D.1662

DOE/RA/04934-06
Dist. Category UC-97e

163
8-21-80

**U.S. Department of Energy**
Assistant Secretary for Rescource Applications
Industrial and Utility Applications and Operations
Division of Hydroelectric Resources Development
Washington, D.C. 20461

May 1980

EXECUTIVE SUMMARY

# LEGAL OBSTACLES AND INCENTIVES TO SMALL-SCALE HYDROELECTRIC DEVELOPMENT IN THE SIX MIDDLE ATLANTIC STATES

MASTER



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EXECUTIVE SUMMARY

# LEGAL OBSTACLES AND INCENTIVES IN THE SIX MIDDLE ATLANTIC STATES TO SMALL SCALE HYDROELECTRIC DEVELOPMENT

## Introduction

This executive summary describes the relationship of federal law and regulation to state law and regulation of small scale hydroelectric facilities. The executive summary also highlights important features of the constitutional, statutory, case law and regulations of each of the six Middle Atlantic States. In addition, this summary should serve as a concise overview of and introduction to the six detailed reports on the legal and regulatory systems of each of the Middle Atlantic States prepared by the Energy Law Institute.

The summary and underlying reports it describes have been prepared by the Energy Law Institute of the Franklin Pierce Law Center for the Department of Energy pursuant to a contract between the Department and the Law Center. This contract requires examination of legal and institutional obstacles and incentives to the development of small scale hydroelectric power in 19 northeastern states and in federal regulatory systems and development of rational and appropriate recommendations for change in these legal and regulatory systems. The contract also requires that economic research be performed so that the economic issues concerning small scale hydroelectric power are fully understood and new policy initiatives may properly reflect the economics of small scale hydroelectric power. These economic analyses are contained and will be contained in a series of economic papers. Three such papers are available

at this writing. These papers describe, respectively, the basic economic issues involved in small scale hydroelectric development; the problem of the monopsony power of integrated electric utility systems and sales of power by small scale hydroelectric facilities to these systems; and the potential contribution of small scale facilities to grid reliability.

It should be noted that both the federal and the state regulatory environments are undergoing significant changes. Regulations of the Federal Energy Regulatory Commission under Title II of the Public Utility Regulatory Policies Act of 1978 will defer considerable responsibility for regulating and developing a market for power generated by small scale hydro projects to state regulatory commissions. As changes are made, these changes will be set forth and analyzed in future works of the Energy Law Institute under its contract with the Department of Energy.

I. Federal-State Relationships:

The relationships of state regulatory systems to federal systems is perhaps no more complex than in the areas of regulation of water resources and energy. To place the subsequent analysis of the regulatory systems of the six Middle Atlantic States in proper context, it is necessary to discuss this series of unique Federal-State relationships. Fortunately in some areas "bright-line" allocations of functions have been delineated by the Courts and Congress or long standing administrative practices have made relationships well understood.

(a) Regulation of Water Resources

Under the Federal Clean Water Act authority has been conferred

on the appropriate state agencies to monitor and enforce various aspects of water quality. Under these provisions, appropriate state agencies are the issuing authorities for § 401 water quality certificates and § 402 "Point Source" permits if required for the retrofitting or construction of a dam. From the standpoint of a clear delegation of authority to federal agencies, the Corps of Engineers is the issuing authority for § 404 "Dredge and Fill" permits under the Clean Water Act when such permits are required.

The relationship becomes less clearly delineated when the Federal Energy Regulatory Commission issues a license under Part I of the Federal Power Act. It is clear that the issuing authority is the FERC, but as noted in the Energy Law Institute report on the Federal Regulatory Systems, FERC regulations require consultation with and clearance from certain state agencies prior to the issuance of the license.

While state agencies have the "right" to consult with the developer and the FERC and even to formally intervene in a licensing proceeding, they cannot, independently of the FERC, halt construction or operation of a project otherwise approved by the FERC. A possible execption to this last statement would be the unusual situation where the developer was refused, for valid reasons, a § 401 permit by the appropriate state agency and the FERC proceeded to issue the license. Under these circumstances a strong argument could be made that the later enacted Federal Clean Water Act superseded the authority of the FERC to issue a

license under the earlier enacted provisions of the Federal Power Act. On the other hand, in the situation where a State Fish and Game Agency seeks to require the developer, who is applying for a FERC license, to construct expensive fish passages and the FERC does not require such devices as a condition of the license, it is clear that the state agency has no powers or rights other than those of formal intervenors in licensing proceedings or persons involved in the impact statement process.

