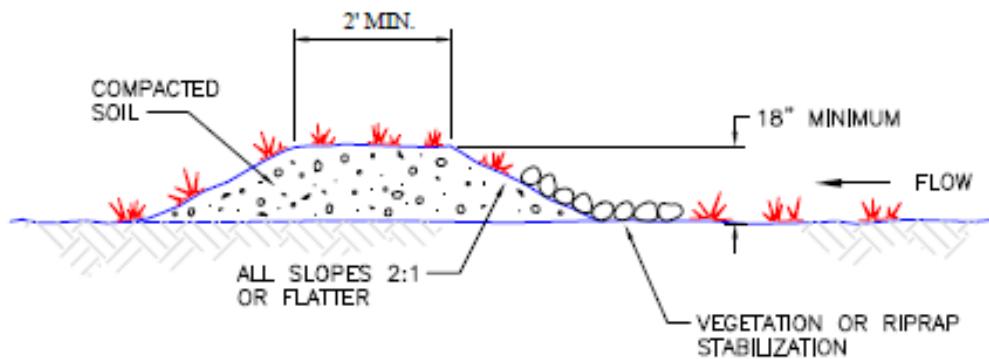


Berm was not well stabilized and could not stand up to run-on flows. Berms and swales should be designed and constructed to handle site specific run-on or run-off flows.

## EARTH BERM



### TYPICAL FILL DIVERSION

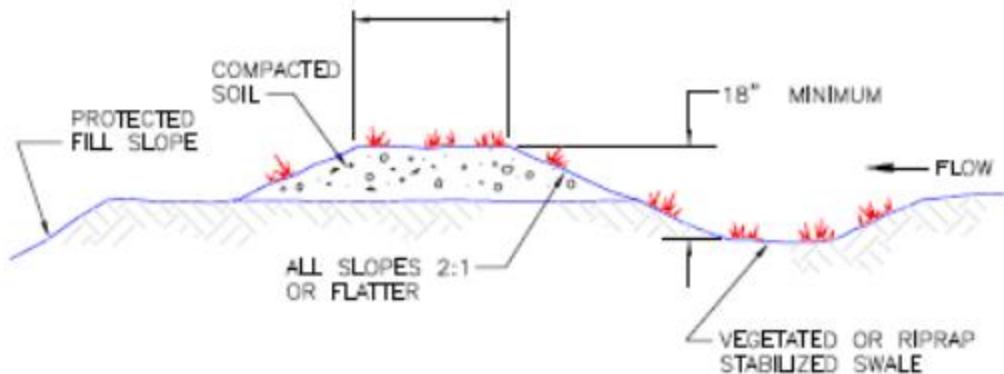


### TYPICAL TEMPORARY DIVERSION DIKE

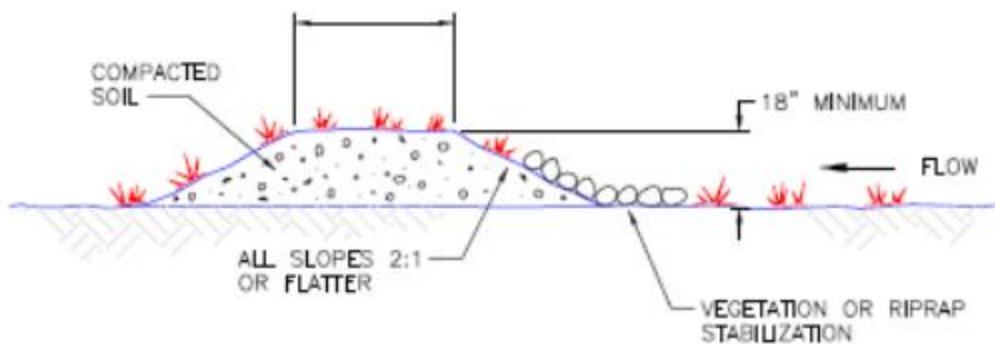
#### NOTES:

1. THE CHANNEL BEHIND THE BERM SHALL HAVE A POSITIVE GRADE TO A STABILIZED OUTLET.
2. THE BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
3. THE BERM SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT SEEDING, MATTING, OR OTHER APPLICABLE MEASURES.
4. THE TOP OF THE BERM SHALL HAVE A MINIMUM WIDTH OF 2 FEET AND ALL SIDE SLOPES SHALL BE 2:1 OR FLATTER.

## EARTH BERM



### TYPICAL FILL DIVERSION

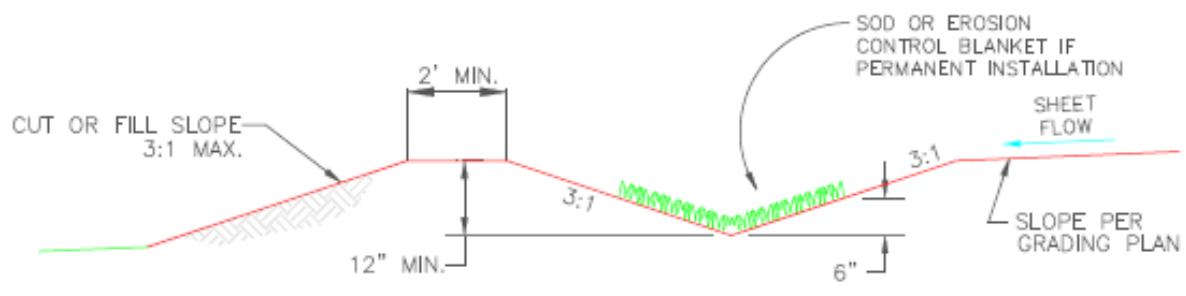


### TYPICAL TEMPORARY DIVERSION DIKE

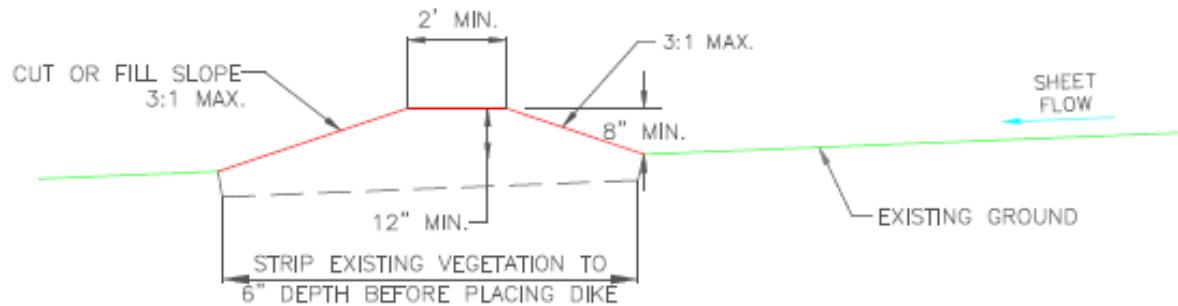
#### NOTES:

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5. THE TOP OF THE BERM SHALL HAVE A MINIMUM WIDTH OF 2 FEET AND ALL SIDESLOPES SHALL BE 2:1 OR FLATTER.

## EARTH BERMS & SWALES



### SWALE

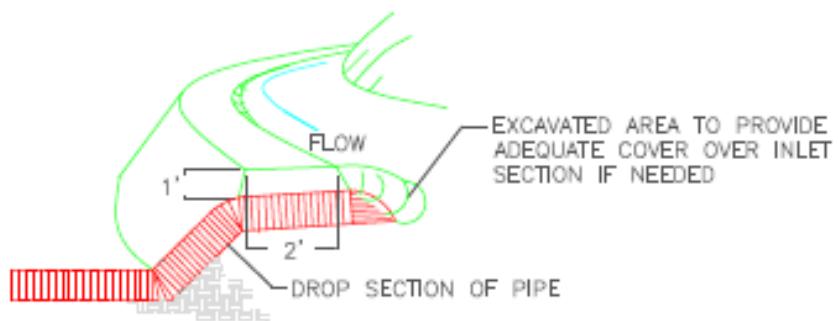
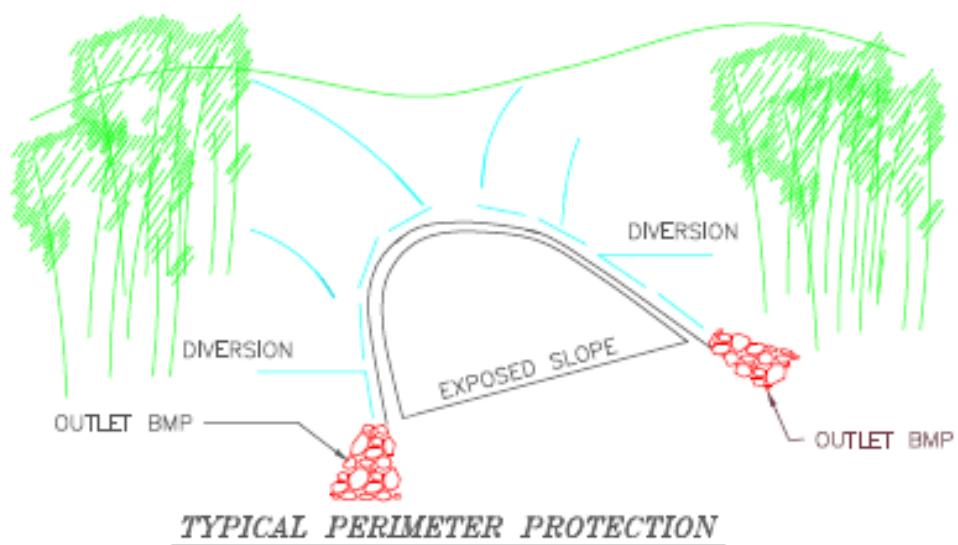
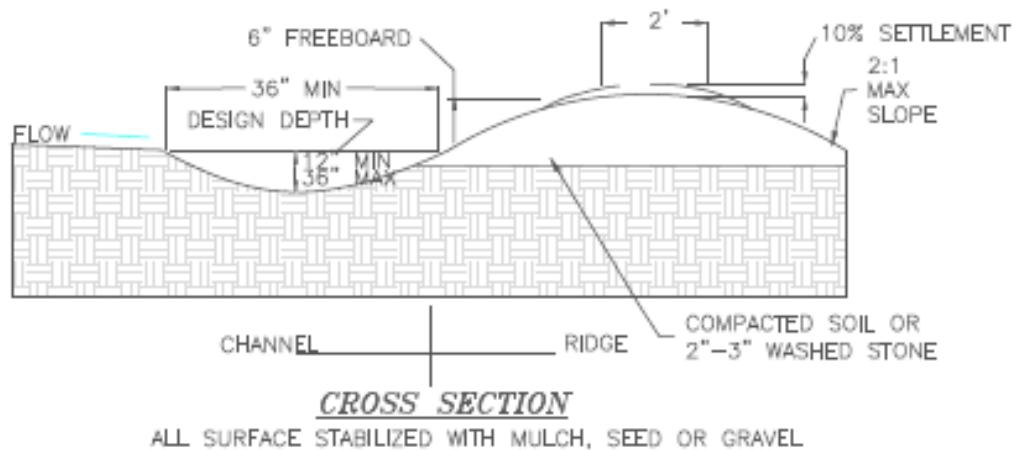


### DIKE

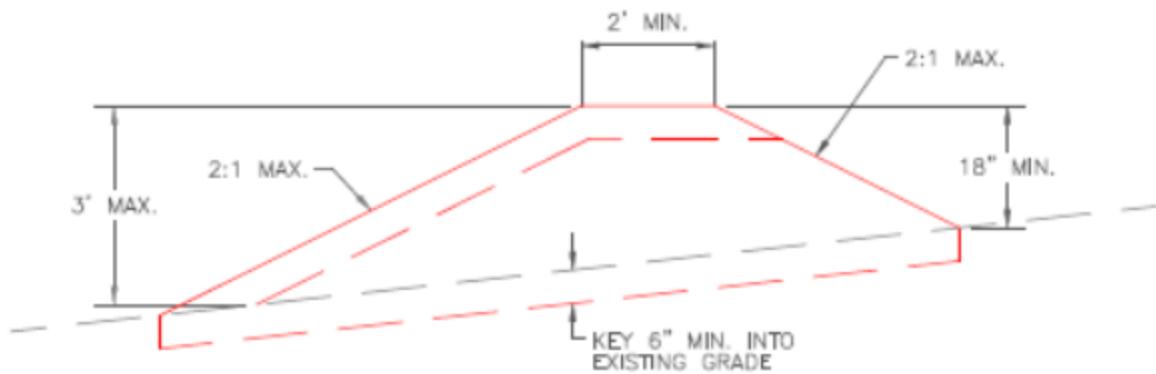
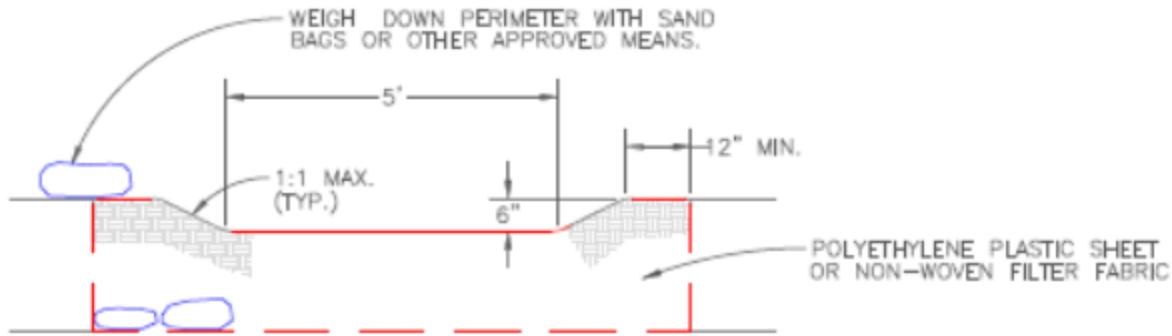
#### NOTES:

1. DIKE SHALL BE COMPACTED TO DENSITY EQUAL TO THAT SPECIFIED FOR ADJOINING AREA (90% STANDARD PROCTOR DENSITY, MINIMUM).
2. MINIMUM 1% GRADE MUST BE PROVIDED FOR SWALE OR ALONG UPSLOPE SIDE OF DIKE FOR PROPER DRAINAGE.

## EARTH BERMS & SWALES



## TEMPORARY SILT CONTAINMENT BERM



### NOTES:

1. SOIL IN BERM SHALL BE FIRMLY COMPACTED.
2. AT EACH END OF BERM, TURN BERM UPSLOPE AND EXTEND UNTIL GROUND SURFACE RISES TO TOP OF BERM ELEVATION.
3. PROVIDE OVERFLOW AREAS AT 200 FT. MAX. INTERVALS.

## Fiber Rolls/Gravel Bags



### **Product Types**

- Straw Wattles
- Terra-Tubes®
- Coir Logs
- Compost Socks
- Gravel Bags

### **Alternatives**

- Silt fence
- Triangular Silt Dike

### **BMP Objectives**

- Sediment Control
- Reduce Runoff Velocity
- Inlet Protection

#### **Description**

Fiber rolls are tube-shaped erosion-control devices filled with straw, flax, rice, coconut fiber material, gravel, or composted material. Common types of this BMP include: straw wattles, coir logs, compost socks, gravel bags, and Terra-Tubes®. Straw wattles are wrapped with UV-degradable polypropylene netting for longevity or with 100% biodegradable materials like burlap, jute, or coir. Coir logs are very similar to straw fiber rolls but are comprised of long lasting coconut fiber. They are also resistant to being consumed by wildlife. Compost socks and gravel bags are three dimensional tubular devices comprised of woven mesh fabric or other similar material and filled with gravel, rock or compost material. Terra-Tubes® are similar to fiber rolls except they are treated with special polymers that react (flocculate) with suspended soil particles, increasing the ability of the suspended solids to settle.

These devices can be used to break up a slope length, reducing the effects of runoff on long or steep slopes. They also help reduce sediment loads to receiving waters by filtering runoff or capturing sediments. Fiber roll BMPs can be used as check structures to reduce runoff velocity and can be placed around storm drain inlets for velocity and sediment control.

#### **Applications**

- Along the toe, top, face, and at-grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Along the perimeter of exposed soil areas.
- Gravel bags only can be used as check dams in unlined ditches.
- Around temporary stockpiles (on dirt).
- Around storm drain inlets (see Section 3.5).

## Limitations

- They have a limited sediment capture zone.
- Some may have problems with ice buildup.
- Must be trenched in to function properly.
- Straw and rice fiber rolls are susceptible to damage and consumption by wildlife.

## Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention	x		
Sediment Control			x
Runoff Control		x	
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Straw, Coir logs	x	x		
compost socks	x			x
gravel bags/snakes	x			x

## Design Criteria and Construction Specifications

### Materials

- Most will come prefabricated. Some may require filling onsite, such as gravel bags and compost socks.
- Straw fiber rolls must be at least 8" diameter. To be effective, fiber rolls at the toe of slopes must be at least 20 inches in diameter. An equivalent installation, such as stacked smaller-diameter fiber rolls, can be used to achieve a similar level of protection.
- Compost socks: the compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted. Filter socks used for erosion control are usually 12 inches in diameter.
- Gravel bags: filled with clean 3/4" crushed or 1/4" pea gravel. If subject to impact from equipment or vehicles, fill bags only 1/2 to 3/4 full with non-angular rock.
- Terra-Tubes® can be used where additional reductions in turbidity are required.
- Stakes installed per manufacturer recommendations.

### Installation.

- On projects with slopes, install fiber rolls along the contour with a slight downward angle at the end of each row to prevent ponding at the midsection. Turn the ends of each fiber roll upslope to prevent runoff from flowing around the roll.
- Install fiber rolls in shallow trenches dug 3 to 5 inches deep for soft, loamy soils and 2 to 3 inches deep for hard, rocky soils.
- Determine the vertical spacing for slope installations on the basis of the slope gradient and soil type. General Guidance is as follows:
  - 1:1 slopes = 10 feet apart
  - 2:1 slopes = 20 feet apart
  - 3:1 slopes = 30 feet apart
  - 4:1 slopes = 40 feet apart

- Fiber rolls can be anchored in the following ways:
  1. Drive the stakes through the middle of the fiber roll and deep enough into the ground to anchor the roll in place. About 3 inches of the stake should stick out above the roll, and the stakes should be spaced 3 to 4 feet apart.
  2. Stakes may be placed on each side of the roll tying across with a natural fiber twine or staking in a crossing manner ensuring direct soil contact at all times.
- Gravel bags do not require staking.
- Terminal ends of fiber rolls may be dog legged up slope to ensure containment and prevent channeling of sedimentation.
- Backfill the length of the fiber roll with the excavated soil and compact.

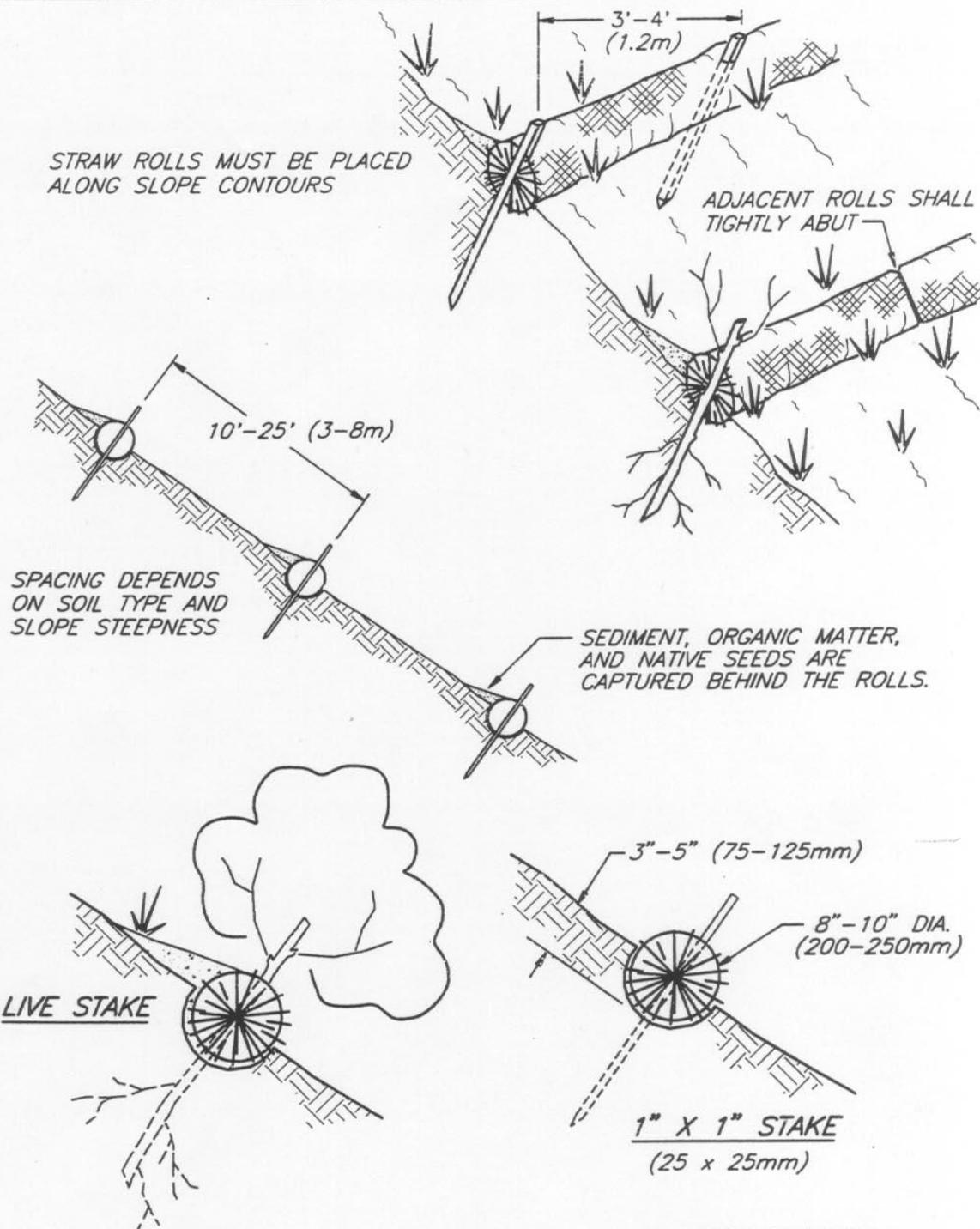
## Inspection and Maintenance

- Ensure that the rolls remain firmly anchored in place and are not crushed or damaged by equipment traffic.
- Check that fiber rolls are trenched in and no gaps exist under the rolls.
- Check that fiber rolls are adequately aligned with the next roll. Either overlapped uphill of the next or doglegged.
- Check that fiber rolls are securely anchored.
- Repair or replace split, torn, unraveled, or slumping fiber rolls.
- Rills or gullies upslope of the rolls and any undercutting is to be repaired.
- Sediment deposits shall be removed when the sediment reaches one-third of the fiber rolls functional freeboard height. Removed sediment shall be deposit within the project in such a way that the sediment is not subject to erosion by wind or water.
- Additional fiber rolls can be placed on top of existing ones to increase sediment capacity.

## What not to do...



A rill is forming under the fiber roll. The rill should be filled in. The fiber roll should be properly entrenched into the soil so that water velocity is decreased and water is forced to pool behind to promote sedimentation and flow over the fiber roll.



NOTE:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

NOT TO SCALE

**STRAW ROLLS**

# Check Dams



## Alternatives

- Stabilize channel with TRM, asphalt or concrete.

## Options

- Gravel bags
- Rock
- Logs
- Prefabricated Juniper Bales
- Triangular Silt Dike®
- Other prefabricated products

## BMP Objectives

- Sediment Retention
- Reduction in runoff velocity
- Erosion Control

### Description

A check dam is a small dam constructed across a channel, drainage ditch or other area of concentrated flow. Check dams reduce erosion and promote sedimentation by reducing runoff flow velocity and encouraging sediment to settle out. Check dams are usually constructed of rock, gravel bags, sandbags or other proprietary products and may either be a temporary or permanent structural control.

### Applications

- Use to minimize down cutting in channels, retain sediment, and reduce velocity.
- Useful in temporary ditches that will be removed after construction.

### Limitations

- A check dam with a height of over 2 feet or located in an area where failure of the check dam would result in damage to facilities, the environment or other safety issues requires an engineered design.
- Significant sediment accumulations behind the check structure may destroy vegetation lining the channel.
- Requires regular maintenance and sediment removal.
- May not be used in a drainage that is a perennial stream.
- May cause increased erosion if not installed correctly.

### Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention		x	
Sediment Control			x
Runoff Control			x
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Rock, logs, juniper bales		x	x	
Gravel bags, Triangular Silt Dike	x			x

## Design and Construction Guidance

- Check dam must be located in a defined channel to reduce runoff velocity or retain sediment.
- If high flows are expected, ensure scour protection has been installed on the downstream of the check dam.
- Check dams should be spaced at a distance to allow the elevation of the ponded water from the downstream check dam to match the elevation of the toe of the upstream dam.
- Flows must be directed over the check dam.
- When using rock, ensure the material diameter is appropriate to create ponding.
- Straw bales and wattles should not be used as check dams.
- The center of a check dam must always be lower than its outside edges and the channel bank height to allow proper flow over the check structure.