The other salient point of confusion in federal-state relationships on the regulation of water resources is the use of the ambiguous, and seemingly infinitely malleable term "navigability". If a project is located on navigable waterways, affects navigability or generates electricity which would be transmitted in the interstate commerce, the FERC has jurisdiction. Section 210 of the Federal Power Act provides a mechanism, apparently largely unused, whereby a determination can be obtained brom the FERC as to whether it will take "jurisdiction" of a project. Section 210 permits the filing of a declaration of intent with the FERC. If the FERC declines to exercise jurisdiction, then "permission" is deemed to have been granted to construct and operate the project in compliance with state law. The declaration of intent is of little benefit to the states in view of the fact few developers involved in projects which raise close questions of FERC jurisdiction file such declarations, and that regulatory lag which may ensue upon filing the declaration creates uncertainty and delay. Some comfort may be taken in the fact that of the some fifty thousand dams in the United States,

only some three thousand have ever been subjected to FERC (or predecessor FPC) licensing processes. However, it should be noted that many of these dams were constructed prior to 1920 or at a time when it was thought the Federal Power Act did not apply. Some additional assurance to state agencies seeking to exercise what they perceive to be their regulatory responsibilities under state law may also be found in the fact that the FERC with its present docket of approximately 180 hydro licensing matters and an average regulatory lag of three (3) years cannot possibly undertake to license all of the potential projects under consideration.

## II. Federal-State Relationships in the Regulation of Electric Power

There has developed over a period of several years a delicate relationship between the FERC (formerly FPC) and state public utility regulatory commissions in the regulation of electric power. In certain areas the relationship is well established and clear. In other areas the relationship remains unsettled. Of major importance to this relationship also is the enactment of the Public Utility Regulatory Policies Act of 1978 (PURPA).

The FERC has clearly established jurisdiction over electric utilities which transmit electric energy in interstate commerce or sell electric energy at wholesale. This jurisdiction extends to requiring such utilities to maintain accounting records pursuant to a uniform system and regulating wholesale electric rates and rates for interstate transmission services. State regulatory commissions regulate the rates at which electric energy is sold at retail, the exercise of eminent domain

authority by public utilities except in connection with FERC licensed hydroelectric projects, and the construction of plant and transmission and distribution lines and networks.* By longstanding practice, the FERC and state regulatory commission exercise concurrent authority over accounting and certain management functions and practices and, in fact, a provision of the Federal Power Act provides that the FERC shall exercise these functions in aid of state regulation.

The federal-state relationship becomes uncertain in situations involving interconnection and wheeling. Interconnection involves the physical linkage of one electric system to another system, customer or user. It can have important advantages in planning for system capacity and avoiding construction costs for new capacity. Wheeling is the transmission of electric energy from one point on a system over that system's transmission or distribution lines to another point on that system. Wheeling services, if available, can be important to persons who desire to purchase energy from a remote generating facility. Prior to the enactment of PURPA, it was the position of the FERC, supported in some measure by the courts, that the FERC did not have the power to compel wheeling by an electric utility. The FERC, prior to enactment of PURPA, did have the power to order interconnection upon proper application by an electric utility or state commission and subject to a series of conditions as prescribed by § 202(b) of the Federal Power Act.

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* It should be noted that power plant construction may involve federal agencies other than the FERC, chiefly the Nuclear Regulatory Commission and the Environmental Protection Agency. However, the point is that FERC jurisdiction has not been extended to plant siting or eminent domain matters, matters which, until recently, were the exclusive province of state regulatory commissions.

What remains largely untested is the power of state regulatory commissions to order large scale interconnection between electric utilities selling at wholesale and potential retail customers of those utilities. Similarly, it is not clear what authority state commissions have to order wheeling intrastate over transmission lines which also transmit energy to interstate markets. Should state regulatory commissions have the power, free from any federal preemption, to order interconnection and wheeling under the circumstances described above, such authority could be fashioned and employed to provide greater access of small scale hydroelectric facilities to markets for their power.

To some extent the relationships described previously will be changed by the new act (PURPA). Specifically, Title II of PURPA grants rulemaking to the FERC to delineate the relationship of small power producers which utilize renewable resources to integrated electric utility systems. Under the new act utility systems will be required to interconnect with small power producers, including small scale hydroelectric projects, and under certain circumstances will be required to wheel power from small scale producers to customers at wholesale. Much of the implementation of the act is left to rulemaking by the FERC. The rates at which power is purchased and sold by small power producers will be determined by the state regulatory commissions pursuant to a standard or standards established by rule of the FERC. The FERC may also by rule exempt certain small scale producers from all or part of the requirements of state regulatory law. At this writing, it is not known how the FERC will exercise its power under PURPA or how it will adjust its relationship with state regulatory commissions. Drafts of

regulations are not scheduled before Spring of 1979 and the final regulations are due in November of 1979.

## III. Summaries of Important Provisions of State Law in the Six Middle Atlantic States

The following material is a state-by-state synopsis of the important provisions of the laws of the six Middle Atlantic states, which have a bearing on small scale hydroelectric development.

# EXECUTIVE SUMMARY OF THE REGULATION OF SMALL DAMS IN DELAWARE

## I. WATER LAW

A Delaware riparian owner who privately owns land bordering upon a navigable watercourse holds title to the low water mark. The bed beneath a navigable watercourse is owned by the state. If the watercourse is not navigable, then a riparian owner holds title to the center of the watercourse.

Navigability is defined by some minimum standard of navigation. However, Delaware has never adopted a specific definition by statute or common law. Delaware courts have taken judicial notice that certain rivers are obviously navigable.

Ownership and use of flowing water is a more complex matter. Delaware courts have rejected the natural flow doctrine and appear to have adopted a standard of reasonable use. Public rights of navigation and fishing have been recognized. The riparian owner who owns land to the low water mark of a navigable river must allow public use of the water to the high water mark. Reasonable use also implies various private use rights. Riparian owners have been allowed to build obstructions, without state permission, when they own the land beneath the water.

The most significant private right emanates from the Mill Dam Act. This Act allows any person to erect a dam on a non-navigable stream as long as he is a riparian owner who owns land abutting at least one side of the stream. The Mill Dam Act does not allow a riparian owner to erect a dam to the injury of any other lawful upstream dam. Only the height of the dam is subject to outside control, determined by a court-appointed group of five impartial landowners.

An additional area of interest to dam builders is the measure of liability for breach. If a dam breaches, liability for ensuing damage would be determined by a common negligence standard.

II. DIRECT REGULATION

The Public Service Commission regulates all public utilities that generate electric power. One significant exception are municipal electric companies.

Public utilities subject to Commission jurisdiction must file for a certificate of public convenience and necessity for initial operation. This certificate must include the proposed tariff. The Commission then determines a reasonable rate. In addition to rate determination, the Commission also has exclusive and original supervision and regulation of public utility property rights, equipment, facilities and franchises.

While many states grant public utilities broad eminent domain powers, Delaware does not. Non-municipal utilities have condemnation power only for erecting, constructing and maintaining wires or lines for transmission. Only a municipal electric company has the constitutional and statutory authority to condemn property for the actual construction of a hydroelectric dam.

The Department of Natural Resources and Environmental Control serves as a central agency with broad regulatory powers over dams. Most of the regulation occurs through the various divisions within the Department.

One such branch is the Division of Environmental Control. DEC statutory authority over water pollution and ground water mandates that the developer obtain a permit if he/she wishes to build a dam across a

navigable watercourse. The cost of the permit process may be assessed to the developer.

No specific application form is required, but various standards control the decision-making process of the Secretary of the Department. No permit to build a SSH dam may be granted unless the county or municipality having jurisdiction has first approved the activity in accordance with its zoning regulations. If there is no local problem, then the Secretary makes his decision on the basis of various rules and regulations. Variances may be granted by the Secretary to circumvent these rules.

Final decisions of the Secretary may be appealed to the Environmental Appeals Board. Further appeals to Superior Court may be initiated by any aggrieved person. However, such an appeal does not automatically stay a decision of the Secretary.

The Department is vested with broad enforcement powers. Some of the penalties for non-compliance with Department regulations include fines, cease and desist orders, and the sealing of non-complying equipment. If a SSH dam depletes an existing use of water, the operator may be required to replace the water supply free of charge or provide an alternative source. Such penalties may be enforced by the Secretary, his Environmental Protection Officers or the Attorney General.

The Department is also responsible for enforcement of the Wetlands Act. A wetland is any land above the mean low water elevation that is a bank, marsh, swamp, meadow, flat or other low land subject to tidal action. A developer may determine the applicability of the Wetlands Act by consulting wetlands maps that are kept at the Department and con-

clusively define Delaware's wetland areas.

Development within a wetlands area triggers a more detailed permit requirement. Factors which control the issuance of a permit by the Secretary indicate that a cost-benefit analysis will be employed.

State-owned land may be leased or conveyed in fee simple by the Secretary. The Department also has a limited power of eminent domain. Lands may be acquired for recreation or state parks.

Another agency with jurisdiction which translates into a permit requirement is the Delaware River Basin Commission, formed pursuant to a compact between Delaware, New Jersey, New York, Pennsylvania and the United States. The Delaware River Basin Commission has jurisdiction over the Delaware Basin, which includes all areas of drainage into the Delaware River, Delaware Bay and their tributaries. No project having a substantial effect on the water resources of the Delaware Basin shall be undertaken unless first submitted to and approved by the Delaware River Basin Commission. There are specific and numerous exceptions. Administrative agreements may be entered into to avoid duplication of requirements imposed by a state or local agency. Specific forms and numerous regulations govern the permit process for SSH projects.

Local zoning has a significant direct impact on SSH development. Zoning regulations, which are deferred to initially by both the Public Service Commission and the Department of Natural Resources and Environmental Control, may regulate and restrict the height and size of structures and the location and use of buildings, structures and land. These regulations are employed by numerous cities, towns and Delaware's three counties.

The Coastal Zone Act may also trigger direct regulation of a SSH

project in the unlikely event that a dam would be built near the coast. Any new manufacturing use which includes SSH in the Coastal Zone would be required to obtain a permit from the Office of Management, Budget and Planning. The Coastal Zone is a limited area defined by statute.

III. INDIRECT REGULATIONS

The newly organized Delaware Energy Office is involved in fostering research, development and use of renewable energy resources. DEO is presently involved in analysis of regulatory delay in the siting of energy facilities. As an information repository of energy law, DEO may soon benefit developers who seek information about the regulatory process. Indirectly, SSH developers should benefit from DEO recommendations for the elimination of processes which cause delay and increased costs in the site selection, construction and operation of energy facilities. Such recommendations are required by statute.