### Installation:

- Should be installed as soon as possible while construction activities are occurring.
- The center of the dam should be at least six-inches lower than its edges.
- Check dam material should be entrenched into the sides and bottom of the channel to ensure flow does not go around or under the check dam.
- Rock should be placed individually by hand or by mechanical methods (no dumping of rock).
- Check for damage and erosion caused by flows around or under the dam structure. Repair erosion around a check dam and lower the center if required.
- Remove any debris that would impede flow over the check dam.
- When the sediment has reached a height of approximately one-half the original height of the dam (measured at the center), remove accumulated sediment from the upstream side of the dam.
- Remove check dams made from temporary materials when the adjacent site is stabilized.
- Before removing a check dam, remove all accumulated sediment from the channel. If sediment is placed on adjacent slopes, stabilize it with native vegetation.

## Inspection and Maintenance

## What not to do...

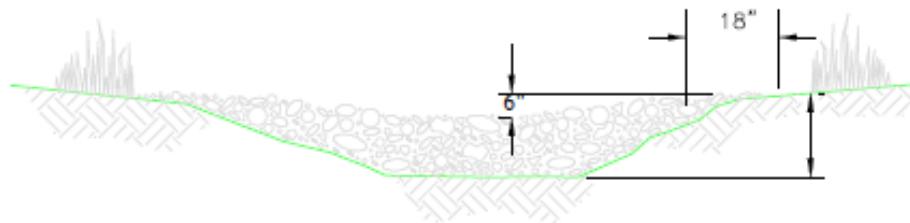


Silt fence cannot be used as a check structure and is not designed for concentrated flow.

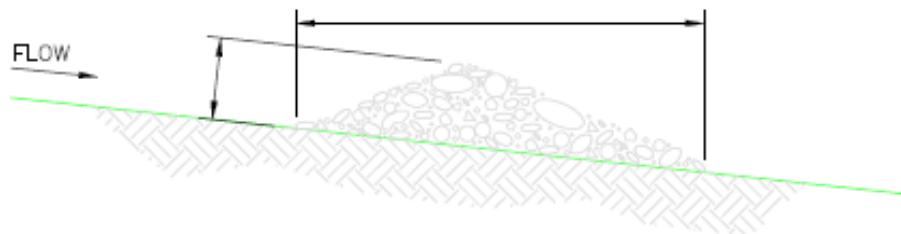


Notice how runoff bypassed the check structures. Channel banks must be sufficient to withstand flows and the dam center must be lower to allow flow over the check dam.

## ROCK CHECK DAM

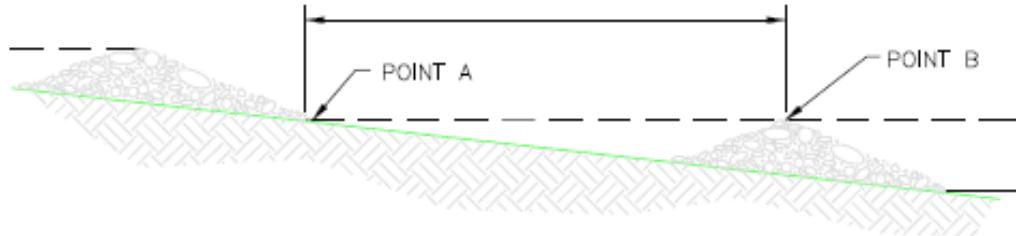


VIEW LOOKING UPSTREAM



SECTION A

X = THE DISTANCE SUCH THAT POINT A AND B ARE OF EQUAL ELEVATION.



SPACING BETWEEN CHECK DAMS

### NOTES:

1. ROCK CHECK DAMS SHALL BE CONSTRUCTED WITH 2-15 INCH MAXIMUM SIZE AGGREGATE ROCK.
2. WHERE APPLICABLE, KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND DAM.
3. PROVIDE AN ENERGY DISSIPATOR ON THE DOWNSTREAM SIDE OF THE DAM TO REDUCE DOWNSTREAM EROSION.

## **Silt Fence and S-Fence™**



### **Product Types**

- Silt fence
- S-Fence™

### **Alternatives**

- Depending on surface and site conditions; gravel bags, wattles, or Triangular Silt Dike may be used.

### **BMP Objectives**

- Sediment Control
- Sheet Flow Runoff Control
- Wind Erosion Control

### **Description**

Silt fences are typically used as temporary perimeter controls around sites where construction activities will disturb the soil. They can also be used within the interior of a site. A silt fence consists of a length of woven, permeable geotextile, stretched between anchoring posts spaced at regular intervals along the site at low/downslope areas. The filter fabric should be entrenched in the ground between the support posts. When installed correctly, silt fences create ponding of runoff from the site, allowing transported sediment to settle out. Silt fences can be an effective barrier to sediment leaving the site.

The S-Fence is made from HDPE material and is much stiffer than the silt fence material. It is buried 3 inches in the ground and can be secured to an existing chain link fence or can be installed by itself and fastened to wood stakes. Each section is 7 feet long and comes in two heights: 10 inch and 14 inch. S-Fence is designed to allow water to flow through it and significantly reduces erosive energy and provides particle filtering.

## Applications

Silt fences apply to construction sites with relatively small drainage areas. They are appropriate in areas where runoff will occur as sheet flow. The drainage area for silt fences should not exceed 0.25 acre per 100-foot fence length. Silt fence should not be used for runoff velocity control or placed in areas of concentrated runoff such as drainage channels and storm drain inlets and outlets. Silt fence should be installed along the contour to minimize channeling of runoff. They may also be placed perpendicular to prevailing winds at staggered intervals to address wind erosion. The same applications apply to S-Fence.

## Limitations

- Do not install silt fences along areas where rocks or other hard surfaces will prevent uniformly anchoring the fence posts and entrenching the filter fabric. Improper installation prevents proper function.
- Silt fences are not suitable for areas where large amounts of concentrated runoff are likely. Do not install silt fences across streams, ditches, or waterways.
- High winds can make the filter fabric deteriorate faster, so installing fences in open, windy areas should be avoided.
- When the pores of the fence fabric become clogged with sediment, pools of water are likely to form on the uphill side of the fence. Siting and design of the silt fence should account for this. Take care to avoid unnecessarily diverting storm water from these pools, causing further erosion damage.
- UV exposure degrades silt fence filter fabric, causing separation of the fabric strands which leads to greater potential for holes and wind damage.

## Performance and Longevity

Studies have approximated the following effectiveness ranges for silt fences constructed of filter fabric that are properly installed and well maintained:

- Average total suspended solids removal of 70 percent
- Sand removal of 80 to 90 percent
- Silt-loam removal of 50 to 80 percent
- Silt-clay-loam removal of 0 to 20 percent.

Removal rates are highly dependent on local conditions and installation.

Silt fence in the LANL area will typically experience the onset of degradation due to UV exposure over a period of 6 to 12 months and will need to be maintained or repaired due to damage from wind and runoff.

S-Fence can also be used as a perimeter control but is made from an HDPE material and has a functional life greater than 4 years. It can also be reused. The product will stand up to winds and UV exposure and can be recycled at the end of its life.

Performance	Poor or N/A	Good	Excellent
Erosion Prevention	x		
Sediment Control			x
Runoff Control		x	
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Silt Fence	x			
S-fence	x			x

## Design and Construction Guidance

### Materials

#### **Silt Fence**

- The material for silt fences should be a pervious sheet of synthetic fabric such as polypropylene, nylon, polyester, or polyethylene yarn.
- Choose the material based on the minimum synthetic fabric requirements shown in Table 1.

*Table 1. Minimum requirements for silt fence fabric*

Physical property	Requirements
Filtering efficiency	75%-85% (minimum): highly dependent on local conditions
Tensile strength at 20% (maximum) Elongation	Standard strength: 30 lb/linear inch (minimum) Extra strength: 50 lb/linear inch (minimum)
Ultraviolet radiation	90% (minimum)
Slurry flow rate	0.3 gal/ft <sup>2</sup> /min (minimum)

#### **S- Fence Product Characteristics**

- Unit weight, 10" / 14" (lbs/ft) (max) 0.35 / 0.48
- Reusable YES
- Functional life (minimum)(years) 4+
- Filter capability – AOS (ASTM D4751) (microns) 250
- Dimension – length per module (ft) 7
- Percentage Open Area (COE 22125-86) (min %) 20%
- Dimension (freeboard height in inches) 10.0 / 14.0
- Tensile Yield ASTM D-638 (lb/in<sup>2</sup>) 1800 - 2800
- Installed freeboard height (inches) 7.0 / 11.0
- Ultimate Tensile Strength: ASTM D-638 (lb/in<sup>2</sup>) 2000 - 2800
- Recyclable Post consumer #2 YES
- Service temperature (deg F) -30 to 160

### Installation

- Standard-strength fabric can be reinforced with wire mesh behind the filter fabric to increase the effective life of the fence.
- Attach the filter fabric to wood or metal stakes at least 4 feet long. Stakes should have a minimum diameter of 2 inches if a hardwood like oak is used or at least 4 inches in diameter if soft woods such as pine are used. When using metal posts in place of wooden stakes, they should weigh at least 1.00 to 1.33 lb/linear foot. If metal posts are used, attachment points are needed for fastening the filter fabric with wire ties.
- Erect silt fence in a continuous fashion from a single roll of fabric to eliminate gaps in the fence. If a continuous roll of fabric is not available, overlap the fabric from both directions only at stakes or posts. Overlap at least 6 inches in a shingle pattern in the direction of runoff flow.
- Excavate a trench to anchor the bottom of the fabric fence at least 6 inches below the ground surface. The trench should be backfilled and the soil

compacted over the toe of the filter fabric. Alternatively use a slicing machine to install the filter fabric.

- Install posts along the length of the fence at a height of 18 to 36 inches above the original ground surface. Posts should be driven into the ground a minimum of 12 inches. If standard-strength fabric is used with wire mesh, space the posts no more than 10 feet apart. If extra-strength fabric is used without wire mesh reinforcement, space the posts no more than 6 feet apart. Attach the filter fabric to the posts.
- The ends of the silt fence should be turned uphill to prevent flow from running around the ends of the fence.
- Install silt fence at least 6 feet from the toe of a slope.
- Once installed, silt fence should remain in place until all areas upslope have been permanently stabilized by vegetation or other means.

## Inspection and Maintenance

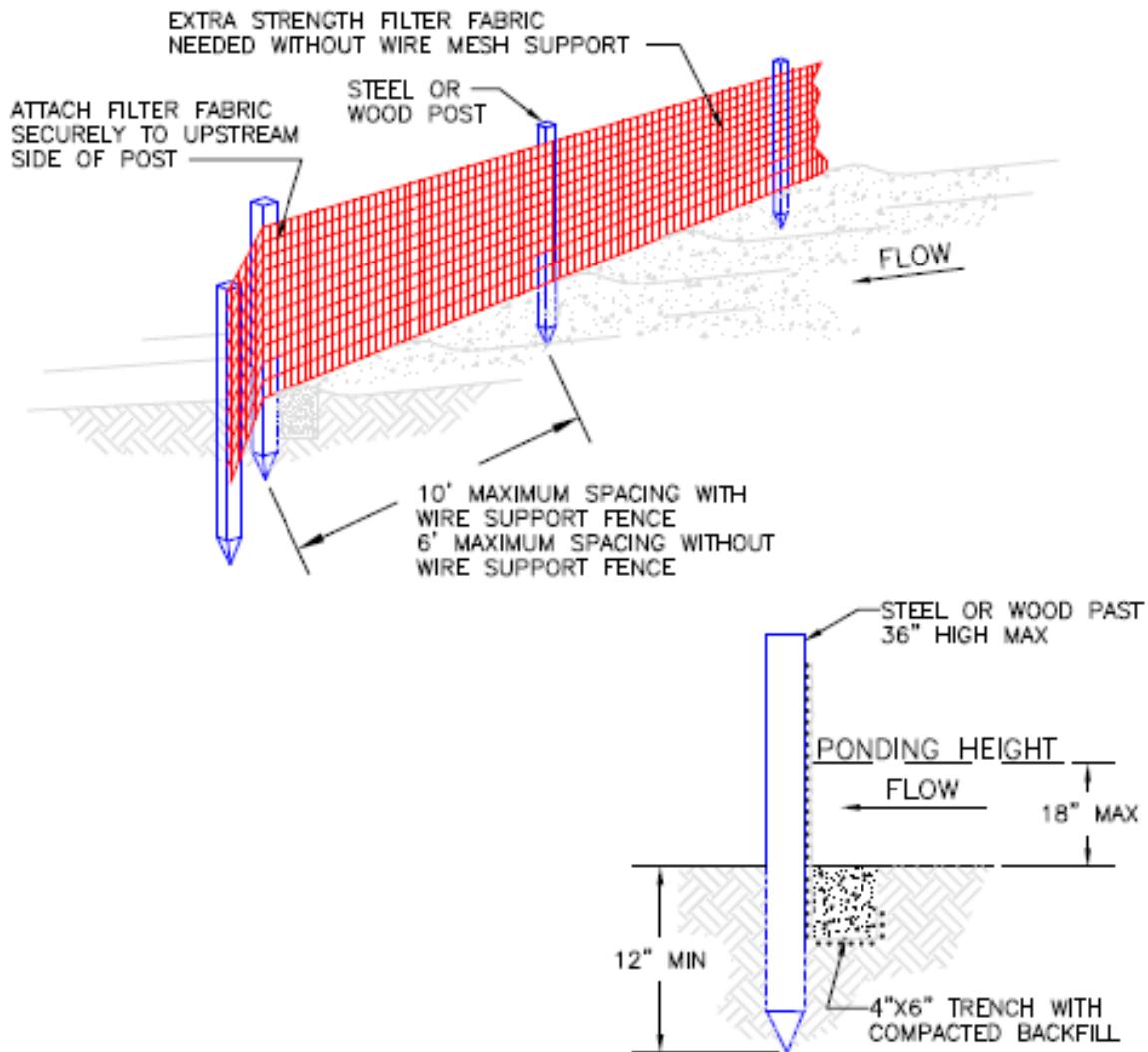
- Inspect fences to make sure that they are intact and that there are no gaps where the fence meets the ground or tears along the length of the fence.
- If gaps or tears are found, repair or replace the fabric immediately.
- Remove accumulated sediments from the fence base when the sediment reaches one-third to one-half the fence height.
- Remove sediment more frequently if accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event.
- When removing the fence, remove the accumulated sediment as well.

## What not to do...



Silt fence should be properly entrenched for proper operation.

## SILT FENCE

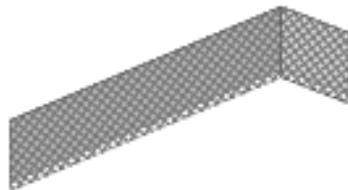
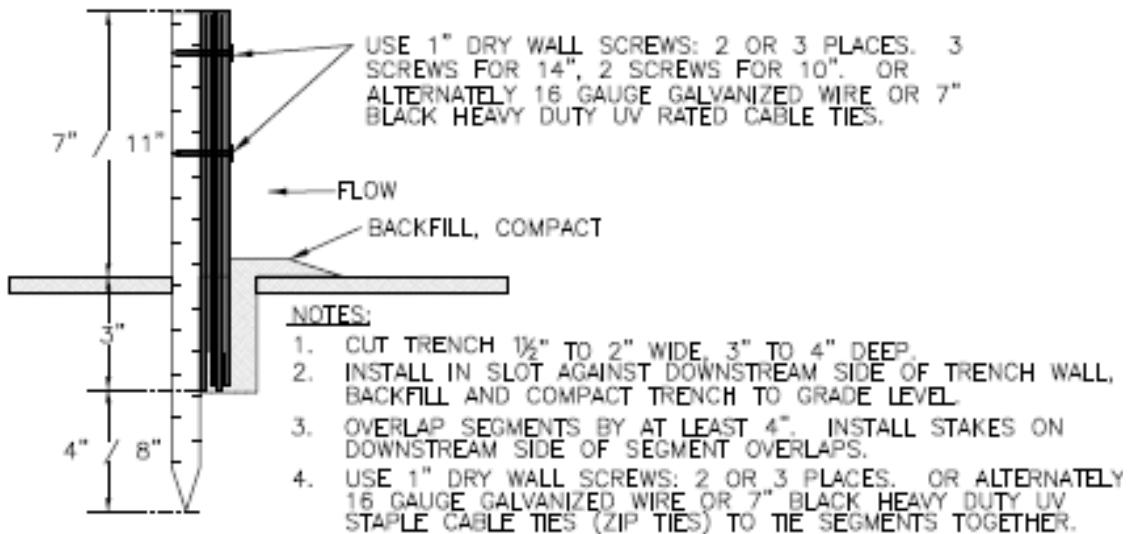


### TRENCH DETAIL

#### NOTES:

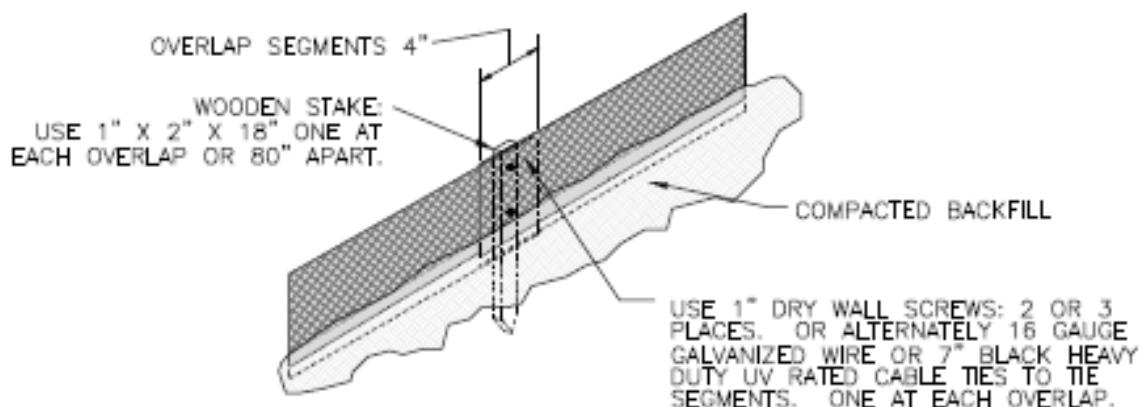
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. WHEN USING WIRE MESH SUPPORT, EXTEND WIRE INTO TRENCH A MINIMUM OF 2 INCHES AND NO MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
3. THE ENDS OF THE SILT FENCE SHALL BE TURNED UPHILL.
4. PLACE SILT FENCE AT LEAST 6 FEET FROM THE TOE OF A SLOPE.
5. PONDING HEIGHT SHALL BE A MAXIMUM OF 18 INCHES WITH TRENCH INSTALLATION AND 9" WITHOUT TRENCHING.

# ERTEC™ S-FENCE™



NOTES:

1. DOG-LEG AT END-OF-RUNS TO CONTAIN SEDIMENT.
2. INSTALL ON SAME CONTOUR TO LIMIT SCOUR AND FLOW CONCENTRATION. DOG-LEG PERIODICALLY IF ON DOWN-HILL RUN TO MINIMIZE VELOCITY SCOUR.



## Base Course (Temporary Stabilization)



### Options and Alternatives

- Rock mulch
- Base course
- Recycled wood mulch
- Hydromulch (without seed)
- Temporary seeding - with annual cover crops
- For dust control (see Section 3.5)

### BMP Objectives

- Erosion Control

#### Description

Temporary stabilization is used for short-term stabilization; when it is known that the area will be disturbed again or when stabilization methods such as seeding are out of season. The use of rock or recycled wood chip mulch can break up raindrop impact. Hydromulch can be used without seed to provide short-term erosion protection. Dust control additives such as gorilla snot bind the clay particles to provide short-term erosion protection.

#### Applications

- Efficient method of providing immediate, temporary erosion control.
- Use to stabilize a site during winter until seeding can begin.
- Stabilize a portion of a site or soil piles until final grading occurs.

#### Limitations

- Not a permanent control; re-application may be required throughout the season to achieve effective erosion control.
- Not appropriate during all seasons.

#### Performance and Longevity

Performance is not as good as permanent stabilization for erosion control; temporary stabilization generally only lasts for a season. Rock and wood mulch last longer but should not be used alone as permanent stabilization.

Performance	Poor	Good	Excellent
Erosion Prevention			x
Sediment Control		x	
Runoff Control	x		
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Revegetation with Annuals/cover crops	x			
Mulch	x	x		
Base course	x	x		x

## **Design Criteria and Construction Specifications**

- Rock mulch should be applied in a thin layer if it is meant to be used in conjunction with seeding in the future.
- Install hydromulch per manufacturer's recommendations. Select a type of mulch based on longevity needs.
- Temporary seeding can be done with cover crops (e.g., annual barley, oats, winter rye, etc.) or sterile, non-invasive annual species such as Quickguard sterile triticale hybrid or Regreen. See Revegetation Section 5.1 for seeding guidelines.
- Recycled wood mulch (MSS has equipment) can be applied as temporary stabilization in areas that do not receive concentrated flows.

## **Inspection and Maintenance**

- Check for erosion and undermining.
- Backfill and compact any rills.
- Storm water diversion and conveyance controls may be installed to divert concentrated flows away.
- Reapply hydromulch or dust suppression substances as necessary if temporary stabilization period is extended.

## What not to do...



Base course should not be used for stabilization in areas of high flow.



Hydromulch should not be applied too lightly or in areas of high flow.

# Rolled Erosion Control Products



## Options and Alternatives

- Turf Reinforcement Mats
- Erosion Control Blankets
- Riprap
- Gabions
- Engineered Stabilization

## BMP Objectives

- Erosion control

### Combinations and Alternatives

Turf reinforcement mats (TRMs) may be used in conjunction with temporary or permanent sediment and erosion control BMPs to promote vegetation growth. Areas where TRMs are applied should be seeded prior to installation.

Erosion Control Blankets (ECBs) may be used in conjunction with temporary or permanent sediment and erosion control BMPs to promote vegetation growth. Areas where ECBs are applied should be seeded prior to installation.

### Description

Turf reinforcement mats are a long term non-degradable rolled erosion control product (RECP) comprised of UV stabilized, non-degradable, synthetic fibers or nettings. TRMs are especially useful in areas such as channels that receive higher velocity flows and on slopes requiring immediate permanent soft stabilization. TRMs can enhance the natural ability of vegetation to protect soil from erosion.

Erosion control blankets are generally a machine produced mat of organic, biodegradable mulch such as straw, curled wood fiber (excelsior), coconut fiber or a combination thereof, evenly distributed on or between photodegradable polypropylene or biodegradable natural fiber netting. ECBs are used to temporarily stabilize and protect disturbed soil from raindrop impact and surface erosion, to increase infiltration, decrease compaction and soil crusting, and to conserve soil moisture. Mulching with erosion control blankets will increase the germination rates for grasses and legumes and promote vegetation establishment. Erosion control blankets also protect seeds from predators; reduce desiccation and evaporation by insulating the soil and seed environment.

### Applications

TRMs:

- TRMs may be used in areas where hard armoring or impervious lining would be required.
- Excellent for stabilizing soil in high shear stress/velocity channels or any area exposed to high volume or high velocity storm water runoff such as drainage ditches and runoff conveyance systems. TRMs may be used in channels where shears are up to 11 lbs/ft<sup>2</sup> and velocities range up to 20 ft/sec.
- May be used on slopes requiring immediate permanent soft stabilization.

- Remain in place as permanent stabilization.
- Helps establish and maintain vegetative cover.

## Limitations

- The slopes must be uniform and relatively smooth before installation to ensure complete contact with the soil.
- Should not be used when anticipated hydraulic conditions are beyond the limits of TRMs.
- ECBs will often mask slope failures from all but the most intense scrutiny until erosion is too far along to effectively treat the slope with spot methods.
- Erosion control blankets are generally more expensive than hydroseeding.

## Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention			x
Sediment Control	x		
Runoff Control	x		
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
TRM			x	

## Design Criteria and Construction Specifications

Site preparation is essential to ensure that RECPs perform as intended and remain in close contact with the soil. Ensure soil amendments are applied as necessary and seed according to LANL Master Specifications Section 32 9219 Seeding. Choose the appropriate turf reinforcement mat for a channel based on the calculated shear stress and water velocities.

### Anchoring:

- U-shaped wire staples, metal geotextile stake pins, or triangular wooden stakes can be used to anchor mats to the ground surface. Wire staples should be a minimum of 11 gauge. Metal stake pins should be 3/16 inch diameter steel with a 1 1/2 inch steel washer at the head of the pin. Wire staples and metal stakes should be driven flush to the soil surface. All anchors should be 6-8 inches long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.

### Installation of TRM or ECB on Slopes:

- Begin at the top of the slope and anchor the RECP in a 6 inch deep x 6 inch wide trench. Backfill trench and tamp earth firmly.
- Unroll RECP downslope in the direction of the water flow.
- The edges of adjacent parallel rolls should be overlapped 2-3 inches and be stapled every 3 feet.
- When RECP must be spliced, place mats end over end (shingle style) with 6 inch overlap. Staple through overlapped area, approximately 12 inches apart.
- Lay RECP loosely and maintain direct contact with the soil - do not stretch or allow "tenting" of the material.
- RECP should be stapled sufficiently to anchor mat and maintain contact with the soil.

- Staples should be placed down the center and staggered with the staples placed along the edges.

#### **Installation of TRM in channels:**

- Dig initial anchor trench 12 inches deep and 6 inches wide across the channel at the lower end of the project area.
- Excavate intermittent check slots, 6 inches deep and 6 inches wide across the channel at 25-30 foot intervals along the channel.
- Cut longitudinal channel anchor slots 4 inches deep and 4 inches wide along each side of the installation to bury edges of matting. Whenever possible extend matting 2-3 inches above the crest of channel side slopes.
- Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at 1 foot intervals.
- In the same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of 3 inches.
- Secure these initial ends of mats with anchors at 1 foot intervals, backfill and compact soil.
- Unroll center strip of matting upstream.
- Unroll adjacent mats upstream in similar fashion, maintaining a 3 inch overlap.
- Shingle-lap spliced ends by a minimum of 1 foot with upstream mat on top to prevent uplifting by water
- Anchor overlapped area by placing two rows of anchors, 1 foot apart on 1 foot intervals.
- Place edges of outside mats in previously excavated longitudinal slots, anchor and backfill and compact soil.
- Anchor, fill and compact upstream end of mat in a 12 inch x 6 inch terminal trench.
- Secure mat to ground surface using U-shaped wire staples, geotextile pins, or wooden stakes.

#### **Inspection and Maintenance**

- All mats should be inspected periodically following installation.
- Inspect mats after significant rain events to check for erosion and undermining. Any failure should be repaired immediately.
- If washout or breakage occurs, re-install the material after repairing the soil damage

## What not to do...



TRM installation was not continued along swale where water flow is concentrated, causing erosion.



Properly anchor blanketing on a properly prepared surface.

# Construction Entrance/Exit



## Product Types

- Rock
- Grizzly Tracker® or similar
- Tire washer

## Alternatives

- Sweeping

## BMP Objectives

- Good Housekeeping
- Sediment Control

### Description

A temporary construction entrance/exit is an area with a singular or series of controls established to manage and reduce off-site tracking of sediment from equipment and vehicles. It reduces the sediment that collects on vehicle tires and minimizes off-site tracking of sediment.

### Applications

- Locations where mud tracking is a problem during wet weather or where dust is a problem during dry weather.
- Locations where construction activities are adjacent to roadways.

### Limitations

- May require replacement of rock during project.
- Requires a large entrance space.
- Can be high maintenance when rock is the only material used.
- Must be used in conjunction with sweeping for optimal performance.

### Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention	x		
Sediment Control		x	
Runoff Control	x		
Good Housekeeping			x

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Gravel/Rock	x			
Grizzly Tracker®		x		x

## Design Criteria and Construction Specifications

- Ensure that entrance cannot be bypassed by vehicles and equipment.

### Rock entrance

- The rock used for pad construction shall be 4-6 inch maximum size aggregate. Do not use base course.
- Geo-textile fabrics must be used to improve the stability of the pad foundation.
- Rock shall be spread to a minimum thickness of 6 inches.
- Rock placement shall conform to the grade and dimensions shown on the design drawings.
- The pad shall extend the full width of the entrance/exit. Minimum pad width shall be 10 feet.
- Minimum pad length shall be 50 feet.

### Grizzly Tracker® or similar

- Install per manufacturers recommendations, typically a minimum of 16'.

### Wheel Wash Stations

- Use per manufacturers recommendations.

## Inspection and Maintenance

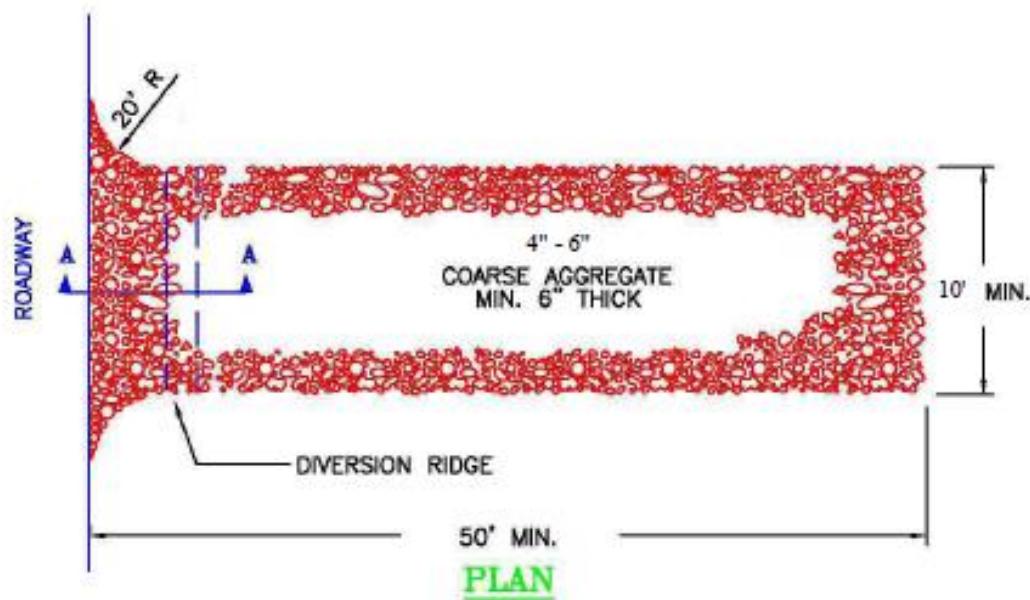
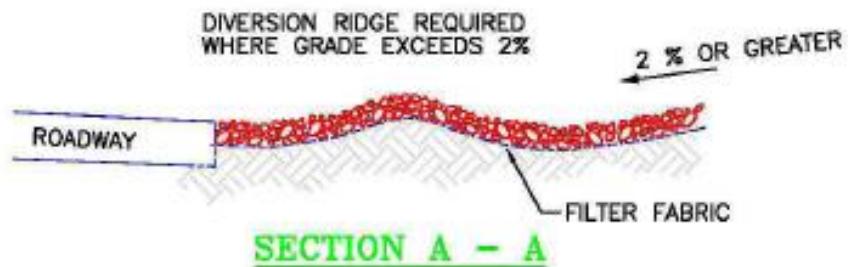
- Inspect for sediment accumulations and the need to remove the accumulations or replace gravel.
- Inspect for compaction of the rock into the surrounding ground, creating a surface that does not adequately shake vehicles as they pass over the entrance. As required, add additional layers of rock to the pad to prevent off-site tracking of sediment.
- Inspect for signs of vehicles bypassing the entrance and block off alternate egress routes.

## What not to do...



Failure to install a construction entrance has led to sediment transport offsite.

## TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT



### NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL MINIMIZE SEDIMENT TRACKING OR TRANSPORT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE ADDING ADDITIONAL LAYERS OF GRAVEL, REPAIR AND/OR CLEANOUT OF MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC ROADWAYS.

# Good Housekeeping



## **Options and Alternatives**

- Waste and Material Storage and Transport
- Vehicle and Equipment BMPs
- Street Sweeping
- Washout Areas

## **Objectives**

- Reduce or eliminate runoff pollutants

**Description** Good housekeeping includes controls that are practices (as opposed to structural controls) that are used to reduce or prevent pollutants.

**Applications** Low cost alternative to structural BMPs.

**Limitations** Only prevents the initial migration of pollutants from the source.

**Performance and Longevity** In general, use of practices to prevent pollutants from contact with storm water is extremely effective.

Good housekeeping practices are implemented before project activities begin and throughout project activities. These practices are temporary in nature and are only meant to last through the construction activity process.

Performance	Poor or N/A	Good	Excellent
Erosion Prevention	x		
Sediment Control	x		
Runoff Control	x		
Good Housekeeping			x

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Good housekeeping	x			

**Design and Construction Guidance**

## **Material storage**

- Designate material storage areas away from the nearest watercourse and in locations that do not receive a substantial amount of upslope run-on.
- Store soils uphill of BMPs or the excavation.

- Hazardous materials, fluids, and chemicals should be placed within covered storage, or a lined berm or other appropriate secondary containment.
- Drums containing liquids or hazardous materials should be stored on secondary containment pallets that minimize storm water accumulation.

#### **Wastes**

- Designate a waste collection site that does not drain to a watercourse and that does not receive a substantial amount of upslope run-on.
- Refuse containers should have lids that will remain closed to prevent rain exposure. Bins should be leak proof.
- Waste collection should be scheduled to prevent overflow of refuse.
- Trash, material cuttings, and any other waste should be managed or disposed of at the end of each workday and prior to an anticipated storm event.
- Portable lavatories should be used and maintained in accordance with manufacturer's recommendations; staked to the ground to prevent being knocked over by wind; and lavatory waste must be treated off-site.

#### **Material Transport or Movement**

- Material should be transported in appropriate containers or vehicles so that facility locations outside the project boundaries and public roadways will not be adversely impacted through sediment tracking or waste spillage.
- Spill control equipment should be present during any transfer operations.
- Movement of liquid filled containers or transfers of oil or chemicals will not occur during precipitation events
- Containers must be upright and secured to the vehicle/hand truck it is being transported on
- Drums are not to be rolled or tipped, even while empty, to prevent damage to containers
- Containers will be inspected before and after they are transported for leaks or damage.
- Storm drain covers will be used at adjacent storm drains if necessary to prevent a potential spill from entering the storm drain before it would be controlled.
- Transfers from portable containers to equipment occur away from storm drains. Spigots or pumps should be used, do not pour directly from drums. Consider placing absorbent mats before a transfer occurs.

#### **Vehicle and Equipment Refueling & Maintenance**

Vehicle and equipment control techniques include:

- Properly covering and providing secondary containment for fuel drums and other similar materials.
- Refueling of equipment shall be conducted at least 100 feet from any storm drain, drainage, or wetland, including dry arroyos.
- Refueling operations will be completed such that head space is provided within fuel tanks to allow for fuel expansion.

- Develop and implement spill prevention and cleanup plan.
- Maintain a spill kit on site.
- Use a covered, paved area dedicated to vehicle maintenance.
- Wash vehicles and equipment only at facilities approved for washing activity.
- All vehicles and equipment will be observed for leaks and if found drip pans will be used until fixed.
- Leaks will be fixed as soon as practicable and leaking vehicles and equipment will be removed from service and repaired.
- Spills of all products will be cleaned up and managed per applicable state and federal regulations.

#### **Potholing**

- Spoils must be properly disposed of.
- Discharge spoils only in approved designated areas.
- Do not discharge to the environment any glycol treated water.

#### **Concrete Washouts**

Concrete washouts should be used to contain concrete and liquids when rinsing equipment used for mixing or delivering concrete, or for excess concrete. They consolidate solids for easier disposal and prevent contaminated water from mixing with runoff.

- Washouts should be located a minimum of 100' from a watercourse or storm drain and in a location that allows convenient access for concrete trucks and equipment.
- Containment areas will not be constructed in areas designated as Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), or Treatment Storage and Disposal Facilities (TSDFs).
- Washouts are typically built below grade to prevent breaches and reduce runoff.
- Washouts should be sized to manage both concrete washout and storm water accumulation from precipitation events.
- Use appropriate control measures that act as a continuous line barrier to prevent the runoff of discharges and the co-mingling of discharges with storm water.
- Prefabricated washout containers must protect against spills and leaks, be watertight, and should be used in accordance with manufacturer specifications.
- Inspect washout area for damage and repair as necessary to ensure structure integrity.
- Once a washout facility has reached 75% capacity the materials should be removed and properly disposed of.

#### **Street Sweeping**

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways.

- Vacuuming is essential because sweeping alone may cause dust pollution and off-site sediment transport.
- Points of site egress are especially vulnerable to off-site sediment tracking.

- A proper construction entrance/exit may be needed if street sweeping efforts are not sufficient to prevent sediment from leaving the site.
- Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).
- Sweeping should be performed at a frequency necessary to minimize visible sediment tracking from the site.

### Inspection and Maintenance

- Check that materials are properly stored.
- Check that washout areas are being used.
- Check for vehicle leaks and proper maintenance.
- Check for tracking of sediment from site.

### What not to do...



Sweeping without vacuuming causes severe dust migration leading to sediment transport offsite.



Improper waste disposal and storage of waste products. Containerize and separate waste items for proper disposal.

# Revegetation



## Options

- Seed in conjunction with hydromulch
- Seed in conjunction with erosion control blanket installation
- Seed in conjunction with other types of mulch products

## Alternatives

- Use Turf Reinforcement Mat
- Preservation of existing vegetation

## BMP Objectives

- Temporary or permanent soil stabilization
- Increase infiltration and reduce erosion and sediment transport

## Description

Revegetation is the establishment of short-term or long-term vegetative cover, through seeding, on disturbed surfaces or other areas that pose a high risk of erosion. Seeding can provide temporary or permanent stabilization with reduced erosion, runoff, and sediment transport. Temporary seeding can be used on any temporary earthen structure, construction sites, topsoil stockpiles, etc. Typical areas appropriate for permanent seeding include denuded areas where long-term vegetative cover is desired, buffer areas, steep slopes, stream banks, and areas where soils are unstable.

## Applications

- Temporary or permanent stabilization at construction sites, topsoil stockpiles, etc.
- Denuded areas where long-term vegetative cover is desired, buffer areas, steep slopes, stream banks, and areas where soils are unstable.

## Limitations

- Establishment of vegetation can take one or more growing seasons and is dependent upon growing conditions (temperature, rainfall, soils, etc.).
- May require ongoing irrigation and maintenance to establish vegetation.
- Incorrect revegetation methods may inhibit growth and may not be fully evident until after the growing season.
- Effectiveness can be greatly reduced if rills or gullies are allowed to form underneath blankets, or if hydromulch is subject to concentrated flows.
- Soil may require agronomic evaluation and/or amendment before revegetation can be successfully implemented or established.

## Performance and Longevity

Performance	Poor	Good	Excellent
Erosion Prevention			x
Sediment Control		x	
Runoff Control	x		
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Revegetation		x		

## Design Criteria and Construction Specifications

Design Criteria: Use LANL Master Specification 32 9219 for detailed guidance on seedbed preparation, applicable seed mixes, seeding operations, application rates, and mulch cover products. ([http://engstandards.lanl.gov/specs/32\\_9219R3.doc](http://engstandards.lanl.gov/specs/32_9219R3.doc))

- Seeding should be initiated as soon as practicable following completion of soil disturbing activities.
- Permanent seeding should be applied prior to seasonal rains or freezing weather.
- If soil is compacted, loosen soil with disking, raking or harrowing. Remove large clods and stones, or other foreign material that would interfere with seeding equipment and installation of erosion control blankets (ECB).
- If seeding requires harrowing, tracking, or furrowing, these activities shall be conducted horizontally across the face of the slope.
- Native species appropriate to site conditions should be used wherever possible.
- Seed shall be applied uniformly using calibrated broadcast spreaders, mechanical drills, or hydroseeders.
- Do not seed during windy weather, or when topsoil is dry, saturated or frozen.
- Apply slow-release organic fertilizers in accordance with manufacturer recommended rates.
- The application of mulch shall immediately follow seeding.
- Apply hydromulch and soil amendments in accordance with manufacturer's specifications.
- Select appropriate mulch material or erosion control blanket based on slope, required longevity, irrigation or non-irrigation, and site and soil conditions.
- If hydraulically applying mulch as part of the broadcast seeding process, use a 2-step process. Apply seed with a tracer. Once seed is applied, apply full complement of mulch. This will allow seed to be in good contact with soil surface and not suspended in the mulch matrix.
- Mix hydromulch slurry in a tank with an agitation system and spray, under pressure, uniformly over soil surface.
- Lay ECBs loosely and maintain direct contact with the soil. Do not place over protruding objects; rocks, bushes, etc.
- Install storm water diversion and conveyance controls as needed to divert concentrated flows away from seeded areas.

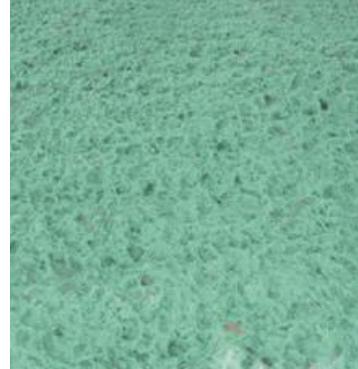
## Inspection and Maintenance

**ECB and Hydromulch Usage Table**

	slopes steeper than 1:1	slopes flatter than 1:1	slopes flatter than 2:1	slopes flatter than 3:1	channels
Permanent blankets (TRM)	x	x	x	x	x
BFM, FGM hydromulch	x	x	x	x	
Wood fiber hydromulch, compost mulch			x	x	
Straw/coir ECBs			x	x	
Coir ECBs		x	x	x	

- Ensure seed and mulch is applied at the specified rate.
- Inspect seeded area for uniform application of seed and mulch.
- For hydromulch applications on slopes, inspect the mulch application from multiple directions (i.e., looking both up and down the slope) to ensure uniform application and no “shadowing” (absence of mulch on the back side of a furrow caused by spraying hydromulch from only one direction).
- Ensure ECBs are properly trenched, overlapped, and anchored. Check that rocks, sticks, or vegetation are not interfering with the blanket’s contact with the ground.
- Ensure that ECBs have been placed such that they maintain contact with the ground surface.
- Inspect seeded area for evidence of erosion (rills, gullies).
- Check for erosion and undermining. Backfill and compact any rills. Install storm water diversion and conveyance controls as needed to divert concentrated flows away from seeded areas.
- Repair torn or windblown blankets.
- Inspect reseeded areas for uniform growth of vegetation. Check for areas for damage by vehicles or other equipment.
- Install storm water diversion and conveyance controls as needed to divert concentrated flows away from seeded areas.

### Visual Key for Proper Application (Flexterra-FGM shown)



Proper Application: 3,000 lb/acre - 4.1 mm thick



Improper Application (thin)

### What not to do...



Properly prepare seed bed and ensure mulch or blanketing is installed correctly in order to promote vegetation growth and control erosion.

# Dust Suppression



## Options and Alternatives

- Stabilize with vegetation, or paving (see Sections 5.1, 5.7)
- Cover stockpiles with plastic

## BMP Objectives

- Erosion Control
- Sediment Control

### Description

Dust control measures are implemented to prevent the soil from leaving the site. Dust control practices include minimization of soil disturbance, water application, mulching, establishing vegetation, and using soil stabilizers or tackifiers.

### Applications

Apply dust suppression techniques on any site subject to wind erosion and off-site tracking, especially at construction sites and on roads.

### Limitations

Some temporary dust controls must be reapplied and/or maintained frequently.

### Performance and Longevity

- *Mulch* - Can reduce wind erosion by up to 80 percent.
- *Tillage* - Roughening the soil can reduce soil losses by approximately 80 percent in some situations.
- *Soil Stabilizers* - Effectiveness of polymer stabilization methods range from 70 percent to 90 percent.

Performance	Poor or N/A	Good	Excellent
Erosion Prevention			x
Sediment Control			x
Runoff Control	x		
Good Housekeeping	x		

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
water and soil stabilizers	x			

### Design Criteria and Construction Specifications

- *Water Application*: Sprinkling the ground surface with water is an effective dust control method for roads. If this method is to be employed at a construction site, it is recommended that a proper construction entrance/exit be created to prevent tracking sediment off-site.
- Apply water in a manner that does not result in runoff from the site.

- *Soil Stabilizers*: select product and application based on site conditions and required longevity. *Apply in accordance with manufacturer's recommendations.*
- *MgCl* should not be used at LANL.
- *Tillage*: This practice roughens the soil and brings clods to the surface. Plowing should begin on the windward side of the site using chisel-type plows spaced about 12 inches apart, spring-tooth harrows, or similar plows.

## Inspection and Maintenance

### What not to do...



Dust control was not applied sufficiently.

# Storm Drain Inlet Protection



## Product Types

- Block and Gravel
- Gravel bags
- Prefabricated Inserts and Pop-ups
- Prefabricated Inlet Filters
- Eco Blok

## BMP Objectives

- Sediment Control
- Runoff Control

### Description

The purpose of inlet protection is to filter sediment while still allowing storm water to drain to the inlet or to create ponding around an inlet to allow transported sediment to settle out. These measures are temporary and are implemented before a site is disturbed.

### Applications

Where sediment laden surface runoff may enter an inlet.

### Limitations

- Typically requires additional upstream controls for optimal performance.
- Most effective only when placed in a sump condition.

### Performance and Longevity

Performance	Poor or N/A	Good	Excellent
Erosion Prevention	x		
Sediment Control			x
Runoff Control	x		
Good Housekeeping			x

Longevity	Temporary (must be removed)	Long term (may need maintenance)	Permanent	Re-useable
Block and gravel	x			
Gravel bags, prefabricated inserts, pop ups, and inlet filters	x			x

## Design Criteria and Construction Specifications

- Choose the BMP appropriate for the location and type of inlet. Some hold up to traffic or are low profile, and some are suitable for use in sites still under construction that require higher ponding levels.
- *Block and Gravel:* Block and gravel inlet barriers should be at least 1 foot high (2 feet maximum). Lay the bottom row of blocks at least 2 inches below the soil surface, flush against the drain for stability. Place one block in the bottom row on each side of the inlet on its side to allow drainage. Place 1/2-inch wire mesh over all block openings to prevent gravel from entering the inlet. Place gravel (3/4 to 1/2 inch in diameter) outside the block structure at a slope no greater than 2:1.
- Install in a sump condition
- Ensure BMP does not divert flow and create downstream flooding.
- Ensure BMP placed in locations subject to traffic have overflow capabilities to minimize potential for upstream flooding and traffic hazards.
- *Pre-manufactured devices:* Install per manufacturer's instructions.

## Inspection and Maintenance

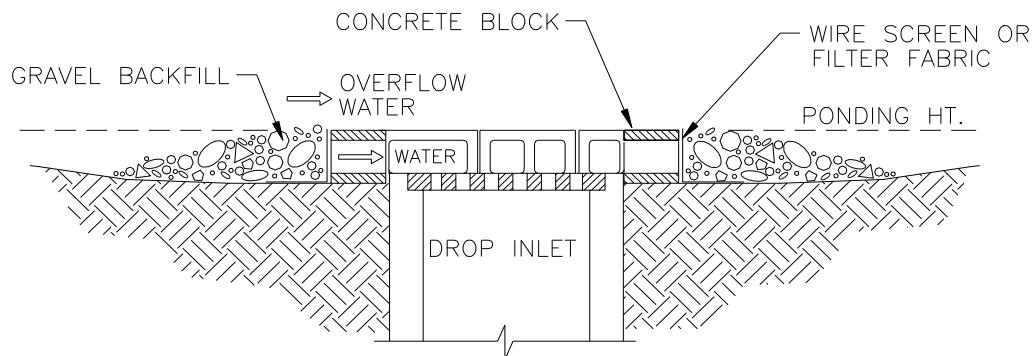
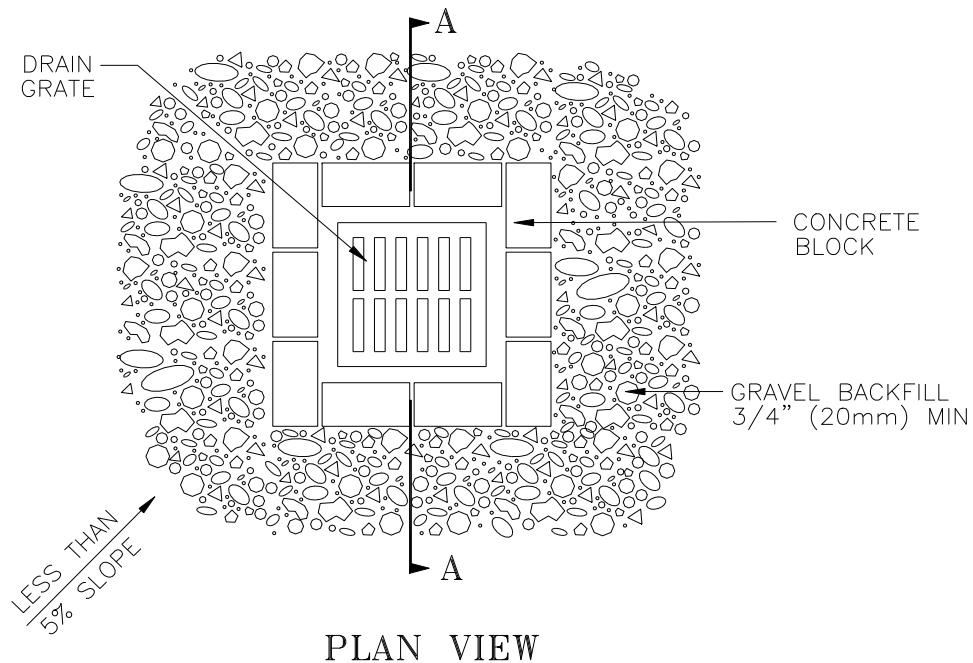
- Ensure there is a spillway
- Accumulated sediment shall be removed when it reaches 1/3 to 1/2 the height of the inlet protection.
- Storm drain inlet protections shall be removed when the area has been finally stabilized.
- Removed sediment accumulations shall not be placed within any drainage, either above or below the BMP. Removed sediment shall be stabilized to prevent future migration from storm water runoff.
- Ensure there are no gaps under or between elements of the inlet protection.
- Check materials for tears.