Another indirect consideration for SSH development is the existence of protected historic sites. Historic sites recognized by Delaware are listed in the Federal Register.

IV. FINANCIAL CONSIDERATIONS

The Public Service Commission imposes a yearly fee on public utilities (not including municipal electric companies) of two mills per dollar of gross operating revenue. A report of the utility's gross operating revenue for the immediately preceding year must be submitted with a check for the two mill assessment on or before March 31 of each year. The Commission may also impose other charges and fees for filing, copying, inspection, etc., so long as such costs do not exceed one percent (1%) of the public utility's gross operating revenues.

A public utility must obtain an unexpired license from the Department of Finance. An unexpired license initially costs fifty dollars ($50). Yearly renewals are obtained by paying a sum equal to one (1) mill on each dollar of gross receipts. Municipal Electric Companies are exempt from the license tax.

An additional tax rate of five percent (5%) on gross receipts must be paid by all electric company distributors including municipalities. Sales of electricity for resale are not subject to this tax. Even though the utility pays this tax to the state, the tax is passed on to the consumer by means of an adjustment to tariff. Gross receipts received by a distributor from residential customers are exempt from this tax.

Public utilities must also pay local real property taxes on their land, buildings, improvements and special betterments. Special betterments and improvements are specifically defined by statute. Federal, state or local government property and all tangible and intangible personal property are not subject to local real property taxes.

By issuing bonds, the Department of Community Affairs and Economic Development assists in financing projects in areas where there is substantial unemployment, seasonal or cyclical unemployment, or where the environment is in danger of pollution. A SSH project could have a substantial indirect effect on unemployment. If a SSH project could fulfill one of the unemployment requirements, such project could apply for up to three (3) million dollars in funds backed by the full faith and credit of the state.

## Flow Diagram of Regulation of Small Dams in Delaware

PROJECT

↓

I. OWNERSHIP

- Does the developer have the legal right to use the flowing water?
- Does the developer own one or both banks of the waterway?
- Is the waterway navigable or non-navigable?

II. IF NAVIGABLE:
State owns bed in trust and rights to flowing water.

↓

Appeal to state court → Waterway found non-navigable

↓

Waterway found navigable

↓

Apply to Secretary of Department of Natural Resources and Environmental Control for grant or lease authorizing use of trust resources.

Approved / Denied

IF NON-NAVIGABLE:
Developer owns bed if he owns both banks. Developer has right to use flowing water.

Developer who owns one bank may utilize Mill Dam Act.

↓

- File written petition with Superior Court
- Give notice to all affected landowners
- Court appoints commissioners to determine height of dam and damages
- Pay damages

III. DETERMINE: effect of local zoning laws and ordinances which regulate the height and size of structures and the location and use of buildings, structures and land.

Approved / Denied

Denied → Appeal to board of adjustment, superior court, etc.

Appeal successful / Appeal unsuccessful

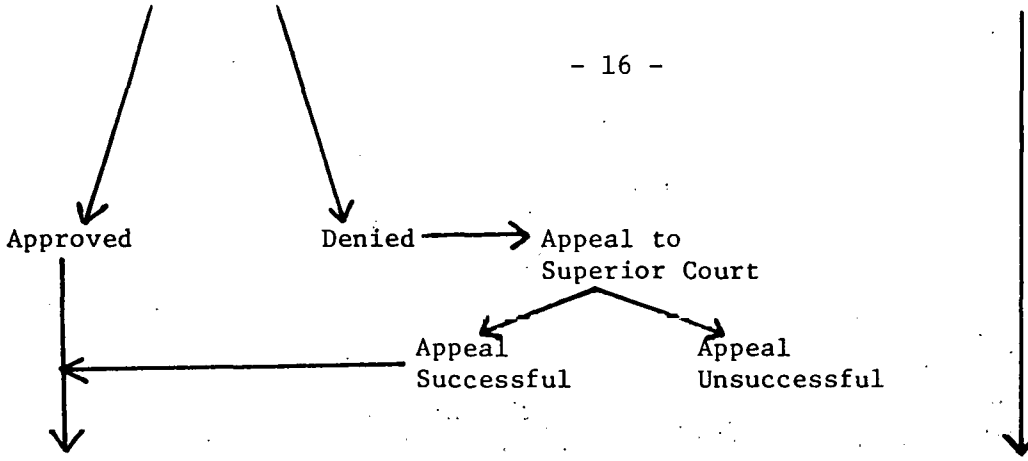
IV. Is the entity a public utility?