## What not to do...



Remove sediment and debris in a timely manner from storm drains.

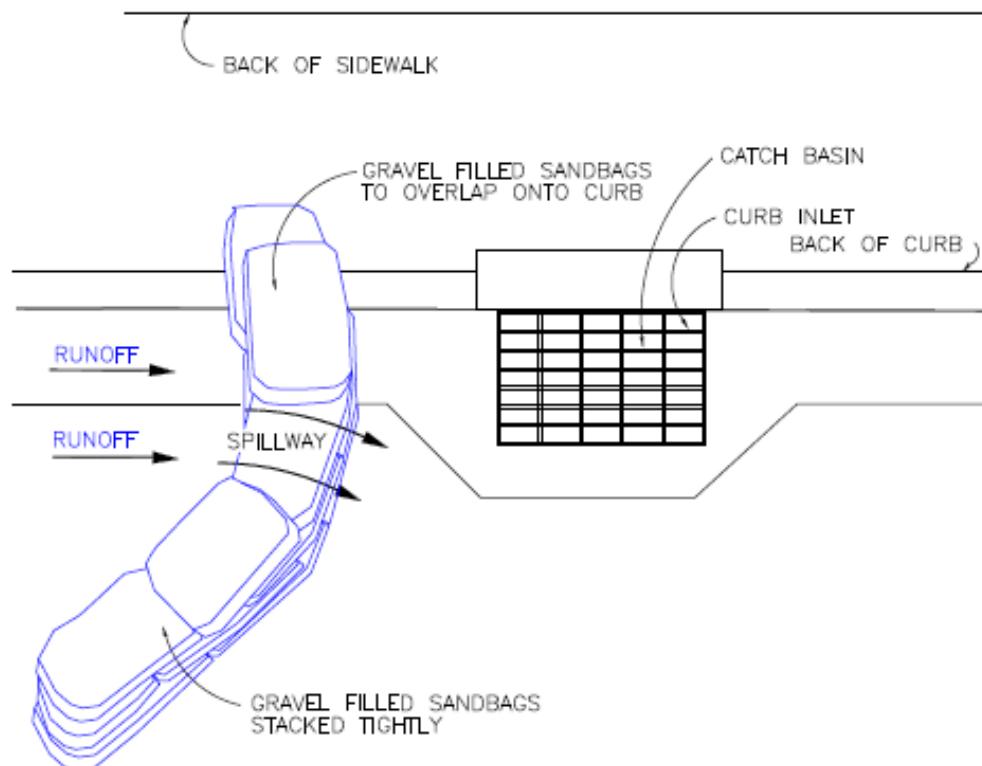
# BLOCK AND GRAVEL DROP INLET SEDIMENT BARRIER



## NOTES:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL (LESS THAN 5%) DRAINAGE AREAS.
2. BLOCKS SHALL BE EMBEDDED IN A TRENCH AROUND THE INLET TO A MINIMUM DEPTH OF 3", WITH THE ENDS TIGHTLY ABUTTING.
3. BACKFILL THE BLOCKS WITH GRAVEL TO ASSIST IN SEDIMENT RETENTION.
4. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET.

## CURB AND GUTTER SEDIMENT BARRIER

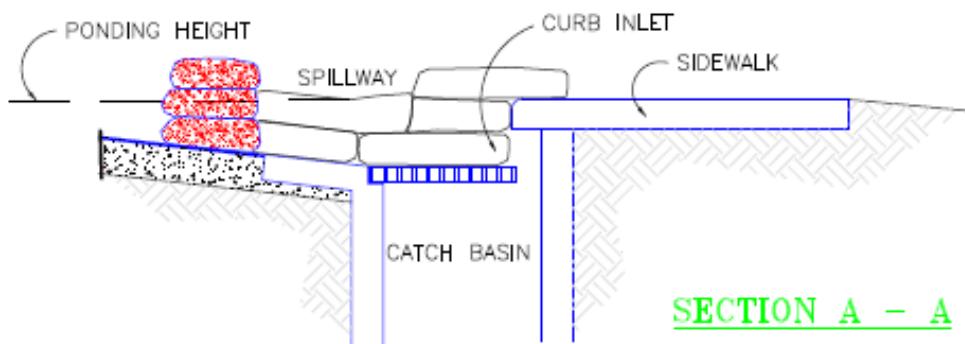
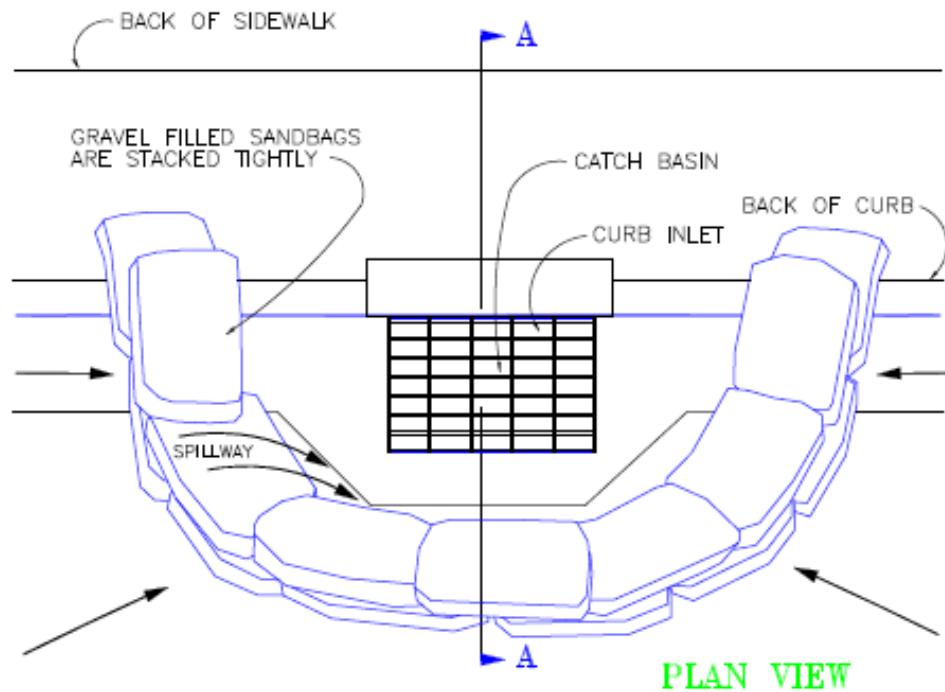


PLAN VIEW

### NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS SHOULD BE FILLED WITH 3/4" DRAIN ROCK OR 1/4" PEA GRAVEL LAYERED AND PACKED TIGHTLY.
3. ENSURE THAT SANDBAG MATERIAL SHALL BE A TYPE OF GEOTEXTILE THAT WILL NOT RAPIDLY DETERIORATE.
4. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.

## CURB INLET SEDIMENT BARRIER (SANDBAGS)



### NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS SHALL BE FILLED WITH 3/4" DRAIN ROCK OR 1/4" PEA GRAVEL LAYERED AND PACKED TIGHTLY.
3. ENSURE THAT SANDBAG MATERIAL SHALL BE A TYPE OF GEOTEXTILE FABRIC THAT WILL NOT RAPIDLY DETERIORATE.
4. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.

## SECTION 32 9219

### SEEDING

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#### LANL MASTER SPECIFICATION

Word file at <http://engstandards.lanl.gov>

**This template must be edited for each project. In doing so, specifier must add job-specific requirements. Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer. Once the choice is made or text supplied, remove the brackets. The specifications must also be edited to delete specification requirements for processes, items, or designs that are not included in the project -- and specifier's notes such as these. To seek a variance from requirements in the specifications that are applicable, contact the Engineering Standards Manual [Civil](#) POC. Please contact POC with suggestions for improvement as well.**

**When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General requirements.**

**Specification developed for ML-4 projects. For ML-1, 2, and 3 applications, additional requirements and independent reviews should be added if increased confidence in procurement or execution is desired; see ESM Chapter 1 Section Z10 Specifications and Quality sections.**

**This specification is to be used for the stabilization of disturbed areas with native plant seed. See ESM Civil Chapter 3, Section G2050, Landscaping and ESM Architectural Chapter 4, Section B-C\_GEN, G2050 for additional guidance for landscaping and revegetation projects.**

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## PART 1 GENERAL

### 1.1 SECTION INCLUDES

- A. Seed Mixes
- B. Mulching Products
- C. Preparation of Seedbed.
- D. Application of Seed.
- E. Using Hydraulic Mulch and Rolled Erosion Control Products.
- F. Watering and Maintenance.

### 1.2 RELATED SECTIONS

- A. Section 01 5705, *Temporary Controls and Compliance Requirements*
- B. Section 01 2500, *Substitution Procedures*
- C. Section 31 2000, *Earth Moving*

## 1.3 ACTION SUBMITTALS

- A. Submit the following in accordance with project submittal procedures:
  1. Catalog data, including sources of supply for amendments, mulch, tackifier, fertilizer and erosion control blankets.
  2. Certification substantiating that material complies with specified requirements. Submit certified seed bag tags and copies of seed invoices identified by project name.
  3. Installation instructions, including proposed seeding schedule. Coordinate with specified maintenance periods to provide maintenance from date of final acceptance. Once schedule is accepted, revise dates only with LANL approval after documentation of delays.

## 1.4 QUALITY ASSURANCE

- A. Subcontractor Qualifications:
  1. Perform work by a single firm experienced with the type and scale of work required and having equipment and personnel adequate to perform the work satisfactorily.
- B. Material Quality Control:
  1. Provide seed mixture in containers sealed and labeled by seed dealer. Container label shall show origin of seed and pure live seed (PLS) content, species and percentages in seed mix, lot number, test information including, purity, germination, percentage seed crop, percentage inert, percentage noxious/restricted weeds, net weight, test date, date of packaging, and location of packaging. The seed dealer may premix the seed, documentation shall be provided the same as if the seeds were sold or bagged separately. Seed analysis shall be no older than five months for seed shipped interstate, and no older than nine months for seed shipped intrastate.
  2. Furnish seed labeled in accordance with the requirements of federal seed laws and New Mexico Department of Agriculture seed labeling laws. Such resulting requirements include but are not necessarily limited to Federal Seed Act and Amendments, rules and regulations established by the United States Department of Agriculture, the New Mexico Seed Law and all resulting regulations or restrictions established by New Mexico State University or other authorized entity.
  3. In addition, ensure seed mix and its application comply with the requirements of all other federal and New Mexico statutes and regulations governing seeds, plants and weeds. These requirements include but are not necessarily limited to the Noxious Weed Control Act and all rules, regulations, or control measures by a noxious weed control district embracing Los Alamos County, New Mexico; and the Harmful Plant Act.
  4. Wood or bark mulch shall be clean and free of plastic, metal or other trash.
  5. Water used for irrigation shall be free of oil, acid, salt or other substances harmful to plants.

6. Soil amendments, such as sand or compost, shall be clean and free of toxic materials.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver packaged materials in original sealed and labeled containers from seed dealer. Protect materials from deterioration during delivery and while stored at site. Opened or wet seed shall be rejected and returned to the responsible party.
- B. Temperature of the seed in storage shall not exceed the supplier's recommended maximum temperature.

## PART 2 PRODUCTS

### 2.1 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Comply with Section 01 2500, *Substitution Procedures*.

### 2.2 SEED

- A. Obtain native grass, wildflower, and shrub seed from sources whose origin would ensure site adaptability at LANL. Plant sources from New Mexico or surrounding states are preferred.
- B. Develop seed mixture as follows: Choose a minimum of 5 grass species from the list. Should wildflowers be included in the mix, use a ratio of 80–90 percent grasses and 10–20 percent wildflowers. Choose 3–5 species from the forb and wildflowers species in the Native Perennial Mix list. These species are applicable for both undeveloped and urban-interface areas. The seed dealer may premix the seed.

1. Pre-mixed Sources: Curtis & Curtis Inc, "LANL Stormwater Mix"

### NATIVE PERENNIAL MIX

Common Name	Scientific Name	% of Mix
Grasses		
Blue grama*	<i>Bouteloua gracilis</i>	30 - 40%
Arizona fescue†	<i>Festuca arizonica</i>	10 - 15%
Prairie junegrass†	<i>Koeleria macrantha</i>	5 - 10%
Bottlebrush squirreltail*	<i>Elymus elymoides</i>	15 - 20%
Little bluestem†	<i>Schizachyrium scoparium</i>	10 - 15%
Indian ricegrass*	<i>Oryzopsis hymenoides</i>	10 - 15%
Mountain brome†	<i>Bromus marginatus</i>	10 - 15%
Sand dropseed*	<i>Sporobolus cryptandrus</i>	1 - 8%
Slender wheatgrass†	<i>Elymus trachycaulus</i>	10 - 15%
Western wheatgrass†	<i>Pascopyrum smithii</i>	10 - 15%
Needle and Thread grass*	<i>Stipa comata</i>	5 - 10%
New Mexico needlegrass*	<i>Stipa neomexicana</i>	10 - 15%
Forbs/Wildflowers		
Firewheel	<i>Gaillardia pulchella</i>	2%

Common Name	Scientific Name	% of Mix
Evening primrose	<i>Oenothera caespitosa</i>	1%
Gooseberry leaf globemallow	<i>Sphaeralcea grossulariafolia</i>	1.5%
Scarlet gilia	<i>Ipomopsis aggregata</i>	1%
Plains aster	<i>Aster biglovii</i>	1%
Western yarrow	<i>Achillea millefolium</i>	½%
Fringed sage	<i>Artemisia frigida</i>	1%
Blue flax	<i>Linum perenne lewisii</i>	4%
Scarlet bugler	<i>Penstemon barbatus</i>	2%
Palmer penstemon	<i>Penstemon palmerii</i>	2%
Prairie coneflower	<i>Ratibida columnifera</i>	1%
Showy golden-eye	<i>Helianthus multiflora</i>	1%
Purple geranium	<i>Geranium caespitosum</i>	5%
Shrubs	Any native species	<5%

\*Species particularly suited for especially dry sites

†Species particularly suited for higher elevations (above 7000 ft.)

Reference: Curtis and Curtis LANL Stormwater Mix

Blue Grama, Hachita	<i>Bouteloua gracilis</i>	30%
Galleta	<i>Pleuraphis jamesii</i>	5%
Indian Ricegrass, Paloma	<i>Achnatherum hymenoides</i>	5%
Sand Dropseed	<i>Sporobolus cryptandrus</i>	5%
Western Wheatgrass	<i>Pascopyrum smithii</i>	20%
Buffalograss	<i>Buchloe dactyloides</i>	10%
Chamisa	<i>Chrysothamnus nauseous</i>	2.5%
Four-wing Saltbush	<i>Atriplex canescens</i>	2.5%
Apache Plume	<i>Fallugia paradoxa</i>	5%
Llano Estacado Mix	various	15%

\*\*\*\*\*
Choose one or more appropriate mulching methods to use in conjunction with seeding. Indicate where each stabilization method is to be used on the construction drawings. Delete methods not used from Specifications.

\*\*\*\*\*

## 2.3 WOOD MULCH

- A. Wood or bark mulch can be used to mulch seed beds. Apply mulch a minimum of 2 inches in depth.

## 2.4 HYDRAULIC MULCH

- A. Provide Flexible Growth Medium (FGM) such as Flexterra™/CocoFlex ET™ composed of long strand, thermally processed wood fibers, crimped, interlocking fibers and performance enhancing additives. The FGM requires no curing period and upon application forms an intimate bond with the soil surface to create a continuous, porous, absorbent and flexible erosion resistant cover that allows for rapid germination and accelerated plant growth.

B. The FGM shall be hydraulically applied to the soil as a viscous mixture, creating a continuous three-dimensional blanket that adheres to the soil surface. Upon drying, the matrix shall form a high-strength, porous and erosion-resistant mat that shall not inhibit the germination and growth of plants in and beneath the layer. The matrix shall retain its form despite re-wetting. The FGM shall be 100% biodegradable over time, non-toxic to fish and wildlife, and it shall not contain any non-photo-degradable synthetic fibers.

## 2.7 ROLLED EROSION CONTROL PRODUCTS

A. For all non-channel applications provide the following:

1. Slopes less than 2:1:

Straw/coir blend blankets
A machine-produced straw/coir fiber erosion control blanket using 70-percent straw/30-percent coir fibers sewn into a heavy weight photo degradable top net and a medium weight photo degradable bottom net. Minimum weight of blanket 0.7 lbs/square yard, such as North American Green SC250.

2. Slopes 2:1 and greater:

Permanent turf reinforcement mat
A machine-produced mat of 100% UV stable polypropylene fiber. The matting shall be of consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread, such as North American Green P300, Western Excelsior PP5-Heavy Duty or Western Excelsior EXCEL PP5-12.

B. For all channel applications provide the following. (Shear stress must be calculated by a qualified engineer or hydrologist):

1. For channels subject to flow producing an unvegetated shear stress of 3 lbs/ft<sup>2</sup> or less and a vegetated shear stress of 8 lbs/ft<sup>2</sup> or less (Shear stress must be calculated by a qualified engineer or hydrologist):

Permanent composite turf reinforcement mat
A machine-produced composite turf reinforcement mat comprised of a 100% UV stabilized polypropylene fiber matrix incorporated into a permanent three-dimensional turf reinforcement matting. The matting shall be of consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread to form a permanent three-dimensional turf reinforcement matting, such as North American Green PP512.

2. For channels subject to flow producing an unvegetated shear stress of 3.2 lbs/ft<sup>2</sup> or greater and a vegetated shear stress of 12 lbs/ft<sup>2</sup> or less:

Permanent composite turf reinforcement mat
A machine-produced composite turf reinforcement mat comprised of a 100% coconut fiber matrix or a 100% polypropylene fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between a super heavy duty UV stabilized bottom net with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, an ultra-heavy duty UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, and covered by a super heavy duty UV stabilized top net with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread to form a permanent three-dimensional turf reinforcement matting, such as North American Green C350 or P550.

C. Use fasteners as appropriate for substrate and according to manufacturer's recommendations. Shallow, rocky or loose soils may require spikes and large washers to secure the matting.

## 2.8 AMENDMENTS / SOIL ADDITIONS

- A. Fertilizer: Apply slow-release organic fertilizers such as Biosol Mix, Biosol, Gro-Power, Osmocote, or approved equal to minimize deficiencies of the topsoil. Micronizing fertilizer is acceptable for use in the spring and summer months. Fertilizer may be used for more rapid growth, but is not required. Do not use fertilizer in channel bottoms.
- B. Water: Clean, fresh, and free of substances or matter that could inhibit vigorous growth.
- C. Sand: Clean, washed, and free of toxic materials.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Preparation of the Seedbed:
  1. Prepare seedbed to a minimum depth of 4 inches when tilling with a disc, harrow or chiseling tool, minimum 2 inches depth if using hand tools. Uproot all competitive vegetation during seedbed preparation and work soil uniformly, leaving surface rough to reduce surface erosion and to retain water runoff. Remove large clods and stones, or other foreign material that would interfere with seeding equipment and erosion control blankets.
  2. Perform tillage across slope and along the contour to adequately break up soil. Do not till up and down slopes, as this will create excessive surface erosion problems.
  3. Do not do work when soil is saturated, frozen or ground is otherwise in a non-tillable condition.
  4. To minimize dust problems for adjoining areas, when wind speeds are over 10 mph, dust control measures shall be implemented.

5. The extent of seedbed preparation shall not exceed the area on which the entire seeding operation can be accomplished within a one week period.
- B. Soil Amendments/Additions: Uniformly apply slow release organic fertilizer to prepared seedbed in accordance with manufacturer recommended rates.
- C. Prepare seedbed again if prior to seeding rain or some other factor has affected the prepared surfaces and will prevent seeding to the proper depth.

### 3.2 APPLICATION OF SEED

- A. General:
  1. Do not seed during windy weather, or when seedbed is snow-covered or under standing water.
  2. Equip seed boxes used for drill and broadcast seeding with an agitator.
  3. To prevent stratification of seed mix, do not run seed box agitators while seeding is not being performed.
  4. If seed mix is transported to site in a seed box or other equipment that subjects mix to shaking or similar movement that has the potential to cause stratification, remix seed prior to application.
  5. Seeding equipment shall be calibrated as appropriate to distribute seed at the specified rates.
  6. Unless otherwise shown on Drawings, seed areas disturbed by or denuded by construction operations or erosion.
  7. Use markers to ensure that no gaps will exist between passes of seeding equipment.
- B. Drill Seeding:

When drill seeding, plant seed mix at a rate of 30–35 pure live seed (PLS) lbs/acre. Uniformly apply prescribed mix over area to be seeded as follows:

  1. Accomplish seeding operations, where practical, by drilling in a direction across slope and along the contour.
  2. Plant seeds approximately 1/4 inch deep.
  3. Do not exceed 4 inches distance between drilled furrows. If furrow openers on drill exceed 4 inches, drill area twice to obtain a 4-inch distance between furrows.
  4. Seed with grass wheels, rate control attachments, seed boxes with agitators, and separate boxes for small seed.
  5. Once seed is applied, apply full complement of mulch. This shall allow seed to be in good contact with soil surface and not suspended in mulch matrix.
  6. Prohibit vehicles from traveling over the seeded areas for at least one year.
- C. Broadcast Seeding:

When broadcast seeding, plant seed mix at a rate of 32–37 PLS lbs/acre.

1. Mechanically broadcast seed by use of a hydraulic mulch slurry blower, rotary spreader, or a seeder box with a gear feed mechanism. If seeding is done with a slurry blower, use highest pressure and smallest nozzle opening that will accommodate the seed.
2. If using hydraulic mulch to broadcast seed, use a 2-step process. Apply seed with a trace amount of hydraulic mulch. Once seed is applied, apply full complement of mulch. This shall allow seed to be in good contact with soil surface and not suspended in mulch matrix.
3. For all other seeding applications, immediately rake seedbed thoroughly to provide approximately 1/4 inch of soil cover over of the seed. Then apply mulch as necessary.
4. Prohibit vehicles from traveling over the seeded areas.

### 3.3 HYDRAULIC MULCH:

- A. For maximum performance, apply FGM in a two-step process:
  1. Step One: Mix and apply seed and soil amendments with small amount of FGM for visual metering.
  2. Step Two: Mix and apply FGM at a rate of 50 lb per 125 gallons (23 kg/475 liters) of water over freshly seeded surfaces. Confirm loading rates with equipment manufacturer. Do not leave seeded surfaces unprotected, especially if precipitation is imminent.

#### B. Mixing:

A mechanically agitated hydraulic-application machine is recommended:

1. Fill tank to middle of agitator shaft or tank about 1/3 full of water. Turn on pump to wet or purge lines. Begin agitating. Keep adding water slowly while adding the FGM at a steady rate.
2. Consult application and loading charts to determine number of bags to be added. Mix at a rate of 50 lbs of FGM per 125 gallons (23kg/475 liters). Contact equipment manufacturer to confirm optimum FGM mixing rates.
3. All FGM should be loaded when the tank is approximately 3/4 full.
4. Fertilizer should be added once the tank is nearly full.
5. Before applying, mix the slurry for at least 10 minutes after adding the last amount of FGM. This is very important to fully activate the bonding additives and to attain proper viscosity.
6. Turn off re-circulation valve to minimize potential for air entrainment within the slurry.

#### C. Application:

Use a fan-type nozzle (50-degree tip) whenever possible for best soil surface coverage. Apply FGM from opposing directions to soil surface, reducing the "shadow effect" and assuring a minimum of 95% of soil surface coverage. Slope interruption devices or water diversion techniques are recommended when slope lengths exceed 100 feet (30 m). Install materials at the following minimum application rates:

CONDITION	ENGLISH	SI
≤ 3H to 1V .....	3000 lb/ac .....	3400 kg/ha
>3H to 1V and ≤ 2H to 1V .....	3500 lb/ac .....	3900 kg/ha
>2H to 1V and ≤ 1H to 1V .....	4000 lb/ac .....	4500 kg/ha
>1H to 1V .....	4500 lb/ac .....	5100 kg/ha
Below ECB or TRM .....	1500 lb/ac .....	1700 kg/ha
As infill for TRM .....	3500 lb/ac .....	3900 kg/ha

**Do not apply material in channels, swales or other areas where concentrated flows are anticipated, unless installed in conjunction with a temporary erosion control blanket or non-degradable turf reinforcement mat. After application, thoroughly flush the tank, pumps and hoses to remove all FGM material. Wash all material from the exterior of the machine and remove any slurry spills (FGM will be more difficult to remove once it dries).**

#### 3.4 ROLLED EROSION CONTROL PRODUCT (RECP)

- Place RECP over native grass seeding immediately following the raking operation.
- Install RECPs in accordance with manufacturer's specifications.
- For slope installations, apply as follows:

**Upslope Anchor** – utilize one of the methods detailed below for initial anchoring of Rolled Erosion Control Products (RECP):

- Install the RECP 3 ft. (900 mm) beyond the shoulder of the slope onto flat final grade. Secure roll end with a single row of fasteners on 1 ft. (300-mm) centers.
- Anchor trench: Excavate a 6 in. by 6 in. (150 mm by 150 mm) anchor trench. Extend the upslope terminal end of the RECP 3 ft. (900 mm) past the anchor trench. Use fasteners to secure the product to the bottom of the anchor trench on 1 ft. (300 mm) centers. Backfill the trench and compact the soil into the anchor trench.
- Unroll blanket downslope in direction of water flow.
- Overlap edges of adjacent parallel rolls 2 to 4 inches and fasten every 3 feet.
- When blankets are spliced, place blankets end over end (shingle style) with 6-inch overlap. Fasten through overlapped area, approximately 12 inches apart.
- Lay blankets loosely and maintain direct contact with soil. Do not place over protruding objects; rocks, grass, etc.
- Fasten blankets sufficiently to anchor blanket and maintain blanket contact with soil per manufacturer's instructions. Shallow, rocky or loose soils may require spikes and large washers to secure the blankets.

**Seams** – utilize one of the methods detailed below for seaming of RECP:

1. Adjacent seams: Overlap edges of adjacent RECP by 2 to 4 in. (50 to 100 mm) or by abutting products as defined by manufacturer. Use a sufficient number of fasteners to prevent seam or abutted rolls from separating.
2. Consecutive rolls: Shingle and overlap consecutive rolls 2 to 6 in. (50 to 150 mm) in the direction of flow. Secure fasteners through seam at 1 ft. (300 mm) intervals.
3. Check seam. Construct a fastener check seam along the top edge of RECP for slope application and at specified intervals in a channel by installing two staggered rows of fasteners 4 in. (100 mm) apart on 4 in. (100 mm) centers.
4. Slope interruption check slot: Excavate a trench measuring 6 in. wide by 6 in. deep (150 x 150 mm). Secure product to the bottom of the trench with fasteners. Fold product over upslope material and fill and compact the trench on the downslope side of check slot and seed fill. Continue rolling material downslope over trench.

Terminal Ends – utilize one of the methods detailed below for all terminal ends of RECPs:

1. Install the RECP 3 ft. (900 mm) beyond the end of the channel and secure end with a single row of fasteners on 1 ft. (300-mm) centers.
2. Anchor trench: Excavate a 6 in. by 6 in. (150 mm by 150 mm) anchor trench. Extend the terminal end of the RECP 3 ft. (900 mm) past the anchor trench. Use fasteners to secure the product into the bottom of the anchor trench on 1 ft. (300 mm) centers. Backfill the trench and compact the soil into the anchor trench. Apply seed and any necessary soil amendments to the compacted soil and cover with remaining 1 ft. (300 mm) terminal end of the RECP. Secure terminal end of RECP with a single row of fasteners on 1 ft. (300 mm) centers.

D. Check slot: Construct a fastener check slot along the terminal end of the RECP by installing two rows of staggered fasteners 4 in. (100 mm) apart on 4 in. (100 mm) centers.

### 3.5 WATERING

- A. Where temporary watering is required for seeded areas, provide temporary water system which may be a sprinkler system, or a water truck with a spray boom or any other method satisfactory to distribute a uniform coverage of clean water (free of oil, acid, salt or other substances harmful to plants) to previously seeded and mulched areas.
- B. If a temporary sprinkler system is used, keep all pipe connections tight to avoid leakage and loss of water, and to prevent washing or erosion of growing areas. Maintain sprinklers in proper working order during watering.
- C. Do not drive trucks with spray systems on seeded areas and ensure water force does not cause movement of mulch or seed on the ground.

### 3.6 MAINTENANCE

- A. Begin maintenance immediately after planting. Keep re-vegetated areas free of noxious weeds.

- B. Maintain seeded areas for not less than 60 days after final acceptance of work and longer as required to achieve final stabilization as described in Article 3.8 ACCEPTANCE.

- C. Reseed void areas greater than 6 square feet or repetitive voids greater than 2 square feet amounting to more than 10 percent of any area that appears the growing season following installation.

### 3.7 CLEANUP AND PROTECTION

- A. After completion of work, clear site of excess soil, waste material, debris and objects that may hinder maintenance and detract from neat appearance of site.
- B. Protect seeded areas, work and materials from damage due to vehicles, pedestrians, and operations by other subcontractors. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged work as directed.
- C. Upon completion of all seeding operations, clean the portion of the project site used for storing materials and equipment of all debris. Remove all superfluous materials and equipment from the project site. Sweep walks and pavement clean upon completion of work in this section.

### 3.8 ACCEPTANCE

- A. Seeded areas will be reviewed for acceptance by LANL when final stabilization has been achieved. Final stabilization is defined as "All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed." Stabilization shall be in conformance with the Storm Water Pollution Prevention Plan (SWPPP), as applicable.
- B. In the event that all other work required by the Subcontract is completed before final stabilization is achieved or because seasonal limitations prevent seeding, partial acceptance of the work shall be made with final acceptance delayed until satisfactory vegetative growth has been established.

END OF SECTION

\*\*\*\*\*  
**Do not delete the following reference information:**  
\*\*\*\*\*

THE FOLLOWING REFERENCE IS FOR LANL USE ONLY

**This project specification section is based on LANL Master Specification Section 32 9219 Rev. 4, dated February 26, 2018.**

**APPENDIX F:**  
**BMP Design Requirements**

**APPENDIX G:**

**Endangered Species Act and Historical Property Documentation**

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)  
HISTORICAL PROPERTIES, WETLAND,  
THREATENED AND ENDANGERED SPECIES,  
AND CRITICAL HABITAT EVALUATION  
FOR CONSTRUCTION PROJECTS**

**PROJECT NAME: MIDDLE DP ROAD RECOVERY EFFORT**

**DATE: JUNE 26, 2020**

**EVALUATORS:** CHUCK HATHCOCK  
BIOLOGICAL REVIEW

KARI GARCIA  
CULTURAL REVIEW

## Information Requested for Inclusion in SWPP and Sediment Control Plans:

Excavation permit: 20X-0357

PR-ID:

*Please attach copies of site maps used: include project area boundaries and show areas of concern regarding wetlands, historical property, and threatened or endangered species.*

### ***Wetlands:***

Are any wetlands located within the project area or in proximity to the construction activity?

Yes  No

Check where wetlands are located:

- Areas to be disturbed and the immediate vicinity (including utility trenching),
- Areas (and the immediate vicinity) where storm water discharges flow from the construction site to the point of discharge into receiving waters, and
- Areas in the immediate vicinity of discharges into receiving waters.

If so, please describe the precise location of the wetlands and summarize the actions/ requirements associated with working in the wetlands.

There are wetlands immediately downstream from the project area and along the drainages of Pajarito and Two-mile Canyons. No wetland vegetation should be removed during this action.

What is the approximate acreage of the wetlands?

Can measures be implemented to avoid adverse effects on wetlands identified above?

Yes  No  N/A

If so, what measures are recommended?

- The water release must be distributed and mitigated so that the flow rate from the discharge is comparable to normal water flows in the affected canyons.
- The rate and volume of release should not cause erosion or remove vegetation.
- Storm water or Fast runoff reaching the canyon should be slowed to limit sedimentation and erosion to prevent damage to downstream resources.
- Other Limit the removal of native ground vegetation as much as possible.

***Historical Properties:***

**1. Are you installing any stormwater controls that require subsurface earth disturbance?**

Examples include: Dikes, Berms, Catch Basins, Ponds, Ditches, Trenches, Culverts, Channels, Perimeter Drains and Swales.

Yes  No

If yes, proceed to step 2.

If no, this will be indicated in the NOI and no further screening is necessary.

**2. Have prior professional cultural resource surveys or other evaluations determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?**

Yes  No  N/A

If yes, this will be indicated in the NOI and no further screening is necessary.

If no, proceed to step 3.

**3. If you are installing any stormwater controls that require subsurface earth disturbance, will these activities have an effect on historic properties?:**

Yes  No  N/A

If your answer to the questions in Steps 1 and 2 is “no”, then you must assess whether your earth-disturbing activities related to the installation of stormwater controls will have an effect on historic properties. This assessment may be based on historical sources, knowledge of the area, an assessment of the types of earth-disturbing activities you are engaging in, considerations of any controls and/or management practices you will adopt to ensure that your stormwater control-related earth-disturbing activities will not have an effect on historic properties, and any other relevant factors. If you determine based on this assessment that earth disturbances related to the installation of your stormwater controls will not cause effects to historic properties, you may indicate this on your NOI, and document the basis for your determination in your SWPPP and no further screening steps are necessary. In this case you must also attach a copy of your site map to your NOI. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

**4. If you are installing any stormwater controls that require subsurface earth disturbance and you have not satisfied the conditions in Steps 1-3, have you contacted and consulted with the appropriate historic preservation authorities? Refer to Appendix E of the CGP.**

Yes  No  N/A

Additional Supplemental Information (if applicable):

## **Threatened and Endangered Species and Critical Habitat Evaluation:**

Project area consists of:

- Areas on construction sites where storm water discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur), and the immediate vicinity.
- Areas where storm water discharges flow from the construction site to the point of discharge into receiving waters.
- Areas where storm water from construction activities discharge into receiving waters and the areas in the vicinity of the point of discharge.
- Areas where storm water BMPs will be constructed and operated, including any areas where storm water flows to and from BMPs.
- The areas upstream and/or downstream from construction activities that discharges into a stream segment that may be affected by the said discharges.

### **1. Determine if Your Discharges and Discharge-Related Activities Were Already Addressed in Another Operator's Valid Certification that Included Your Action Area**

Yes  No  If yes, select Criterion B on the NOI form.

Provide eligibility criterion (A, C, D, E, or F) that was certified to by the previous operator, and provide the Tracking Number:

If discharges and discharge-related activities from your site were not addressed in another operator's valid certification that included your action area, you must follow the applicable procedures in Steps 2 through 5 below.

### **2. Determine if Listed Threatened or Endangered Species or their Designated Critical Habitat(s) are Likely to Occur in your Site's Action Area.**

Yes  No

**If there are no listed species in your county or township and no critical habitat areas in your action area,** check eligibility criterion A on your NOI form. Provide a description of the basis for the criterion selected on your NOI form and provide documentation supporting the criterion selected in your SWPPP.

**If there are listed species and/or critical habitat in your county or township and If your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species and/or critical habitat could exist in your action area,** do one or more of the following:

- Conduct visual inspections. This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
- Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located in the action area and whether there are likely to be adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful to conduct in conjunction with Steps Two, Three, or Four of these instructions.

- for specific reasons, such as federal funding or other federal involvement in the project. Note: Coverage under the CGP does not trigger such a review for individual projects/sites. EPA has complied with NEPA in the issuance of the CGP.

and

- Follow the instructions in Steps 3 – 5 below, as applicable. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.

**3. Determine if the Construction Activity's Discharges or Discharge-Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat.**

Potential adverse effects from storm water discharges and storm water discharge-related activities at the project area include:

- Hydrological.** Storm water discharges may cause siltation, sedimentation, or induce other changes in receiving waters such as temperature, salinity, or pH. These effects will vary with the amount of storm water discharged, and the volume and condition of the receiving water. Where storm water discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity may alter drainage patterns on a site where construction occurs which can impact listed species or critical habitat.
- Habitat.** Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of storm water BMPs, may adversely affect listed species or their habitat. Storm water may drain or flood listed species habitat.
- Toxicity.** Pollutants in storm water may have toxic effects on listed species.

Please specify which potential adverse effects are of the greatest concern:

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you should contact the appropriate office of the FWS, NMFS or Natural Heritage Center for assistance.

- **If adverse effects to listed threatened or endangered species or their critical habitat are not likely**, then you may select eligibility criterion C on the NOI form. You must provide the following specific information on your NOI form: 1) what federally listed species and/or designated habitat are located in your “action area”?

and 2) what is the distance between your site and the listed species or designated critical habitat (in miles)?

- You must also provide a copy of your site map with your NOI.
- **If adverse effects to listed threatened or endangered species or their critical habitat are likely**, you must follow Step 4 below.

#### **4. Determine if Measures Can Be Implemented to Avoid Adverse Effects**

If you make a preliminary determination in Step 3 that adverse effects from your construction activity's discharges or discharge-related activities are likely to occur, you can still receive coverage under eligibility criterion C of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage.

These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating stormwater controls, or by modifying the "footprint" of the construction activity. If you are unable to ascertain which measures to implement to avoid the likelihood of adverse effects, you must coordinate or enter into consultation with the FWS and/or NMFS, in which case you would not be eligible for coverage under eligibility criterion C, but may instead be eligible for coverage under eligibility criterion D, E, or F (described in more detail in Step 5).

- **If you are able to install and implement appropriate measures to avoid the likelihood of adverse effects, then you may check eligibility criterion C on the NOI form.** The measures you adopt to avoid or eliminate adverse affects must be implemented for the duration of the construction project and your coverage under the CGP. You must also provide a description of the basis for the criterion selected, and the following specific information on your NOI form: 1) what federally listed species and/or designated habitat are located in your "action area":

and 2) what is the distance between your site and the listed species or designated critical habitat (in miles)?:

- **If you cannot ascertain which measures to implement to avoid the likelihood of adverse effects,** you must follow the procedures in Step 5.

#### **5. Determine if the Eligibility Requirements of Criterion D, E, or F Can Be Met**

**If you have met the requirements of criterion D, E, or F, you may select the appropriate Criterion on the NOI form.** You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between you and the applicable Service in your SWPPP.

(Further detail and explanation provided in Part D.2.5 of Appendix D in the 2012 Construction General Permit)

**Notice of Intent Evaluation:**

Under which criterion of the permit have the ESA eligibility obligations been satisfied?

- (A)** No federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's "action area" as defined in Appendix A of this permit.
- (B)** The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under eligibility Criterion A, C, D, E, or F and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify your eligibility under this Criterion, there must be no lapse of NPDES permit coverage in the other operator's certification. By certifying eligibility under this Criterion, you agree to comply with any effluent limitations or conditions upon which the other operator's certification was based. You must include in your NOI the tracking number from the other operator's notification of authorization under this permit. If your certification is based on another operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C in your NOI form.
- (C)** Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area," and your site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. This determination may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect listed species and critical habitat. To make this certification, you must include the following in your NOI: 1) any federally listed species and/or designated habitat located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also include a copy of your site map with your NOI.
- (D)** Coordination between you and the Services has been concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.
- (E)** Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either:
  - i. a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
  - ii. written concurrence from the applicable Service(s) with a finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

- (F) Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion E is applicable for this action because the land where this action is occurring was transferred from LANL to Los Alamos County. That action was consulted on with the USFWS in 2001 and the resulting biological opinion is attached.



# United States Department of the Interior

foe

FISH AND WILDLIFE SERVICE  
New Mexico Ecological Services Field Office  
2105 Osuna NE  
Albuquerque, New Mexico 87113  
Phone: (505) 346-2525 Fax: (505) 346-2542

## SUMMARY

### FINAL BIOLOGICAL OPINION ON THE EFFECTS TO THE MEXICAN SPOTTED OWL FROM THE CONVEYANCE AND TRANSFER OF TEN LAND TRACTS AT LOS ALAMOS NATIONAL LABORATORY TO THE COUNTY OF LOS ALAMOS AND THE SECRETARY OF THE INTERIOR IN TRUST FOR THE PUEBLO OF SAN ILDEFONSO

Cons. # 2-22-01-F-634

Date of the final opinion: January 15, 2002

Action agency: Department of Energy, Los Alamos National Laboratory

Project: The proposed action is a congressional mandate (PL 105-119) that Department of Energy (DOE) convey fee title of 10 land tracts to the County of Los Alamos (County) and Secretary of the Interior, in trust for San Ildefonso Pueblo (Pueblo). Land use proposals by the County and Pueblo of conveyed and transferred lands include industrial, commercial, and residential development, and environmental, historical, and cultural preservation. According to the Conveyance and Transfer EIS (CTEIS), cultural preservation is the only land use practice that will not result in significant impacts on endangered and threatened species' habitat. Proposed actions will complete steps considered necessary to provide self-sufficiency for Los Alamos and return the land that was part of the Pueblo before the creation of Los Alamos National Laboratory (LANL).

As required by Public Law 105-119, some tracts of land have been recognized by DOE and LANL as now or likely to become nonessential within the next 10 years to meet LANL's current and foreseeable programmatic missions. In the CTEIS, DOE tentatively identified 10 tracts of land for transfer, totaling about 4,800 acres (ac) (1920 hectares [ha]). The Biological Assessment further defined those tracts and reduced the transfer amount to approximately 4,046 ac (1,618 ha).

Nine out of 10 tracts contain potential or known contaminated sites or areas that may require environmental remediation or restoration to be suitable for uses approved by PL 105-119. Only the Manhattan Monument Tract is not known to have contamination issues.

Actual disposition of each tract, or portion of a tract, will be subject to DOE's continuing or future need for an individual tract, or part of a tract, to meet a national security mission

support function. Additionally, disposition of each tract, or portion of a tract, would be subject to DOE's ability to complete any necessary environmental restoration or remediation.

DOE has concluded that significant portions of Technical Area (TA) 21 and Airport Tracts will not be available for conveyance or transfer within the 10-year period specified by PL 105-119. This is due to identified national security operational needs of both facilities within TA-21 and need for surrounding areas to be retained as security, health, and safety buffer areas. All other tracts or their portions will be conveyed or transferred before year's end 2007.

Listed species affected: Mexican spotted owl (*Strix occidentalis lucida*)

Biological opinion: "May affect, likely to adversely affect" the owl on Los Alamos Area Office, DP Road, TA-21, Airport, and TA-74 Tracts.

Incidental take statement: Mexican spotted owls are not expected to be taken as a result of this project.

Conservation Recommendations: Implementation of conservation recommendations is discretionary. Four conservation recommendations are provided.



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New Mexico Ecological Services Field Office  
2105 Osuna NE  
Albuquerque, New Mexico 87113  
Phone: (505) 346-2525 Fax: (505) 346-2542

January 15, 2002

Cons. # 2-22-01-F-634

Mr. David A. Gurule  
Department of Energy  
Albuquerque Operations Office  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

Dear Mr. Gurule:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion (BO) based on our review of the proposed Department of Energy (DOE) conveyance and transfer of ten land tracts to the County of Los Alamos (County), New Mexico and the Secretary of the Interior, in trust for the Pueblo of San Ildefonso (Pueblo) and its effects on the Mexican spotted owl (*Strix occidentalis*) (owl), and its critical habitat in accordance with section 7 of the Endangered Species Act (Act) of 1973 as amended (16 U.S.C. 1531 et seq.). Your letter dated August 30, 2001, requesting formal consultation was received on the same day.

The DOE has submitted the *Biological Assessment for the Conveyance and Transfer of Land Tracts at Los Alamos National Laboratory* (BA) dated August 28, 2001. This BA evaluates the anticipated effect on federally-listed endangered and threatened species and their habitats resulting from the conveyance and transfer of ten land tracts at Los Alamos National Laboratory (LANL). The project is in Los Alamos Canyon, Canon del Buey and Rendija Canyon in Los Alamos County, New Mexico. The proposed action will convey title of seven land tracts to the County and three land tracts to the Secretary of the Interior, in trust for the Pueblo.

The DOE has determined that the proposed conveyance of the Rendija Canyon Tract "may affect, not likely to adversely affect" the owl. The DOE also determined "may affect, likely to adversely affect" the owl on Los Alamos Area Office (LAAO), DP Road, Technical Area (TA) 21, Airport, and TA-74 Tracts.

The Service concurs with DOE's determination of "may affect, not likely to adversely affect" the bald eagle on the Rendija Canyon, LAAO, DP Road, TA-21, Airport, and TA-74 Tracts.

This BO is based on information provided in the August 28, 2001, BA and other information available to the Service, two field site visits, and phone conversations with your staff. A complete administrative record of this consultation is on file in the Service's New Mexico Ecological Services Field Office.

## Consultation History

On November 18, 1996, the Service received a letter from DOE stating that a predecisional draft Environmental Assessment (EA) had been released for the proposed transfer of the DP Road Tract to the County. The Service responded with a request (consultation # 2-22-97-I-078) for

additional information and corrections. On January 23, 1997, DOE issued a Finding of No Significant Impact (FONSI) for this project. The DOE concluded the proposed action was not likely to affect any endangered or threatened species that might occur in the area or their critical habitat. The DOE cited the following information as reasons for their conclusion: (1) several years of species-appropriate field survey data showed potential habitat near the site was unoccupied and was not known to have ever been occupied; (2) the developed character of nearby site areas, including the presence of a paved road, the Omega West Reactor facility within Los Alamos Canyon, TA-21 and Los Alamos townsite on top of Los Alamos mesas represented existing sources of disturbance; (3) use of the Los Alamos canyon for recreational hiking purposes represented another source of disturbance; and, (4) site development would not significantly change the surrounding topography and ponderosa pine tree cover.

On April 14, 1997, the Service asked DOE to revisit its "no effect" determination for the DP Road Tract transfer and to continue informal consultation. On April 21, 1997, the Service advised DOE of its concern about additive adverse impacts related to this project. The DOE agreed on May 9, 1997, to continue informal consultations and advised the Service that a BA on DP Road Tract would be developed within a few weeks. The Service received a BA from DOE on June 3, 1997. The DOE determined "may affect, not likely to adversely affect" the owl, bald eagle, and their critical habitat at LANL. On August 4, 1997, the Service concurred with DOE's DP Road Tract Transfer project determination of "may affect, not likely adversely to affect" the owl. The Service based its concurrence on: (1) no owl nesting/roosting habitat would be modified; (2) no owls were known to occupy the area; (3) impacts to potential foraging habitats were insignificant or discountable; and (4) it was questionable whether adjacent owl nest/roost habitat could be occupied based on current levels of disturbance and human intrusion in and around Los Alamos Canyon.

On May 6, 1998, DOE published its Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Conveyance and Transfer of Certain Land Tracts Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico (63 FR 25022). The Service, on June 30, 1998, responded to DOE's Notice of Intent by providing a threatened and endangered species list for Los Alamos and Santa Fe counties and recommending a site-wide Environmental Impact Statement (EIS) for continued operations at LANL. On November 3, 1998, the Service received a letter from DOE requesting an updated species list and stated that a BA would be prepared concerning the conveyance and transfer of land on LANL. The Service responded to the BA (consultation # 2-22-98-I-311) on December 10, 1998.

On April 2 and 8, 1999, the Service expressed concerns regarding cumulative impacts and need for comprehensive analysis concerning the conveyance/transfer of ten land tracts identified in the *Draft Environmental Impact Statement for Proposed Conveyance and Transfer of Certain Land Tracts Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico* (DEIS). Information used in the Service's response was obtained from consultation # 2-22-98-I-311. On April 23, 1999, the Service received a letter from the Sierra Club, Pajarito Group of the Rio Grande Chapter stating that Senator Pete Domenici (R-NM) successfully sponsored the Land Transfer and Conveyance to Los Alamos County and San Ildefonso Pueblo Act, Public Law (PL)105-119. That law requires that DOE convey and transfer lands to recipients and provides that: the lands: (1) must not be required for DOE's national security mission; (2) must be remediated by 2007; and (3) are suitable for any purpose from preservation to development. On April 14, 2000, the Service received a letter stating that DOE would prepare a BA and reinitiate consultation with the Service.

On December 15, 1999, the Service expressed concern regarding potentially significant impacts to biological resources resulting from zoning regulations that will govern commercial and private development within the County.

On October 6, 2000, the Service received notice of conveyance of Miscellaneous Site 22 and Miscellaneous Manhattan Monument Tract from DOE to the County. On January 5, 2001, the Service concurred with DOE's determination that conveyance of Miscellaneous Site 22 Tract to the County "may affect, not likely to adversely affect" the bald eagle and the owl, and that conveyance of the Tract would result in "no effect" to endangered or threatened species.

The Service, on July 16, 2001, issued a non-jeopardy biological opinion on effects to the owl from the proposed implementation of the April 2001, Wildlife Hazard Reduction Project Plan, on LANL.

## BIOLOGICAL OPINION

### **I. Description of the Proposed Action**

The proposed action is a congressional mandate (PL 105-119) that DOE convey fee title of ten land tracts (Figure 1) to the County or Secretary of the Interior, in trust for the Pueblo. Table 1 illustrates the identity and size of each tract.

Table 1. DOE land tract sizes, and receiving party of conveyed or transferred land tracts.