Yes / No

Yes → Public utility is subject to regulation by the Public Service Commission and must file for Certificate of Public Convenience and Necessity

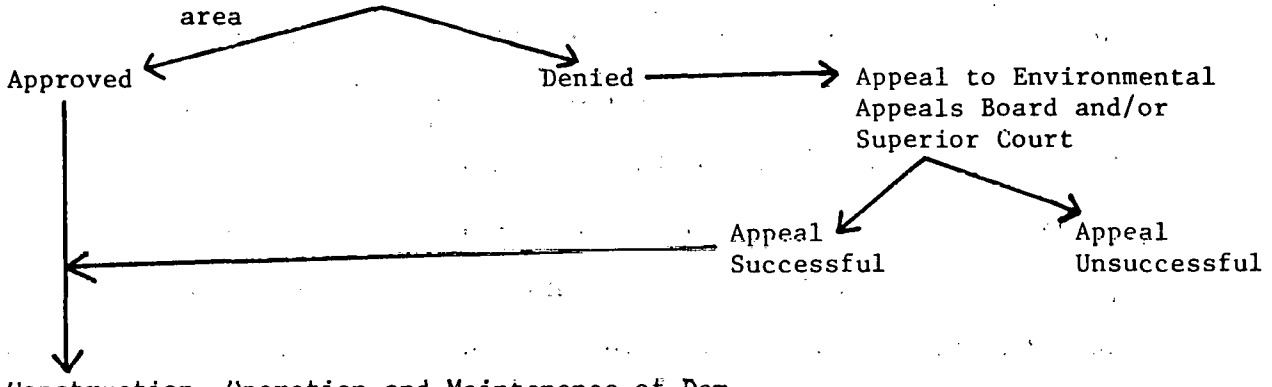
No → Municipal electric company is exempt from Public Service Commission regulation

↓




V. DETERMINE: effect on other interests and apply for necessary permits from appropriate agencies.

- Permit from Secretary of Department of Natural Resources and Environmental Control pursuant to Wetlands Act and statutory regulations of Division of Environmental Control and Division of Fish and Wildlife
- Permit from Delaware River Basin Compact Commission if project within Delaware River Basin
- Permit from Office of Management, Budget and Planning if project within Coastal Zone
- Permission from Governor to develop in a protected historic area




VI. Construction, Operation and Maintenance of Dam

- Comply with conditions of permits
- Public utilities must comply with regulations of Public Service Commission
- Obtain liability insurance for dam breach
- Consider tax and loan programs for viability of project

# EXECUTIVE SUMMARY OF THE REGULATION OF SMALL SCALE DAMS IN MARYLAND

## I. WATER LAW

### A. A Developer Must Acquire The Right To Use The Flowing Water, Banks and Streambed At The Proposed Dam Site.

Maryland follows the riparian theory of water law. This theory holds that there exist private rights in the flowing water of a river or stream, vested in those landowners whose lands border the river or stream. A developer must acquire the abutting land on both sides of the river to acquire the necessary flowage rights for the proposed dam.

In addition to obtaining the requisite interests in the banks of a stream, a developer must be able to utilize the streambed. Ownership of a streambed turns upon a determination of whether a watercourse is navigable or non-navigable. Title to the bed of a navigable waterway is held by the State for use by the public. Title to a non-navigable waterway bed is held by the respective riparian owners. In those circumstances, title is deemed to follow the abutting property line and to extend to the middle of the stream. If a developer acquires the abutting property on both sides of a non-navigable waterway, he would be deemed owner of the respective part of the bed. The riparian owner on a navigable waterway acquires certain rights which include the right of access to the navigable waters, the right to build piers, wharfs, docks and other improvements to the line of navigation, the right to reclaim land, and the right to accretions to his lands. A developer with ownership of the property abutting both sides of a navigable waterway would still have to acquire the right to use the underlying bed at the proposed site. The state may grant a land patent to a developer seeking to use the bed of a navigable waterway,

The Maryland Court of Appeals has held that a waterway is navigable when it is used or is susceptible of being used in its ordinary condition as highways of commerce over which trade and travel are or may be conducted in the customary modes of travel and trade on water. This definition is similar to the "navigable in fact" definition adopted by the Federal government.

B. Reasonable Use

The property right that attaches to riparian land is a right to its "reasonable use." Reasonableness is a question of fact to be determined under the circumstances of each case measured by the importance of the use one the one hand and the gravity of the effects to other riparians on the other. Every riparian owner is bound to use this common right so as not to interfere with an equally beneficial enjoyment of it by other riparians.

C. Public Trust Doctrine

Despite references in several cases about holding the land for the public benefit, Maryland does not have a Public Trust Doctrine.

## II. RELEVANT STATUTORY LAW PERTAINING TO REGULATION OF A HYDROELECTRIC FACILITY

### A. A Developer Must Obtain a Certificate of Public Convenience and Necessity for the Construction of the Facility Before Construction May Begin.

No construction of a generating station or any overhead transmission line designed to carry a voltage in excess of 69,000 volts may be commenced in Maryland by an electric utility without having first obtained from the Public Service Commission a Certificate of Public Convenience and Necessity. The Commission holds a public hearing to consider each application for a Certificate of Public Convenience and Necessity in the area in which any portion of the construction of an appropriate size plant is proposed to be located. Notice of the public hearing is given to all permitting agencies. Each may participate and modify the decision of the P.S.C. Under Maryland law, an electric utility does not include a person or entity generating power

for his own consumption. Electric utilities must submit to rate, account and service regulation by the P.S.C.

B. Use and Appropriation Permit

It is the policy of the State of Maryland, in order to conserve, protect and use water resources in accordance with the best interests of the people of Maryland, to control, so far as possible, the appropriation and use of surface and underground water. To implement this policy, every person is required to obtain a permit from the Department of Natural Resources to appropriate or use, or begin to construct any plant, building or structure which may appropriate or use any waters of the state. This permit is obtained upon written application to the Department.

There exist two exemptions to this permit requirement. First no permit is needed to use water for domestic and farming purposes; to use water for an approved water supply of any municipality if the use was in effect on July 1, 1969. Secondly, the permit requirements do not apply if an application has been made for a Certificate of Public Convenience and Necessity to the Public Service Commission in connection with power plant construction involving use or diversion of waters of the state.

C. Repair and Reconstruction Permit

It is state policy to promote public safety and welfare, and control and supervise so far as is feasible, construction, reconstruction and repair of dams, reservoirs and other waterworks in any waters of the state. A developer would be required to obtain a permit from the Department of Natural Resources to construct, reconstruct, or repair any dam, reservoir, or waterway obstruction or make, construct, or permit to be made or constructed, any change or addition to any dam, reservoir or waterway. Only a developer using the power himself must obtain this permit.

Electric utilities require no permit.

D. County and Local Zoning

A developer who is not an electric utility must obtain county and local zoning or land use permits. Electric utilities are exempt from this requirement.

III. MARYLAND ENVIRONMENTAL REGULATION

An electric utility which has obtained a Certificate of Public Convenience and Necessity will be presumed to have complied with all state environmental requirements. These include water quality criteria, dam safety requirements, wetlands protection, Wild and Scenic Rivers designation and flood plain management protection. A non-utility developer must confront and surmount each of these obstacles individually.

IV. FINANCIAL CONSIDERATIONS

A. Taxation

The main taxes levied by the state are property tax, income tax, and sales and use tax. Instead of a tax on income, utilities are subject to a gross receipt tax at a rate of two percent of the gross operating earnings. Retail sales of electricity are taxed at five percent with a deduction allowed for the fuel rate adjustment. Real property which consists of land and buildings is assessed at fifty percent of fair market value. Machinery and equipment are considered personal property and are assessed at one hundred percent depreciated value.

There might also be local taxes for which a hydroelectric facility might be liable.

B. Loan Programs

The Department of Economic and Community Development was established by the Maryland legislature to encourage the location in the state of new industrial enterprises and to expand existing ones. This Department,

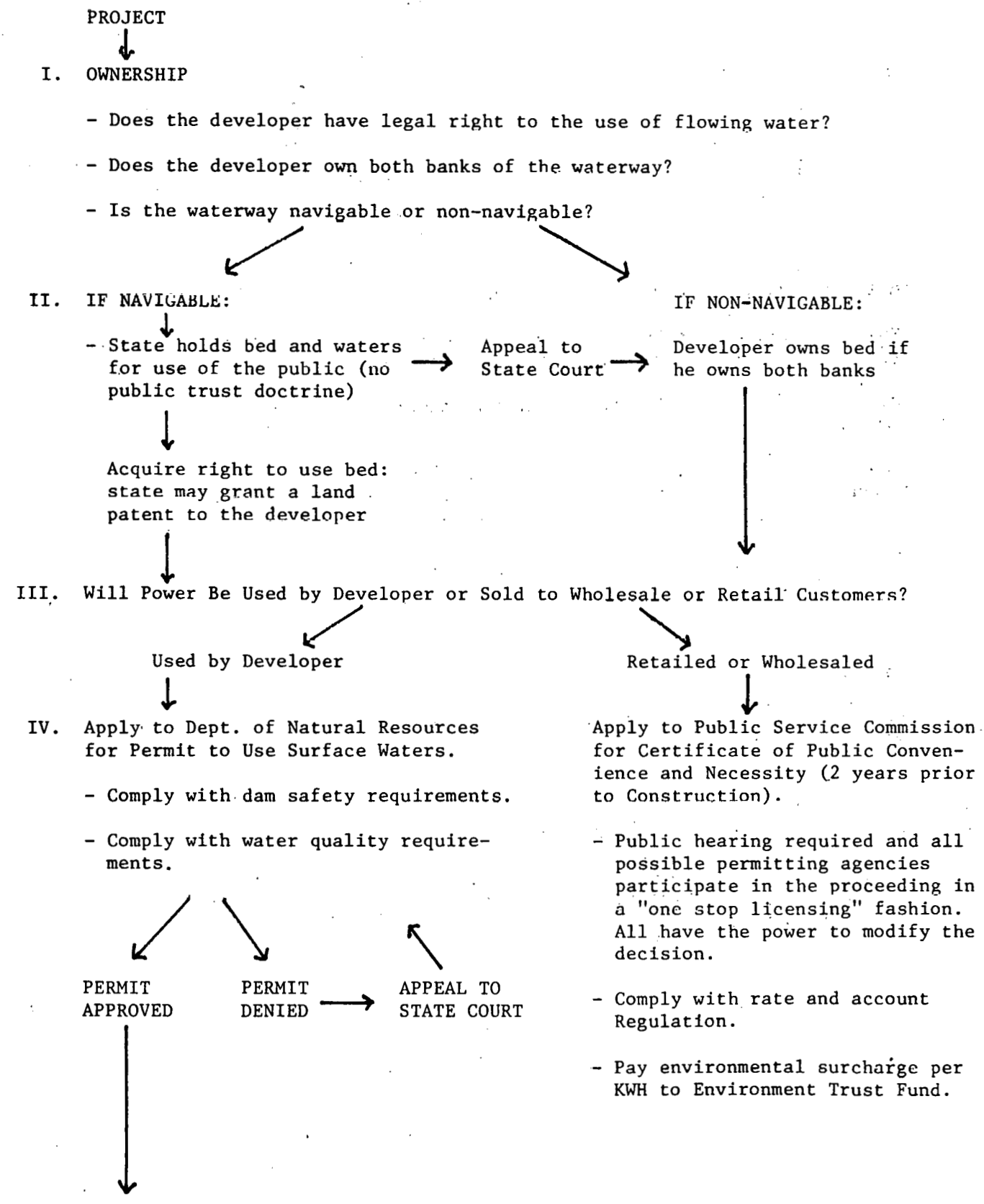
consisting of seventeen agencies, commissions and divisions, has an express purpose of providing money and credit to approved and deserving applicants for the promotion, development or conduct of all kinds of business activity in the state, when and to the extent that such money and credit is not otherwise readily available.