Tract Identification	Tract Size	Conveyance or Transfer Party
Rendija Canyon	910 ac (364 ha)	County
LAAO	15 ac (6 ha)	County
Site 22	<0.5 ac (<0.2 ha)	County
Manhattan Monument	<0.5 ac (<0.2 ha)	County
DP Road	50 ac (20 ha)	County
TA-21	20 ac (8 ha)	County
Airport	110 ac (44 ha)	County
White Rock Y	125 ac (50 ha)	County and San Ildefonso
TA-74	2,715 ac (1,086 ha)	County and San Ildefonso
White Rock	100 ac (40 ha)	County and San Ildefonso
<b>Total Area</b>	<b>4,046 ac (1,618 ha)</b>	

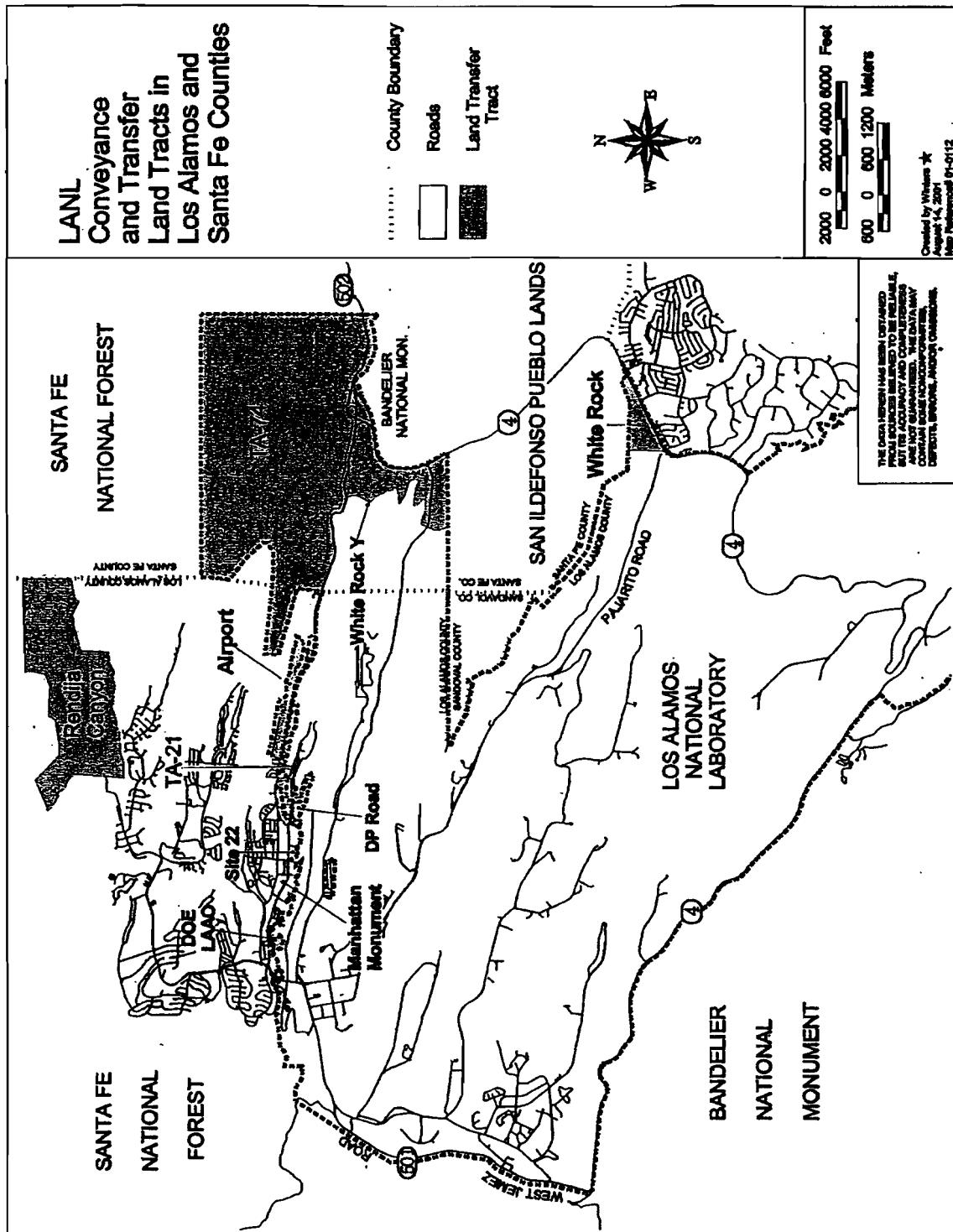


Figure 2. Location of Mexican spotted owl AEIs.

The locations of the ten land tracts (Figure 1) are described as follows:

- Rendija Canyon Tract consists of about 910 ac (369 ha) and is mostly undeveloped. A shooting range (Los Alamos Sportsman's Club) provides recreational opportunity and portions are leased from DOE to Los Alamos.
- LAAO Tract is about 15 ac (6 ha) in size and within the town of Los Alamos. DOE employees occupy offices at this site. The LAAO Tract is located within the Los Alamos Canyon Areas of Environmental Interest (AEIs). An estimated 35 percent of the tract is roads, parking lots, buildings, or artificially maintained landscape. Remaining areas are primarily ponderosa pine forest. There is a great deal of human activity associated with LANL personnel who picnic and hike in the area. Lighting sources within the tract include those used for security, residential, and commercial developments.
- Site 22 Tract consists of less than 0.5 ac (<0.2 ha). It is a Los Alamos townsite parcel overlooking Los Alamos Canyon. The tract is undeveloped, disturbed land and currently used as an unsanctioned vehicle parking area.
- Manhattan Monument Tract consists of less than 0.5 ac (<0.2 ha). This tract is a small, rectangular site found within County land and next to Ashley Pond, where most of LANL work was first conducted. A small log structure occupies the site.
- DP Road Tract consists of about 50 ac (20 ha). DP Road Tract is between TA-21 and a major Los Alamos commercial district and near active operations of LANL. The approximate size of the tract is 50 ac (20 ha) and it contains two structures on approximately two acres (0.8 ha). A short hiking trail crosses the southeastern portion of the tract. No other recreational opportunities exist at this site. It is generally undeveloped and vegetation includes ponderosa pine forest, pinyon-juniper woodlands, open shrub, grasslands and wildflowers.
- TA-21 Tract consists of about 20 ac (8 ha) at the eastern end of DP Mesa, near Los Alamos central business district. This tract contains roads, water towers, and other structures that support ten primary buildings on the east end. Each primary building is 10,000 square feet or more in size. University of California workers occupy offices and LANL operations are conducted at the facility.
- Airport Tract consists of approximately 110 ac (44 ha) and is on the northeastern edge of the mesa above Pueblo Canyon and east of Los Alamos. It is close to a Small Business Center Annex (on East Gate Drive). Since 1948, Airport Tract has been used for commercial air transportation. It served as a landfill before the Los Alamos Airport was constructed on it. The airport handles commercial, private, and emergency transportation. The remainder of the tract is undeveloped.
- White Rock Y Tract consists of about 125 ac (50 ha). It is undeveloped and is associated with major transportation routes connecting Los Alamos with northern New Mexico.
- This TA-74 Tract represents a large area of LANL buffer lands, consisting of approximately 2,715 ac (1,086 ha) that are largely undeveloped. The TA-74 Tract is east of Los Alamos. TA-74 Tract is isolated from LANL operations and contains many archaeological sites and sensitive wildlife habitats. Existing

activities include the maintenance and use of the State highway. Existing structures on this tract include two buildings, water wells, and tanks. Three well-established hiking trails cross the tract. This parcel was restored to public domain by Presidential Proclamation 3539 on May 27, 1963; PL 105-110 provides necessary legislation for tract disposal by DOE. Adjacent land uses include the Bayo Wastewater Treatment Plant in the west-central portion, Pueblo land practices to the east, and ongoing airport activities to the west.

The tract has four potential release sites (PRSs) that have been designated by the LANL Environmental Restoration Project as having actual, suspected or potential releases of contamination. All four PRSs have been characterized, and remediation has been performed. Further cleanup is not likely to be necessary.

- White Rock Tract consists of about 100 ac (40 ha). Utility lines, a water pump station, and a small building used by the County are found on site. The remainder is generally undeveloped.

Land-use proposals by the County and Pueblo for conveyed lands include industrial, commercial, and residential development, and environmental, historical, and cultural preservation. According to the Conveyance and Transfer EIS (CTEIS), cultural preservation is the only land use practice that will not result in significant impacts on endangered and threatened species' habitat. Proposed actions will complete steps considered necessary to provide self-sufficiency for Los Alamos and return land that was part of the Pueblo before the creation of LANL.

The County and Pueblo submitted land use information for future projects within the conveyance and transfer tracts. Potential effects on endangered and threatened species and their habitats for this BO were evaluated using information and boundaries described in the CTEIS and BA.

As required by PL 105-119, some tracts of land have been recognized by DOE and LANL as now or likely to become nonessential within the next ten years to meet LANL's current and foreseeable programmatic missions. In the CTEIS, DOE tentatively identified ten tracts of land for transfer, totaling about 4,800 acres (ac) (1920 hectares [ha]). The BA further defined those tracts and reduced the transfer amount to approximately 4,046 ac (1,618 ha).

These ten tracts were identified as potentially suitable for conveyance or transfer through an informal dialog between the County and DOE. The County identified more than 20 parcels of land that they considered to have high potential development value. Those parcels and several others were evaluated by DOE and LANL management. They decided whether the parcels were required for current and future national security mission support purposes. Included in their determinations were health and safety buffer zones between LANL operations and members of the public living near LANL. In 1996, the list of parcels was divided into three groups: (1) recommended for transfer, (2) tracts having unresolved issues, and (3) tracts not recommended for transfer. The list was further reviewed regarding the criteria established in PL 105-119. Ten tracts were identified for transfer in early 1998.

Nine of 10 tracts contain potential or known contaminated sites or that may require some degree of environmental remediation or restoration to be suitable for uses approved by PL 105-119. Only the Manhattan Monument Tract is not known to have contamination issues.

Actual disposition of each tract, or portion of a tract, will be subject to DOE's continuing or future need for an individual tract, or part of a tract, to meet a national security mission support

function. Additionally, disposition of each tract, or portion of a tract, would be subject to DOE's ability to complete any necessary environmental restoration or remediation.

DOE has concluded that significant portions of TA-21 and Airport Tracts will not be available for conveyance or transfer within the ten-year period specified by PL 105-119. This is due to identified national security operational needs of both facilities within TA-21 and need for surrounding areas to be retained as security, health, and safety buffer areas. All other tracts or their portions will be conveyed or transferred before the end of 2007.

## II. Status of the Species/critical habitat

### Mexican Spotted Owl

The owl was listed as threatened on March 16, 1993 (58 FR 14248). Critical habitat was designated on June 6, 1995 (60 FR 29914) but was withdrawn on March 25, 1998 (Coalition of Arizona-New Mexico Counties for Stable Economic Growth v. U.S. Fish and Wildlife Service, No. 95-1285-M Civil). On March 13, 2000, the United States District Court for New Mexico, (Southwest Center for Biological Diversity and Silver v. Babbitt and Clark, CIV 99-519 LFG/LCS-ACE), ordered the Service to propose critical habitat within four months. Final critical habitat designation was to be completed and published by January 15, 2001. Critical habitat was proposed on July 21, 2000 (65 FR 45336) and designated on February 1, 2001 (66 FR 8530). Background and status information is found in the Final Rule listing the owl as a federally-threatened species (58 FR 14248), previous biological opinions issued by the Service, and the Recovery Plan for Mexican Spotted Owl (*Strix occidentalis lucida*) (Recovery Plan) (USFWS 1995a). Information on species description, life history, population dynamics, status, distribution, and range-wide trends provided in those documents is included herein by reference and is summarized below.

The American Ornithologist's Union recognizes three spotted owl subspecies: California spotted owl (*Strix occidentalis occidentalis*); the Mexican spotted owl (*S. o. lucida*); and northern spotted owl (*S. o. caurina*). The Mexican spotted owl is distinguished from the California and northern subspecies chiefly by geographic distribution and plumage. The owl is mottled in appearance with irregular white and brown spots on its abdomen, back and head. The owl's spots are larger and more numerous than in other subspecies giving it a lighter appearance. Several thin white bands mark its brown tail. Unlike most owls, spotted owls have dark eyes.

*S. o. lucida* is a distinguishable taxon based on allozyme electrophoresis (Barrowclough and Gutiérrez 1990). Analysis of mitochondrial DNA shows further evidence that three subspecies are valid. Phylogenetic relatedness and reduced gene flow between the subspecies, suggests they should be treated as separate conservation units (Barrowclough *et al.* 1999).

Mexican spotted owls have the largest geographic range of the three subspecies. Its range extends from Aguas Calientes, Mexico, through the mountains of Arizona, New Mexico, and western Texas, the canyons of southern Utah, and southwestern Colorado, and the Front Range of central Colorado. Because this is a broad area of southwestern United States and Mexico, much remains unknown about owl distribution within its range. This is especially true in Mexico where much of the owl's range has not been surveyed. The owl has a fragmented distribution throughout its range corresponding to forested mountains and rocky canyon lands. Historic populations size estimates and range distribution are not known, however, present population size and distribution are thought to be similar.

According to the Recovery Plan, 91 percent of owls known to exist in the United States between 1990 and 1993 occurred on land administered by the Forest Service; therefore, it is the primary administrator of lands supporting owls. Most owls have been found within Region 3, which includes 11 National Forests in New Mexico and Arizona. Forest Service Regions 2 and 4 support fewer owls. The Recovery Plan divided its range into 11 Recovery Units (RUs), five in Mexico and six in the United States. The Recovery Plan also identifies recovery criteria and provides distribution, abundance, and density estimates by RU. The Upper Gila Mountain RU has the greatest known concentration of owl sites (55.9 percent), followed by the Basin and Range-East (16.0 percent), Basin and Range-West (13.6 percent), Colorado Plateau (8.2 percent), Southern Rocky Mountain-New Mexico (4.5 percent), and Southern Rocky Mountain-Colorado (1.8 percent) RUs.

Reliable owl population estimates are not available because of limited information. Fletcher (1990) estimated 2,074 owls were in Arizona and New Mexico in 1990 using information gathered by Forest Service, Region 3. The Recovery Plan reports an estimate of owl sites based on 1990-1993 data. An owl "site" means a visual sighting of at least one adult owl or a minimum of two auditory detections in the same vicinity of the same year. The 1990 through 1993 surveys show one or more owls had been observed at a minimum of 758 sites in the United States and 19 sites in Mexico. Those surveys indicate that owls persist in most locations reported before 1989.

In 1996, the Forest Service estimated a total of 869 management territories and 1,738 individual owls. Their assumptions were that each known site was occupied by a single owl or an owl pair. The Forest Service has not updated that data for Arizona or New Mexico.

Owls breed sporadically and do not nest every year. The owl's reproductive chronology varies across its range. In Arizona, courtship apparently begins in March with pairs roosting together during the day and calling to each other at dusk (Ganey 1988). Eggs are laid in late March or early April. Incubation begins shortly after the first egg is laid, and is done entirely by the female (Ganey 1988). Incubation period for owls is assumed to be 30 days (Ganey 1988). During incubation and the first half of the brooding period, females leave only to defecate, regurgitate pellets, or receive prey from their mate (Forsman *et al.* 1984, Ganey 1988). Foraging is done entirely or mostly by males. Eggs usually hatch in early May, with nestlings fledge four to five weeks later, and disperse in mid-September to early October (Ganey 1988).

Reproductive output varies spatially and temporally. White *et al.* (1995) reported an average annual rate of 1.0 young per pair. Current demographic research in Arizona and New Mexico has documented populations that are declining at greater than 10 percent per year (Seamans *et al.* 1999). Possible reasons are habitat quality declines and regional climate trends (Seamans *et al.* 1999). Radio-tracking studies have suggested that adult annual survival rates are 0.8 to 0.9 and that juvenile survival rates are lower (0.06 to 0.29). Juvenile survival rate estimates may be lower because of permanent dispersal from study areas and lag-time before marked juveniles are detected as survivors through recapture efforts (White *et al.* 1995). Little research has been conducted on mortality causes. Known mortality factors are starvation, accidents, and predation by great horned owls, northern goshawks, red-tailed hawks, and golden eagles.

Owls nest, roost, forage, and disperse in diverse biotic communities. Nesting habitat is typically in complex forest structure or rocky canyons, and contains mature or old-growth stands with uneven-aged, multistoried, high canopy closure (Ganey and Balda 1989a, USFWS 1991). In northern portions of its range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons. Elsewhere, most nests are in Douglas fir (*Pseudotsuga menziesii*) trees (Fletcher and Hollis 1994, Seamans and Gutierrez 1995). A wider variety of tree species are used for roosting; however, Douglas fir is used most (Ganey 1988, Fletcher and

Hollis 1994, Young *et al.* 1998). Owls generally use a wider variety of forest conditions (mixed conifers, pine-oak, ponderosa pine [*Pinus ponderosa* var. *scopulorum*], piñon-juniper [*Pinus edulis*, *Juniperus* spp.]) for foraging than they use for nesting/roosting.

Seasonal movement patterns of owls are variable. Some owls are year-round residents while others remain in the same general area but show shifts in habitat use patterns. Some owls migrate 12 to 31 miles (mi) (19 to 50 kilometers) in winter, generally migrating to more open habitats at lower elevations (Ganey and Balda 1989b, Willey 1993, Ganey *et al.* 1998). Owl home-range size appears to vary considerably between habitats and geographic areas (USFWS 1995b). They range in size from 647 to 3,688 ac (259 to 1475 ha) for individuals birds, and 945 to 3,846 ac (378 to 1538 ha) per pair (Ganey and Balda 1989b, Ganey *et al.* 1999). Little information exists about habitat use by juveniles during natal dispersal. Ganey *et al.* (1998) found dispersing juveniles in a variety of habitats ranging from high-elevation forests to piñon-juniper woodlands and riparian areas surrounded by desert grasslands.

Owls consume a variety of prey such as woodrats (*Neotoma* spp.), peromyscid mice (*Peromyscus* spp.), and microtine voles (*Microtus* spp.). Owls may consume bats, birds, reptiles, and arthropods (Ward and Block 1995). Habitat correlates of owl's common prey emphasize that each species uses unique habitats. Deer mice (*Peromyscus maniculatus*) are ubiquitous in distribution in comparison to brush mice (*Peromyscus boylei*), which are restricted to drier, rockier substrates, with sparse tree cover. Mexican woodrats (*N. mexicana*) are typically found in areas with considerable shrub or understory tree cover and high log volumes or rocky outcrops. Mexican voles (*Microtus mexicanus*) are associated with high herbaceous cover, primarily grasses; whereas, long-tailed voles (*M. longicaudus*) are found in dense herbaceous cover, primarily forbs, with many shrubs and limited tree cover. A diverse prey base is dependant on availability and quality of diverse habitats.

Recreational activities may affect the owl directly by disturbing nests, roosts, or foraging sites. Disturbance may occur indirectly through altered habitat caused by trampling of vegetation, soil damage, or both. Developing new recreational facilities or expanding existing facilities, such as campgrounds and trails, may alter owl habitat and habitat use and perpetuate disturbance impacts caused by recreation.

The Recovery Plan provides for three levels of habitat management: protected habitats, restricted habitats, and other forest and woodland types. "Protected habitat" includes all known owl sites, and all areas in mixed conifer or pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in 20 years, and all reserved lands. Protected Activity Centers (PACs) are delineated around known owl sites. PACs include a minimum of 600 ac (240 ha) designed to include best nesting and roosting habitat in the area. Recommended sizes are 75 percent of foraging areas used by owls. Management guidelines recommended in the Recovery Plan for PACs are to take precedence for activities within those areas. "Restricted habitat" includes mixed conifer forest, pine-oak forest, and riparian areas; the Recovery Plan provides less specific management guidelines for these areas. The Recovery Plan does not provide owl-specific guidelines for "other forest and woodland types."

Timber harvest practices in Forest Service, Region 3 and catastrophic wildfires, were cited as primary factors leading to listing of the owl as a Federally-threatened species. Other factors that have or may lead to declines include lack of adequate regulatory mechanisms. The Recovery Plan also notes that forest management has created ecotones favored by great horned owls, increasing the likelihood of predation. Finally, there is a potential for increasing malicious and accidental anthropogenic harm, and for the barred owl to expand its range, resulting in competition or hybridization with the owl.

## ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR 402.02) define environmental baseline as past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are anticipated impacts of all proposed Federal projects that have undergone section 7 consultation, and impacts of State and private actions that are contemporaneous with the consultation in progress.

A total of 524 projects have undergone formal consultation for the owl in Arizona and New Mexico. Of that aggregate, 258 projects resulted in a total anticipated incidental take of 490 owls plus an additional unquantifiable number of owls. These consultations have primarily dealt with actions proposed by the Forest Service, Region 3. Consultations also addressed actions and impacts proposed by the Bureau of Indian Affairs, Department of Defense (including Air Force, Army, and Navy), DOE, National Park Service, and Federal Highway Administration. Those proposals have included timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military and sightseeing overflights, and other construction activities.

### Status of the Mexican Spotted Owl (within the Action Area)

Owl requirements in the Jemez Mountains include nesting, roosting, and foraging habitat. Nesting habitat includes cavities in cliffs and small rock outcrops. To date, all known owl nests in this area have been found on cliffs, with stands of mixed conifers nearby. Roosting habitat consists of any area with suitable microclimate for roosting during hot summer months. Foraging habitat is described as widely varying and requiring hunting perches. Johnson (1997) reported low nest occupancy in the Jemez Mountains from 1992 through 1996. By 1997, nest occupancy rates had increased to 67 percent of known nest locations (Johnson 1997). The BA reported less than half the historic nest locations were occupied in 2001.

LANL has designated suitable owl habitat and protective buffer areas surrounding the habitat as AEIs. AEIs are areas within LANL that are managed and protected because of their significance to biological or other resources. Overall, an owl AEI consists of a core area containing important breeding or wintering habitat and a buffer area surrounding the core. Owl AEI core areas were defined geographically based on owl habitat requirements. Buffer zones were established around each core based on regulatory guidance and literature information on the species' reaction to disturbance. An AEI is different from a PAC; a PAC must be or has been occupied. Alternatively, AEIs were defined based on a conservative estimate of potential foraging habitat, but may not suggest suitable nesting areas. Only an occupied AEI would be comparable to a PAC. The AEIs were designed to be consistent with the Recovery Plan.

LANL lands were surveyed from 1994 to 2001 as part of the Threatened and Endangered Species Habitat Management Plan for LANL (HMP). In combination with habitat modeling, these efforts resulted in establishing six owl AEIs on LANL (Figure 2). A brief discussion of the three AEIs affected by the proposed action is provided below.

1. Los Alamos Canyon Mexican Spotted Owl AEI. A total of 8325 ac (4133-ac core and 4192-ac buffer) (3330 ha, 1653-ha core and 1677-ha buffer) delineates this AEI. The AEI contains one canyon system and surrounding mesas. It overlaps two other AEIs: Sandia-Mortandad Canyon, and Pueblo Canyon. DOE controls only 27.5 percent of this AEI. Of that amount, 143 ac (57.3 ha) of core and 339 ac of buffer (136 ha) have been developed. During 1995, 1996, 1997, and 2001 owl surveys, no responses were obtained in this AEI. Either all or part of the LAAO, DP Road, and TA-21 Tracts are within this AEI.

2. Pueblo Canyon Mexican Spotted Owl AEI. A total of 2450 ac (1058-ac core and 1392-ac buffer) (980 ha; 423-ha core and 557-ha buffer) delineates this AEI. This AEI is found in Pueblo, Walnut, and Acid canyons and includes Barranca Mesa, Kwage Mesa, North Mesa, and the mesa supporting the commercial centers of Los Alamos. This AEI also overlaps the Los Alamos Canyon AEI. DOE has control of 12 percent of this AEI (70 ac [28 ha] of core and 230 ac [92 ha] of buffer). Of that amount, 56.5 percent of DOE-controlled core and 19.2 percent buffer are developed. During owl surveys in 2001, no responses were obtained in this AEI. Portions of Airport and TA-74 Tracts are within this AEI.
3. Sandia-Mortandad Canyon Mexican Spotted Owl AEI. A total of 2585 ac (1180-ac core and 1405-ac buffer) (1034 ha, 472-ha core and 5621-ha buffer) delineates this AEI. DOE manages 99 percent of this AEI. It overlaps with the Pajarito Canyon and Los Alamos Canyon AEIs. Developments occupy 9.6 percent of DOE-controlled core and 13.2 percent of buffer. During 1998 and 2001 owl surveys, no responses were obtained in the AEI. Portions of Airport, DP Road, and TA-21 Tracts are within the AEI.

Owls have not been documented in the Los Alamos Canyon, Pueblo Canyon, or Sandia-Mortandad Canyon AEIs. All six owl AEIs were surveyed in 2001 and in the previous six years, but owl presence was documented in only one.

Canon de Valle is the only occupied AEI within LANL and is not within the proposed project area. When it was first surveyed for owl presence in 1995, owls were found nesting in the canyon (Keller 1997). Food remains from the 1995 nest investigation suggest it had been used before discovery. All subsequent nesting seasons have resulted in owl detection and, in most years, successful nesting and fledging of chicks. A helicopter overflight performed by LANL biologists on May 25, 2000, and ground survey on May 30, 2000, suggested the nesting area in Canon de Valle experienced low intensity burning as the result of the Cerro Grande Fire. Smoke, fire, and suppression activities, including air attack, may have disturbed the owls. Canon de Valle AEI is not called a PAC, as referred to in the Recovery Plan, although it provides similar levels of protection. Moreover, all known suitable and potential owl habitat on LANL was considered in developing this BO.