C. River Basin Compacts

Maryland has a membership in two river basin compacts: the Potomac River Basin Compact and the Susquehanna River Basin Compact. While these commissions are primarily concerned with flood control and pollution reduction and control, they might be concerned with a new hydroelectric facility in their river basin. A developer should check with the commission if his proposed project is in one of the river basins.

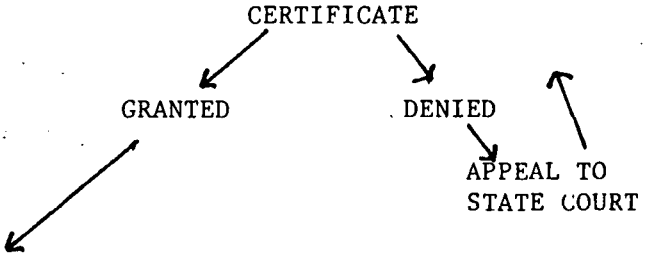
FLOW DIAGRAM OF REGULATION OF

SMALL DAMS IN MARYLAND



- Comply with dam safety regulations.

- Comply with flood plain regulations.




V. Comply with Maryland Environmental Law.

- State and private wetlands protection by the Dept. of Natural Resources (utilities exempt if granted certificate of convenience and necessity)

- Comply with fish ladder requirements (exemption for pre-1955 monetary compensation agreements).

- Check Wild and Scenic River designation (Anacostia, Deer Creek, Monocacy, Pauxtent, Pocombe, Potomac, Severn and Wisomico Rivers). Permit required by the Department of Natural Resources for dam thereon.

- Comply with regulations of the Division of Archaeology (exemption for utilities).

VI. Obtain County and Local Zoning Permits.

- Utilities which have obtained certificates of public convenience and necessity are exempt from this requirement.

VII. Obtain Permit from River Basin Compact.

- If the facility is located on the Potomac or Susquehanna Rivers or within their river basins, a permit may be required for a hydroelectric facility to be built.

# EXECUTIVE SUMMARY OF THE REGULATION OF SMALL DAMS IN NEW JERSEY

## I. WATER LAW

### A. Requisite Property Interests

As a preliminary matter the developer must acquire the right to use the flowing water, banks and streambed at his proposed site.

New Jersey follows the riparian theory of water law. Under this theory, private rights in the flowing water of a river or stream are vested in the landowners whose lands border the river or stream. Ripari-anism constitutes a cost to the developer inasmuch as the right to the use of the flowing water at his proposed site is dependant upon the acquisition of property interests in both sides of the waterway.

In addition to obtaining the requisite interests in the banks of a stream, the developer must be able to utilize the streambed. Ownership of a streambed turns upon a determination of whether a watercourse is tidal or non-tidal. Title to the underlying land of a waterway which is subject to the ebb and flow of the tide is held by the state. Title to the bed of all other streams is held by the respective riparian owners. In this latter circumstance, the title of an individual proprietor follows the lines of his abutting estate and extends to the middle of the stream.

If the developer proposes to locate his facility on a non-tidal stream, he must acquire the requisite property interests, i.e., banks and streambed from the appropriate riparian proprietors. If he proposes to locate it on a tidal stream, he must obtain the necessary interests in the banks of the stream from the abutting landowners and must purchase or lease the bed from the state.