The 1996 Dome Fire affected habitat of three owl territories. Post fire reconnaissance documented that most fire effects to vegetation in those territories resulted in overstory mortality of less than 30 percent (BAER 2000). The Cerro Grande Fire burned approximately 42,878 ac (17,151 ha) between May 4 and May 28, 2000. On DOE, five of six owl AEIs were partially or completely included in the fire area. They were the Los Alamos Canyon, Sandia-Mortandad, Pajarito Canyon, Three-Mile Canyon, and Canon de Valle AEIs. The Los Alamos and Sandia-Mortandad AEIs are within the proposed action area. The Pueblo Canyon AEI, is within the action area and was not burned, but is likely to be affected by flash flooding because of fire damage above the AEI. Less than three percent of the Pueblo Canyon AEI is within DOE boundaries.

#### **IV. Effects of the Action**

Consideration of the impacts of the proposed action on the owl includes an analysis of both the direct and indirect effects of the action, as well as the effects of any interrelated or interdependent actions. Direct effects are the immediate effects of the proposed action on the species or its habitat. Indirect effects are caused by, or result from, the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the action area and may also

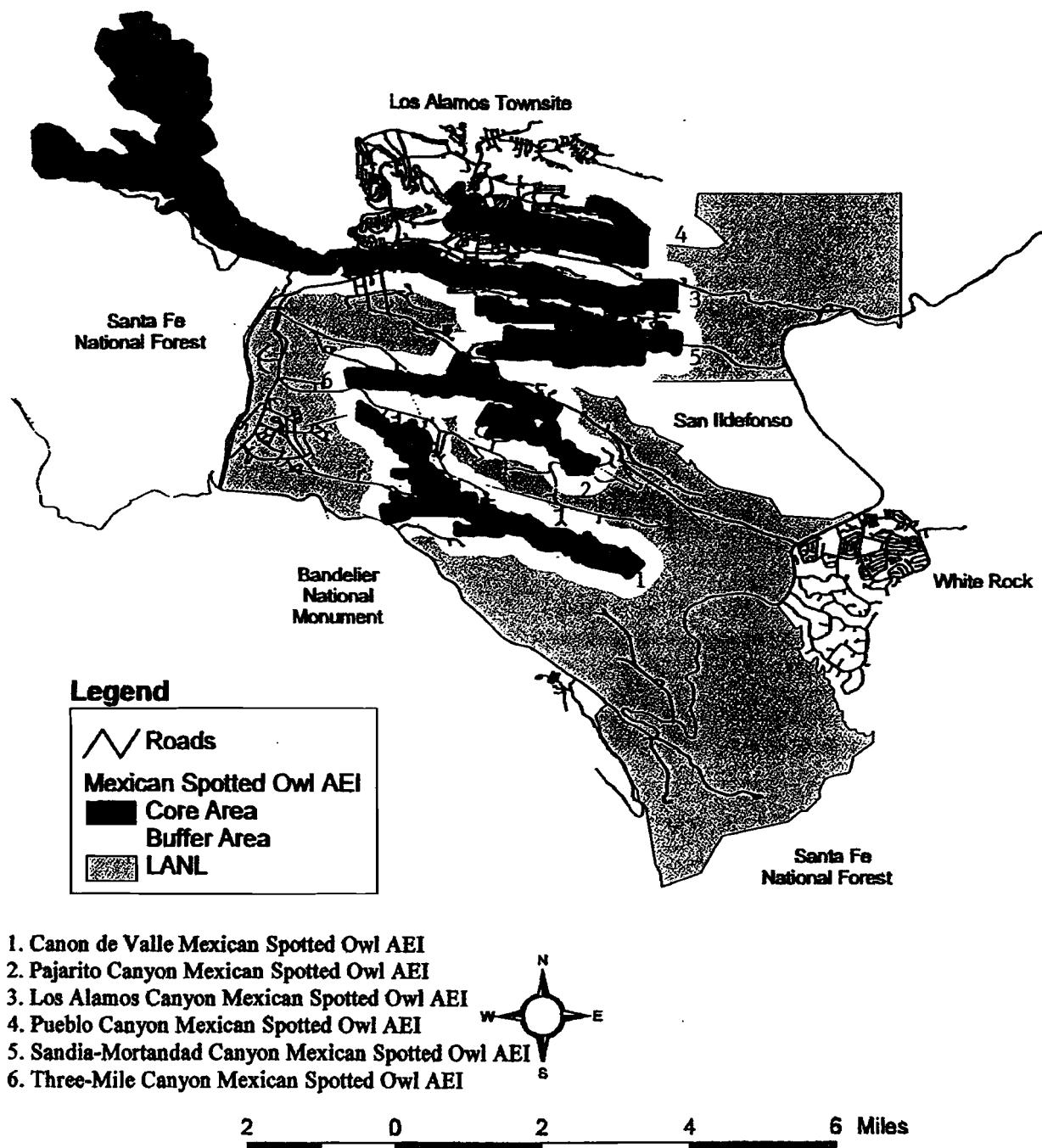


Figure 1. Location of proposed conveyance and transfer land tracts in Los Alamos and Santa Fe Counties.

include other Federal actions that have not undergone section 7 consultation, but may result from the proposed action. Interrelated activities are part of, and depend on, the proposed action for their justification. Interdependent activities have no independent utility apart from the proposed action under consultation. Future Federal actions that are not direct effects of the proposed action are not considered in this BO.

The DOE will not retain jurisdiction or residual authority to enforce compliance of Federal laws which protect threatened and endangered species and their habitats once these tracts are transferred to the County and the Pueblo. The future actions of the County and the Pueblo are included in the proposed action. These possible future actions are considered indirect effects in this BO.

#### LAAO, DP Road, TA-21 and Airport Tracts

Adverse direct effects associated with environmental remediation can result from soil compaction and loss of vegetative cover from heavy equipment use, trench digging, excavation, solvents, and other hazardous chemicals which can lead to the loss of owl suitable habitat. The removal of trees with 9-inch diameters at breast height will result in the reduction of foraging habitat and available owl prey species and reduce potential nesting habitat availability.

The primary indirect effect for these tracts is potential commercial or residential development by the County after conveyance, resulting in the reduction or elimination of existing suitable habitat. Potential adverse effects include: (1) promotion of non-native plants and reduction of prey species densities from disturbance associated with construction; (2) degradation of foraging habitat from increased runoff draining developed areas; (3) reduction in the likelihood of an area becoming occupied because of increased recreational use; (4) reduction in the prey base because of increased numbers of domestic and feral pets.

#### TA-74 Tract

The County has proposed that their portion of TA-74 Tract be kept as a natural area for the purposes of preservation and self-sufficiency. The Pueblo has proposed that their portion be used for cultural preservation. The resulting beneficial effect is that the entire tract will remain primarily undeveloped.

Owls have not been seen in the TA-74 tract however, this tract contains suitable unoccupied owl foraging habitat within the Pueblo and Los Alamos Canyon AEIs. Increased recreational usage of this tract could result in significant degradation of suitable habitat.

### **V. Cumulative Effects**

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. Cumulative effects analysis as stated here applies to section 7 of the Act and should not be confused with the broader use of this term in the National Environmental Policy Act or other environmental laws. Because the action area is a national laboratory, activities such as livestock grazing is not "reasonably certain" to occur. However, future actions next to LANL and DOE lands that are reasonably expected to occur include urban and land development, road construction, logging, fuelwood gathering and other associated activities. These activities reduce the quality and quantity of owl

nesting, roosting and foraging habitat, cause disturbance to breeding owls, and contribute as cumulative effects to the proposed action.

## VI. Conclusion

After reviewing the current status of the owl, the environmental baseline for the action area, the effects of the proposed action (which could result in a reduction of 1300 ac [727 ha] of suitable unoccupied habitat), and the cumulative effects, it is our biological opinion that the implementation of the conveyance and transfer project, as proposed, is not likely to jeopardize the continued existence of the owl.

## INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit take of endangered and threatened species without special exemption. Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm means an act which actually kills listed species. Such acts may include significant habitat modification or degradation that result in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass means an intentional or negligent act or omission that creates likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding or sheltering. Incidental take is take that is incidental to, and not the purpose of, carrying out of an otherwise lawful activity. In section 7(b)(4)(iv) and section 7(o)(2) of the Act, incidental take not intended as part of agency action is not considered prohibited taking if such taking meets the terms and conditions of this Incidental Take Statement.

It is our opinion that the proposed action will not lead to an incidental take of owls. This determination is consistent with our final policy for conducting section 7 consultations on owls and critical habitat dated July 1, 1996. The policy states that incidental take can be supported when habitat-altering action compromises integrity of a PAC or in cases where areas that may support owls have not been adequately surveyed. Our conclusion is also based on knowledge that owl surveys have been conducted during 2001 and will continue to be conducted annually. Because we do not anticipate incidental take related to the proposed action, no reasonable and prudent measures are provided. However, if during the action, incidental take occurs, such incidental take would represent new information requiring review of the project's effects. The DOE must immediately provide an explanation of the taking and review with us needs for possible addition of reasonable and prudent measures.

## CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. LANL should review and reevaluate their owl habitat model. This information could be used to refine AEI designations and update the HMP.

2. LANL should provide copies of annual owl AEI surveys to the Service when data become available, or by October 1.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

#### REINITIATION NOTICE

This concludes formal consultation on the proposed actions. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) amount or extent of incidental take is exceeded; (2) new information reveals effects of agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this BO; (3) agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

In future communications regarding this project, please refer to consultation #2-22-01-F-634. If you have any questions regarding this biological opinion please contact Santiago R. Gonzales at the letterhead address or at (505) 346-2525 ext. 154.

Sincerely,

  
for Joy E. Nicholopoulos  
Field Supervisor

cc:

Field Supervisor, U. S. Fish and Wildlife Service, Arizona Ecological Services Field Office,  
Phoenix, Arizona

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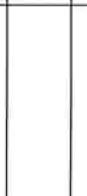
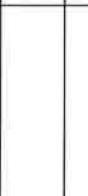
**APPENDIX H:**  
**SWPPP Training Records**

## Meeting Topic: CGP Required SWPPP Training for DP Middle Road Recovery Effort

Meeting Date: 06-30-2020

Place: DP Middle Road

## *Meeting Called By: EPC-CP*

Name	Signature	Organization	Phone (optional)
Julian Martinez		Log/Hero	
32670 326075			
Dante Sieniowski		car - super	505 - 695 - 6741
Dave Thor		RCT	
Eddie Vaughn		Elvin Vaughn	
Christopher Martinez		Log/Hero	
Jacob Sanchez		Log-Hero	
Eladio Montoya		Log-Hero	
Toussaint Velasquez		Log-Hero	

# DP Middle Road Recovery Effort SWPPP Training

**What is a SWPPP?**  *Storm Water Pollution Prevention Plan*

- National Pollutant Discharge Elimination System (NPDES)
  - Part of Federal Clean Water Act – it's the law
  - Under jurisdiction of EPA in NM
  - Established to minimize discharge of pollutants to surface waters
- Component of the NPDES Construction General Permit (CGP)
  - Projects 1 acre or more of disturbance (or part of a larger common plan of development)
  - Regulates and authorizes storm water discharges from construction activity
    - *Clearing, grading, excavation, soil stockpiling*
    - *Other potential pollutants*
- Triad identified as an “operator” with control over the plans and specifications and day to day operations
- EPC-CP (Compliance Programs) has oversight for CGP compliance at LANL

## NOI Posting

- A sign or other notice of your permit coverage must be posted at a safe, publicly accessible location in close proximity to the construction site, visible from the public road nearest to the active part of the construction site

## SWPPP Staff Training Requirements

- Training of staff required prior to starting work and with addition of new personnel
- Need to understand:
  - Permit requirements
  - Location of storm water controls on site
  - How to maintain controls and take corrective actions
  - Proper procedures for pollution prevention
  - How to record findings and corrective actions

## Project SWPPP

- Describes the nature of construction activities and all of the potential pollutant-generating activities for the project
- Contains a description of all the specific sediment and erosion control measures and stabilization practices at the project
- Supporting documents
  - Site map, inspection reports, logs, corrective action documentation
- Contains activity logs and documents follow ups on corrective actions.
- Must be available on-site to all Operators, Inspectors and Regulators

# DP Middle Road Recovery Effort SWPPP Training

## Controls

- Temporary Ertec S-Fence/wire backed silt fence will be installed along the down gradient perimeters of earth disturbing activities (e.g., existing trench/spoils and utility trenching area).
- Temporary Ertec S-Fence/wire backed silt fence will be installed as a perimeter control along the down gradient perimeter of all spoils staging areas.
- Gravel bags or rock check dams in swales or drainages (concentrated flow) in disturbed areas and concentrated flow path upgradient of trenches.
- Stockpiles of potentially hazardous materials will be placed on tarps, covered by visqueen/tarps, and secured with gravel/sand bags.
- Sweeping as necessary of any paved surfaces and stabilized construction entrance as necessary.
- Material storage/handling to minimize exposure to storm water
- Construction and domestic waste in closed or covered containers
- Covered containers for waste
- Spills/leaks – inspect equipment for leaks, repair leaking equipment, clean-up/disposal, on-site spill kits. Keep up with spill log documentation
- Fueling operations – leave head space in tanks for fuel expansion, use secondary containment to prevent discharge
- Minimizing dust
- Portable toilets must be anchored/secured

## Maintenance of Controls

- If sediment is tracked off your site onto pavement, how soon do you have to sweep?  
*By the end of the same workday (sediment tracking)*
- If the wind tears the fabric of a silt fence away from the post, how soon does it have to be fixed?  
*By the end of the next workday (routine maintenance)*
- If a new row of gravel bags or a new earth berm needs to be installed at a location on site, how soon must it be installed?  
*As soon as practicable but no later than 7 days (new BMPs or a significant repair)*

## Stabilization

- Initiate stabilization immediately and completed no more than 7 days after construction activities have permanently or temporarily ceased in a portion of the site.
  - May consist of base course, rolled erosion control products, or revegetation/reseeding.
- Stabilize trench excavated in February 2020 after it is backfilled with base course.

## DP Middle Road Recovery Effort SWPPP Training

- Stockpiles of non-hazardous materials unused for 14 days or more require cover or temporary stabilization.
- Stockpiles of potentially hazardous materials will be placed on tarps, covered by visqueen/tarps, and secured with gravel/sand bags.
  - *For this site only, this will be considered as final stabilization until spoils are removed by a separate contractor.*

### Documentation Requirements

Project personnel are expected to update:

- Soil Disturbance Tracking Table
- Spill Log
- Corrective Action Reports
- Site Map
- SWPPP and supporting records on site

### Inspections

- Weekly
- After 0.25 inches of precipitation
- Monthly (after stabilization has been initiated unless the stabilization is final in all areas – Permanent TRM vs Gravel Mulch)
- Conducted by EPC-CP with project personnel involvement
- Documented on a report sent to project personnel for signature, inclusion in the SWPPP, and corrective action follow-up

# DP Middle Road Recovery Effort SWPPP Training

## NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		Date	Time	
CA #	Condition Identified	Nature of condition and required action		Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA		Completed Date
2	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA		Completed Date
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA		Completed Date
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA		Completed Date
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EPC-CP-QP-2002 R0 Form 3

# DP Middle Road Recovery Effort SWPPP Training

## NPDES Construction General Permit Stormwater Site Corrective Action Report

Notes/Observations:

CAs identified by:  SWPPP Inspector  Site representative  Other:

Print name and title of identifier of corrective actions: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

EPC-CP-QP-2002 RO Form 3

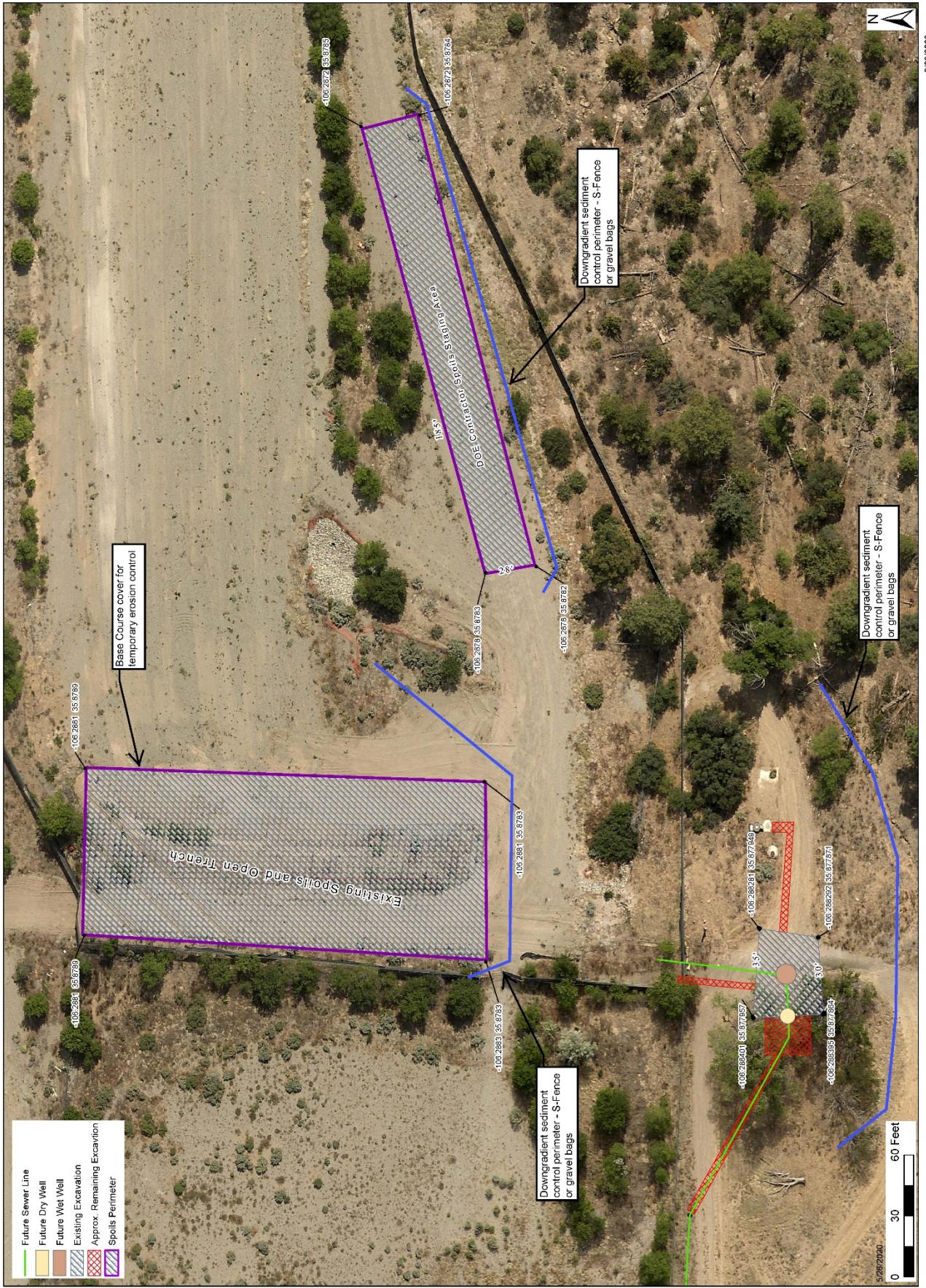
## DP Middle Road Recovery Effort SWPPP Training

### Lessons Learned

#### Top reasons for non-compliances

- Failure to implement corrective actions within permit timeframes, including stabilization
- Corrective action paperwork not completed
- Poor housekeeping
- SWPPP implementation is not a priority

Middle DP Road Recovery Effort SWPPP Site Map - Construction Areas and BMPs



**APPENDIX I:**  
**Inspector/SWPPP Preparer Qualifications and Inspection Templates**

# **Inspector/SWPPP Preparer Qualifications**

## **NPDES General Permit for Storm Water Discharges from Construction Activities**

Terrill Lemke, P.E., CPESC, CISEC, EPC-CP Division

Qualifications: LANL program lead responsible for institutional storm water permitting and compliance. Involved in the development, implementation, and regulatory review of construction SWPP Plans. Assisted in the development of LANL guidance documents for storm water BMPs. Attended and instructed courses in NPDES storm water permit compliance and sediment and erosion control. Civil engineer with previous experience in construction. Professional Engineer (PE), Certified Professional in Erosion and Sediment Control (CPESC) and Certified Inspector of Sediment and Erosion Control (CISEC).

Tim Zimmerly CPESC, CISEC, EPC-CP Division

Qualifications: Bachelor of Science in Civil Engineering with over 20 years experience in design engineering/construction/project management/remediation and emergency and spill response. Assisted in the development of LANL guidance documents for storm water BMPs and the development of construction SWPP Plans. SME in field inspections, implementation of BMPs and other controls. Certified Professional in Erosion and Sediment Control (CPESC) and Certified Inspector of Sediment and Erosion Control (CISEC), and familiar with erosion control and storm water requirements for this project.

Samuel R. Loftin, BS, MS, PhD, CISEC, EPC-CP Division

Qualifications: I received my BS degree in Biology from Western Oregon State University in 1983, my MS in Botany from Arizona State University in 1987 and my Ph.D. in Biology from the University of New Mexico in 1994. I worked on a postdoc research appointment with the USFS Rocky Mountain Research Station in Albuquerque for five years and then started at LANL in 1998. I have over 20 years of professional experience in terrestrial plant ecology, restoration ecology, and vegetation management. I have been working on NPDES permit management at LANL since 2006. I received CISEC certification in June 2010.

Marwin Shendo, CISEC, EPC-CP Division

Qualifications: Received my Bachelor of Science degree in Wildlife Science in 2004 and my Master of Water Resources degree in 2011. I have a year and half experience in performing inspections of NPDES CGP, MSGP, and IP regulated sites; is knowledgeable about implementation and maintenance of BMPs. Certified Inspector of Sediment and Erosion Control (CISEC).

Brad Schilling CPESC, CISEC, EPC-CP Division

Qualifications: Bachelor of Science in Biology with over 15 years' experience in Stormwater BMP design, installation, and inspection. Served as United States Forest Service project lead responsible for the selection and installation of wildland erosion and sediment controls. Provided NPDES permit management support at LANL since 2005. Certified Professional in Erosion and Sediment Control (CPESC) and Certified Inspector of Sediment and Erosion Control (CISEC).

Alethea Banar, CISEC, EPC-CP Division

Qualifications: Bachelor of Science in Biology/Ecology and Masters of Science in Restoration Ecology. Involved in the development and revision of SWPP Plans and site maps. Has demonstrated ability in performing and documenting storm water inspections and is familiar with placement, and maintenance of BMPs. Certified Inspector of Sediment and Erosion Control (CISEC).

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name				Inspection Date	
Inspector(s) Name and Title				Time of Inspection	
Others Present				Present Phase of Construction	Active Stabilization
Type of inspection	7-Day Monthly	14-Day Precipitation Event*	*See attached precipitation data	Are there any discharges occurring?	Yes* No *See attached Visual Assessment form
<b>Stabilization</b> Has area disturbance ceased for a period of 14 or more days? Yes      No      N/A		<b>Equipment/Material Storage Area:</b> Present:      Yes      No Proper Housekeeping:      Yes      No Proper controls installed to prevent discharge:      Yes      No		<b>Waste Management</b> Proper Concrete Washout: Yes      No      N/A Adequate Containment: Yes      No      N/A Good Housekeeping: Yes      No	
<b>Perimeter Controls:</b> Installed:      Yes      No      N/A Functional:      Yes      No      N/A		Porta-Potty Anchored Unanchored N/A		<b>Spills</b> Present:      Yes      No Spill Kit On Site: Yes      No      N/A	
<b>Sediment Track Out</b> Stabilized Entrance: Yes      No      N/A Track out observed:      Yes      No		Discharge points: Visible erosion or sedimentation? Yes      No		<b>Stockpiles</b> Present:      Yes      No Are proper BMPs in place? Yes      No	
<b>50 Foot Buffer</b> Required:      Yes      No Additional Controls Needed: Yes      No		Erosion, Pollution, Sediment Controls: All Operational Required Controls Installed Significant Repair/Replacement Routine Maintenance required Additional control required		<b>SWPPP</b> No updates required Map updates required Soil disturbance schedule required Corrective Action Documentation updated: Yes      No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name		Date
<p>Corrective Action Report Required: Yes No</p> <p>This site has been found to be: In Compliance Non-Compliant</p> <p>Reason for non-compliance:</p>		
<p>Inspector Signature: _____ Date: _____</p>		
<p>Comments:</p>		
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>		
<p>LANL</p> <p>Print name and title: _____ Signature: _____ Date: _____</p>		
<p>Subcontractor Print</p> <p>name and title: _____ Signature: _____ Date: _____</p>		
<p>Subcontractor Print</p> <p>name and title: _____ Signature: _____ Date: _____</p>		

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		Date	Time	
CA #	Condition Identified	Nature of condition and required action		Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping			
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		Action(s) taken to address CA		Completed Date

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		Date	Time		
CA #	Condition Identified	Nature of condition and required action			Due Date
6	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping				
6		Action(s) taken to address CA			Completed Date
7	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping				
7		Action(s) taken to address CA			Completed Date
8	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping				
8		Action(s) taken to address CA			Completed Date
9	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping				
9		Action(s) taken to address CA			Completed Date
10	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping				
10		Action(s) taken to address CA			Completed Date

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Notes/Observations:

CAs identified by:  SWPPP Inspector  Site representative  Other:

Print name and title of identifier of corrective actions: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**APPENDIX J:**  
**Inspection and Corrective Actions Reports**

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	6/30/20
Inspector(s) Name and Title	Terrill Lemke, P.E., CPESC, CISEC Sam Loftin, CISEC Alethea Banar, CISEC			Time of Inspection	2:39
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> 14-Day <input type="checkbox"/> Monthly <input type="checkbox"/> Precipitation Event*			Are there any discharges occurring? *See attached precipitation data	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <small>*See attached Visual Assessment form</small>
Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Initiated: <input type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input type="checkbox"/> Yes <input type="checkbox"/> No		Equipment/Material Storage Area: Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Waste Management Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A (See comments)		Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A		Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
50 Foot Buffer Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Erosion, Pollution, Sediment Controls: <input type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input type="checkbox"/> Routine Maintenance required <input checked="" type="checkbox"/> Additional control required		SWPPP <input type="checkbox"/> No updates required <input checked="" type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input type="checkbox"/> Yes <input type="checkbox"/> No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	DP Middle Road Recovery Effort		Date	6/30/20
Corrective Action Report Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.06.30 16:44:50 -06'00'	Date: <u>6/30/2020</u>	
Comments: Crews are backfilling the trench excavated by Parker Construction in February 2020 with spoils from same trench. Crews are conducting maintenance on existing visqueen/tarps and sand bags covering all spoils piles on site. CGP inspectors conducted SWPPP training for the crews and updated the site map with control measures more tailored to the site and current activities (see updated map in SWPPP dated 6/30/20). Two corrective actions were identified (see attached Corrective Action Report) to install perimeter sediment controls. The existing spoils piles are managed by the visqueen/tarps and sand bags. A vegetation buffer exists downgradient/south of the DOE Spoils Staging Area. A vegetation buffer and area of rip rap exist downgradient/east of the Parker Construction trench. Additional perimeter sediment controls at either location are not required at this time. On the east side of the lift station excavation is a spoils pile and straw wattles. These are not part of the LANL construction activities and are part of the Los Alamos County Department of Utilities construction.				
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."				
LANL Print name and title:	Jennifer E. Payne		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.07.06 10:40:47 -06'00'	Date: <u>07/06/2020</u>
Subcontractor Print name and title:	Signature: _____		Date: _____	
Subcontractor Print name and title:	Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		DP Middle Road Recovery Effort	Date	6/30/20	Time	2:39
CA #	Condition Identified	Nature of condition and required action	Due Date			
1	<input type="checkbox"/> Missing Controls <input checked="" type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	A perimeter sediment control is needed south of the Parker Construction trench. Install gravel bags around the corner of the dirt road from east of the existing riprap to the exiting fence.	7/7/20			
		Action(s) taken to address CA <i>Gravel bags installed around corner of dirt road.</i>	Completed Date 7/1/20			
2	<input type="checkbox"/> Missing Controls <input checked="" type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	A perimeter sediment control is needed south of the lift station excavation. Install gravel bags across the southern-most dirt road and field on either side of the dirt road.	7/7/20			
		Action(s) taken to address CA <i>Gravel bags installed south of lift station excavation.</i>	Completed Date 7/6/20			
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA	Completed Date			
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA	Completed Date			
5	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA	Completed Date			

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Notes/Observations:

CA's identified by:  SWPPP Inspector  Site representative  Other:

Alethea Banar, SWPPP Inspector

Print name and title of identifier of corrective actions:

ALETHEA BANAR  
(Affiliate)

Digitally signed by ALETHEA  
BANAR (Affiliate)  
Date: 2020.06.30 16:45:05 -06'00'

6/30/20

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Print name and title: \_\_\_\_\_

Jennifer E. Payne

Signature \_\_\_\_\_

JENNIFER  
PAYNE (Affiliate)

Digitally signed by  
JENNIFER PAYNE (Affiliate)  
Date: 2020.07.06 10:43:07  
-06'00'

07/06/2020

Date \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	7/6/20
Inspector(s) Name and Title	Alethea Banar, CISEC			Time of Inspection	10:12
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input type="checkbox"/> 7-Day <input type="checkbox"/> Monthly	<input type="checkbox"/> 14-Day <input checked="" type="checkbox"/> Precipitation Event*	Are there any discharges occurring?		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
<p>Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A</p> <p>Initiated: <input type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>(see comments ref. 6/30/20 SWP)</p>		<p>Equipment/Material Storage Area: Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Waste Management Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A</p>		<p>Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A</p>		<p>Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>	
<p>Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>50 Foot Buffer Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Erosion, Pollution, Sediment Controls: <input type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input checked="" type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required</p>		<p>SWPPP <input type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other:</p>	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	DP Middle Road Recovery Effort		Date	7/6/20
Corrective Action Report Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.07.06 11:45:47 -06'00'	Date: <u>7/6/2020</u>	
Comments: Crews completed backfilling the Parker Construction trench on 7/1/20. Utility trench excavation is expected to begin this week.  One new corrective action was observed this morning (see attached Corrective Action Report): existing tarps on the eastern spoils pile area have blow off the tops of the spoils piles and need to be repositioned. The perimeter control of gravel bags south of the lift station excavation has not been installed yet and has a due date of 7/7/20. Refer to SWPPP inspection report from 6/30/20.  The updated Site Map showing construction areas and BMPs is attached for reference.				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
Print name and title: <u>LANL</u>	Signature: <u>Jennifer E. Payne</u>		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.07.27 14:52:38 -06'00'	Date: <u>07/27/2020</u>
Subcontractor Print name and title: _____	Signature: _____		Date: _____	
Subcontractor Print name and title: _____	Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		DP Middle Road Recovery Effort	Date	7/6/20	Time	10:12
CA #	Condition Identified	Nature of condition and required action				Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input checked="" type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	The existing tarps on the eastern spoils pile area have blow off the tops of the spoils piles. Reposition and re-tape the tarps				7/7/20
		Action(s) taken to address CA				Completed Date 7/7/20
2	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date
5	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date

# NPDES Construction General Permit Stormwater Site Corrective Action Report

## Notes/Observations:

The perimeter control of gravel bags south of the lift station excavation has not been installed yet and has a due date of 7/7/20. Refer to SWPPP inspection report from 6/30/20.

CAs identified by:  SWPPP Inspector  Site representative  Other:

Alethea Banar, SWPPP Inspector

Print name and title of identifier of corrective actions:

ALETHEA BANAR  
(Affiliate)

Digitally signed by ALETHEA  
BANAR (Affiliate)  
Date: 2020.07.06 11:48:37 -06'00'

7/6/20

Signature:

Date:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Jennifer E. Payne

Print name and title:

JENNIFER  
PAYNE (Affiliate)

Signature

Digitally signed by  
JENNIFER PAYNE (Affiliate)  
Date: 2020.08.11 15:37:16  
-06'00'

Date

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Data is for tower ta53.

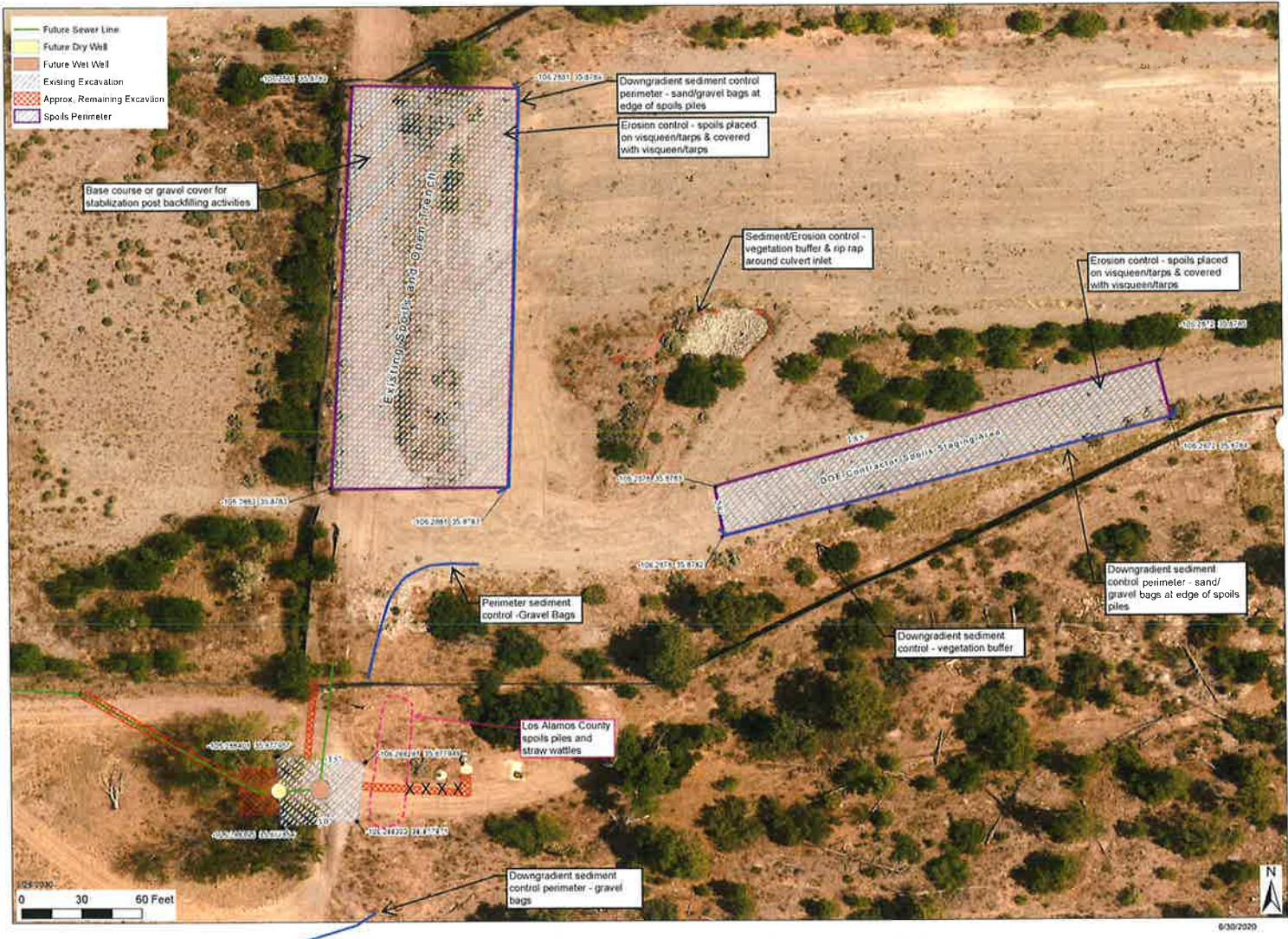
This file was obtained from the LANL Weather Machine, <http://weather.lanl.gov>.

Request made on Mon Jul 06 07:03:59 2020 MST.

All data times are MST.

month mm	day dd	year yyyy	hour hh	minute mm	doy ddd	precip in
7	5	2020	10	45	187	0
7	5	2020	11	0	187	0
7	5	2020	11	15	187	0
7	5	2020	11	30	187	0
7	5	2020	11	45	187	0
7	5	2020	12	0	187	0
7	5	2020	12	15	187	0.06
7	5	2020	12	30	187	0.07
7	5	2020	12	45	187	0
7	5	2020	13	0	187	0
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7	5	2020	13	45	187	0.09
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7	5	2020	15	30	187	0
7	5	2020	15	45	187	0
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7	5	2020	19	30	187	0
7	5	2020	19	45	187	0
7	5	2020	20	0	187	0
7	5	2020	20	15	187	0
7	5	2020	20	30	187	0
7	5	2020	20	45	187	0
7	5	2020	21	0	187	0
7	5	2020	21	15	187	0

### Middle DP Road Recovery Effort SWPPP Site Map - Construction Areas and BMPs



# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	7/13/20
Inspector(s) Name and Title	Alethea Banar, CISEC			Time of Inspection	09:15
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> 14-Day <input type="checkbox"/> Monthly <input type="checkbox"/> Precipitation Event*			Are there any discharges occurring?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <small>*See attached precipitation data</small>
<b>Stabilization</b> Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Initiated: <input type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Equipment/Material Storage Area:</b> Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			<b>Waste Management</b> Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Perimeter Controls:</b> Installed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<b>Porta-Potty</b> <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A			<b>Spills</b> Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<b>Sediment Track Out</b> Stabilized Entrance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Discharge points:</b> Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<b>Stockpiles</b> Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>50 Foot Buffer</b> Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Erosion, Pollution, Sediment Controls:</b> <input type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input checked="" type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required			<b>SWPPP</b> <input type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other:

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	<b>DP Middle Road Recovery Effort</b>		Date	<b>7/13/20</b>
Corrective Action Report Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.07.13 10:04:48 -06'00'	Date: <u>7/13/20</u>	
<p>Comments: Crews not working this morning. Utility trenching is pending Parker Construction completing placement of manholes to the west of planned trenching.</p> <p>On corrective action was identified this morning (see attached Corrective Action report). Tarps and gravel bags have been removed from the northern end of the west spoils pile area marked as a radiation control area.</p>				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
Print name and title: <u>LANL</u>	<b>Jennifer E. Payne</b>		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.07.13 15:30:43 -06'00'	Date: <u>07/13/2020</u>
Subcontractor Print name and title: _____	Signature: _____		Date: _____	
Subcontractor Print name and title: _____	Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		DP Middle Road Recovery Effort	Date	7/13/20	Time	09:15
CA #	Condition Identified	Nature of condition and required action				Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input checked="" type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Tarps and gravel bags have been removed from the northern end of the west spoils pile area. At a minimum replace the gravel bag perimeter to prevent spoils from the radiation control area migrating to the nearby culvert.				7/14/20
		Action(s) taken to address CA	<i>Gravel bags placed around base of spoils pile per David Scarnaski email 7/13/20.</i>			
2	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				
5	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				

NPDES Construction General Permit Stormwater Site Corrective Action Report

**Notes/Observations:**

CAs identified by:  SWPPP Inspector  Site representative  Other:

## Alethea Banar, SWPPP Inspector

Print name and title of identifier of corrective actions:

ALETHEA BANAR

Digitally signed by ALETHEA  
BANAR (Affiliate)

7/13/20

Signature: (Affiliate)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Jennifer E. Payne

JENNIFER

PAYNE (Affiliate)

Digitally signed by

JENNIFER PAYNE (Affiliate)  
Date: 2020-07-13 15:33:33

Date: 2020-07-13 15:32:32  
-06:00

07/13/2020

Print name and title:

**Signature**

07/16/2020

### Subcontractor

Print name and title:

**Signature**

Date \_\_\_\_\_

### Subcontractor

Print name and title:

**Signature:**

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	7/20/20
Inspector(s) Name and Title	Alethea Banar, CISEC			Time of Inspection	10:17
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> Monthly	<input type="checkbox"/> 14-Day <input type="checkbox"/> Precipitation Event*	*See attached precipitation data	Are there any discharges occurring?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No *See attached Visual Assessment form
Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A  Initiated: <input type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input type="checkbox"/> Yes <input type="checkbox"/> No	Equipment/Material Storage Area:  Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Waste Management  Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A			Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
50 Foot Buffer  Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erosion, Pollution, Sediment Controls: <input type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input checked="" type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required			SWPPP  <input type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	DP Middle Road Recovery Effort		Date	7/20/20
Corrective Action Report Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.07.20 12:29:43 -06'00'	Date: <u>7/20/20</u>	
Comments: Per D. Sarnowski, covering the backfilled trench with base course has been approved by NMED. Crews will begin applying the base course Tuesday.  Utility trenching is still on hold pending Los Alamos County Department of Utilities completing placement of manholes to the west of planned trenching.  Three corrective actions for routine maintenance of existing controls were identified today (see attached Corrective Action report).				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
LANL Print name and title:	<u>Jennifer E. Payne</u>		JENNIFER PAYNE (Affiliate) Signature: _____ Date: <u>07/27/2020</u>	Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.07.27 15:01:28 -06'00'
Subcontractor Print name and title:	_____ Signature: _____		Date: _____	
Subcontractor Print name and title:	_____ Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		DP Middle Road Recovery Effort	Date	7/20/20	Time	10:17
CA #	Condition Identified	Nature of condition and required action				Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input checked="" type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Two broken gravel bags observed southeast of the open utility excavation. Replace the broken gravel bags.				7/21/20
		Action(s) taken to address CA				Completed Date <i>7/20/20</i>
		<i>Gravel bags replaced</i>				
2	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input checked="" type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	A 15ft section of tarp on top of the western spoils piles has been blown open exposing the soil. Re-secure the tarp.				7/21/20
		Action(s) taken to address CA				Completed Date
		<i>Tarps were re-secured.</i>				<i>7/20/20</i>
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input checked="" type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	A 10ft section of tarp on top of the eastern spoils piles has been blown open exposing the soil. Re-secure the tarp.				7/21/20
		Action(s) taken to address CA				Completed Date
		<i>Tarps were resecured</i>				<i>7/20/20</i>
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date
5	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping					
		Action(s) taken to address CA				Completed Date

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Notes/Observations:

CAs identified by:  SWPPP Inspector  Site representative  Other:

Alethea Banar, SWPPP Inspector

Print name and title of identifier of corrective actions: \_\_\_\_\_

ALETHEA BANAR  
(Affiliate)

Digitally signed by ALETHEA  
BANAR (Affiliate)

Signature: \_\_\_\_\_ Date: 7/20/20

Date: 2020.07.20 12:30:03 -06'00'

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Jennifer E. Payne

Print name and title: \_\_\_\_\_

JENNIFER  
PAYNE (Affiliate)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Digitally signed by  
JENNIFER PAYNE (Affiliate)  
Date: 2020.08.11 15:36:30  
-06'00'

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	7/27/20
Inspector(s) Name and Title	Alethea Banar, CISEC			Time of Inspection	10:15
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> Monthly	<input type="checkbox"/> 14-Day <input type="checkbox"/> Precipitation Event*	Are there any discharges occurring?		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No
Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Initiated: <input type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input type="checkbox"/> Yes <input type="checkbox"/> No		Equipment/Material Storage Area: Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Waste Management Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A		Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
50 Foot Buffer Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Erosion, Pollution, Sediment Controls: <input checked="" type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required		SWPPP <input checked="" type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input type="checkbox"/> Yes <input type="checkbox"/> No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	DP Middle Road Recovery Effort		Date	7/27/20
Corrective Action Report Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.07.27 10:51:54 -06'00'	Date: <u>7/27/20</u>	
Comments: Backfilled trench was covered with plastic tarps and base course on top of the tarps 7/22/20. This is the final stabilization for this area until DOE-EM and their subcontractor, N3B, take control of this site.  Utility trenching is still on hold pending Los Alamos County Department of Utilities completing placement of manholes to the west of planned trenching.				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
Print name and title: <u>LANL</u>	Signature: <u>Jennifer e. Payne</u>		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.07.27 14:02:06 -06'00'	Date: <u>07/27/2020</u>
Subcontractor Print name and title: _____	Signature: _____		Date: _____	
Subcontractor Print name and title: _____	Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	8/4/2020
Inspector(s) Name and Title	Alethea Banar, CISEC Terrill Lemke, P.E., CPESC, CISEC			Time of Inspection	10:26
Others Present	David Sarnowski			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> 14-Day <input type="checkbox"/> Monthly <input type="checkbox"/> Precipitation Event*			Are there any discharges occurring?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <p>*See attached Visual Assessment form</p>
Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Initiated: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Equipment/Material Storage Area: Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Waste Management Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A		Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
50 Foot Buffer Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Erosion, Pollution, Sediment Controls: <input type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input checked="" type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required		SWPPP <input checked="" type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input type="checkbox"/> Yes <input type="checkbox"/> No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	DP Middle Road Recovery Effort		Date	8/4/2020
Corrective Action Report Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.08.04 13:12:44 -06'00'	Date: <u>8/4/2020</u>	
Comments: Crews are establishing a low temporary earthen berm around the open lift station excavation. Temporary berm will be in place until LA County Utility Dept. is ready for Triad to excavate final two trenches from lift station excavation.  Per D. Sarnowski, the expected date to finish work is end of August. It is planned that DOE-EM's subcontractor N3B will take control of the site in August.  One corrective action was identified (see attached Corrective Action report).				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
LANL Print name and title:	<u>Jennifer E. Payne</u>		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.08.04 17:06:37 -06'00'	Date: <u>08/04/2020</u>
Subcontractor Print name and title:	Signature: _____		Date: _____	
Subcontractor Print name and title:	Signature: _____		Date: _____	

# NPDES Construction General Permit Stormwater Site Corrective Action Report

Project Name:		DP Middle Road Recovery Effort	Date	8/4/2020	Time	10:26
CA #	Condition Identified	Nature of condition and required action				Due Date
1	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input checked="" type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Two gravel bags south of the lift station excavation have been damaged by heavy equipment. Replace two gravel bags.				8/5/2020
		Action(s) taken to address CA <i>Per email from D. Sernawski, gravel bags were replaced 8/4/20.</i>				Completed Date <i>8/4/20 4:56</i>
2	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA				Completed Date
3	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA				Completed Date
4	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA				Completed Date
5	<input type="checkbox"/> Missing Controls <input type="checkbox"/> Additional Controls <input type="checkbox"/> Control Maintenance <input type="checkbox"/> Replace/Repair Control <input type="checkbox"/> Track-Out <input type="checkbox"/> Stabilization <input type="checkbox"/> Housekeeping <input type="checkbox"/> Spill <input type="checkbox"/> Material/Waste Storage <input type="checkbox"/> Record Keeping	Action(s) taken to address CA				Completed Date

# NPDES Construction General Permit Stormwater Site Corrective Action Report

## Notes/Observations:

CA's identified by:  SWPPP Inspector  Site representative  Other:

Alethea Banar, SWPPP Inspector

Print name and title of identifier of corrective actions:

ALETHEA BANAR

Digitally signed by ALETHEA  
BANAR (Affiliate)

8/4/2020

Signature: (Affiliate)

Date: 2020.08.04 13:13:35 -06'00'

Date:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

LANL

Jennifer E. Payne

JENNIFER

Digitally signed by  
JENNIFER PAYNE (Affiliate)

08/04/2020

Print name and title:

Signature

Date

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor

Print name and title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# NPDES Construction General Permit Stormwater Site Inspection Report

Project Name	DP Middle Road Recovery Effort			Inspection Date	8/11/2020
Inspector(s) Name and Title	Alethea Banar, CISEC Sam Loftin, CISEC			Time of Inspection	10:30
Others Present	George Fields			Present Phase of Construction	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Stabilization
Type of inspection	<input checked="" type="checkbox"/> 7-Day <input type="checkbox"/> Monthly	<input type="checkbox"/> 14-Day <input type="checkbox"/> Precipitation Event*	*See attached precipitation data	Are there any discharges occurring?	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No *See attached Visual Assessment form
Stabilization Has area disturbance ceased for a period of 14 or more days? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A  Initiated: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Functioning: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Equipment/Material Storage Area: Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Proper controls installed to prevent discharge: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Waste Management Proper Concrete Washout: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Adequate Containment: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Good Housekeeping: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Perimeter Controls: Installed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Functional: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Porta-Potty <input checked="" type="checkbox"/> Anchored <input type="checkbox"/> Unanchored <input type="checkbox"/> N/A			Spills Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Kit On Site: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sediment Track Out Stabilized Entrance: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Track out observed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Discharge points: Visible erosion or sedimentation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Stockpiles Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are proper BMPs in place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
50 Foot Buffer Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Additional Controls Needed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erosion, Pollution, Sediment Controls: <input checked="" type="checkbox"/> All Operational <input type="checkbox"/> Required Controls Installed <input type="checkbox"/> Significant Repair/Replacement <input type="checkbox"/> Routine Maintenance required <input type="checkbox"/> Additional control required			SWPPP <input checked="" type="checkbox"/> No updates required <input type="checkbox"/> Map updates required <input type="checkbox"/> Soil disturbance schedule required Corrective Action Documentation updated: <input type="checkbox"/> Yes <input type="checkbox"/> No Other:	

# NPDES Construction General Permit Stormwater Site Inspection Report Cont.

Project Name	<b>DP Middle Road Recovery Effort</b>		Date	8/11/2020
Corrective Action Report Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
This site has been found to be: <input checked="" type="checkbox"/> In Compliance <input type="checkbox"/> Non-Compliant				
Reason for non-compliance:				
Inspector Signature: <u>ALETHEA BANAR (Affiliate)</u>		Digitally signed by ALETHEA BANAR (Affiliate) Date: 2020.08.11 15:22:32 -06'00'	Date: <u>8/11/2020</u>	
Comments: Excavation of final two trenches from lift station is still pending placement of manholes to the west of planned trenching. No issues identified.				
<p>"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p>				
LANL Print name and title:	<u>Jennifer E. Payne</u>		Digitally signed by JENNIFER PAYNE (Affiliate) Date: 2020.08.11 15:32:40 -06'00'	Date: <u>11 August 2020</u>
Subcontractor Print name and title:	Signature: _____		Date: _____	
Subcontractor Print name and title:	Signature: _____		Date: _____	