2. The Public Right of Navigation

If a given river or stream is used, or susceptible to being used, as a highway of commerce, then it is deemed to be "navigable" and subject to a "superior public easement of passage." A determination that a waterway is navigable operates as a constraint on its utilization; a particular use must not seriously interfere with the "public easement." A developer who locates his facility on a navigable river or stream is subjected to substantial additional regulation.

3. The Nature of the Property Right in Flowing Water

The private property rights which obtain in rivers and streams are confined to the use of the flowing water. In New Jersey, the use of a watercourse is limited by the "natural flow doctrine." The doctrine essentially provides that each riparian proprietor is entitled to have the stream flow by his land free from any unreasonable diminishment of quantity or unreasonable diminution in quality. Each riparian may use the water for either natural or artificial purposes so long as he does so on his own land. In the event that a riparian owner materially affects either the quantity or quality of a stream, another proprietor may bring an action against him regardless of whether or not any actual injury or damage has resulted.

Another theory of water law which has influenced the New Jersey courts in recent years is the "reasonable use doctrine." Under this theory, a riparian proprietor may utilize the water of a flowing stream on either riparian or non-riparian land, so long as his use does not "unreasonably" affect the rights of other riparians along the stream. Reasonableness is a question of fact to be determined under the circumstances of each case measured by the importance of the use on the

one hand and the gravity of the effects to other riparians on the other. Unlike the natural flow doctrine, in order for an action to be maintained under "reasonable use" an aggrieved riparian must demonstrate actual damage.

New Jersey has expressly adopted the rule of reasonable use in stream pollution cases. The influence of the rule is also discernable in other areas.

4. The Right to Flow Upper Land

Unlike some states, New Jersey has no "Mill Dam Act" which would grant to the developer a statutory right to flow a small amount of upper riparian land upon payment of compensation. However, it appears that the state common law has in many respects accomplished the same result. A court will not enjoin the developer who flows a small amount of upper land; rather he will be required to pay damages.

In the event that the developer flows more than a "small portion" of upper land, it may be determined that he has "taken" the property. If he is authorized to exercise the power of eminent domain, e.g., if he qualifies as a "public utility," the flowage may continue so long as just compensation is paid. Otherwise, a court may order that the flowage of upper land be discontinued.

5. Liability for Dam Breach

The standard of liability resulting from dam breach in New Jersey is negligence. The New Jersey courts have apparently determined that it would be inequitable to hold a dam owner as an absolute insurer of the dam. Consequently, the measure of the duty owed in the construction and maintenance of a dam is one of reasonable care.

## II. RELEVANT STATUTORY LAW

### A. Dam Construction Permit

If the developer plans to construct a dam which will raise the waters of a river or stream more than five feet above the usual low water mark, or if the drainage area above the dam is more than one-half (1/2) square mile in extent, he must obtain a dam construction permit from the Department of Environmental Protection (D.E.P.).

The developer must submit his construction plans to the D.E.P. before a permit will be issued. These must include surveys, drawings, and specifications. After a permit is issued, the D.E.P. periodically inspects dams for the purpose of determining their safety and may order such alterations, additions and repairs as it deems necessary.

If the developer seeks to repair an existing dam for purposes of his L.H.H. facility, he must also obtain a permit from the D.E.P. An exemption is provided for those circumstances in which the water surface created by the dam is less than one hundred (100) acres in extent and the proposed repair of the dam will not raise the height of the water eight (8) feet or more. The exemption does not apply if a written complaint raising a question of safety is submitted to D.E.P.

### B. Stream Encroachment Permit

Stream encroachment permits are generally required for any structure or alteration within the natural high water mark of any stream. It appears, however, that a stream encroachment permit would not be required for L.H.H. in all circumstances.

The permit would be required in those circumstances where development would, for some reason, require channel work at a point below the dam. In addition, this permit may be required in those circumstances where a

dam construction permit is not, i.e., the dam will not raise the waters of the stream more than five (5) feet above the usual mean low-water mark or the drainage area above the dam is less than one-half (1/2) square mile in extent.

C. Riparian Permit

In the event that the developer plans to locate his site within a tidal stream, in addition to purchasing or leasing the underlying land from the state, he must also obtain a permit from the Division of Marine Services within the D.E.P.

The application for a riparian permit must be signed by the developer and submitted in duplicate. Plans must be drawn in accordance with applicable regulations of the United States Army Corps of Engineers. The developer also has the burden of demonstrating that his project will serve the "public interest," and will not cause "deleterious" environmental effects.

D. Coastal Wetlands Permit

In the event that the developer plans to construct his site within a coastal wetland, he must obtain a wetlands permit from the D.E.P. An application for the permit must include a detailed description of the proposed work and a map showing the area of the wetland directly affected.

The Commissioner of the D.E.P., in his review of a wetlands permit application, must consider the effect of an L.H.H. facility on the public health and welfare, marine fisheries and wildlife. He must also consider the protection of life and property from flood, hurricane and other natural disasters.

E. Hackensack Meadowlands Permit

The Hackensack Meadowlands consist of state-owned low-lands in the

northeast section of the state. The District is under the direction of a Commission which is vested with broad powers regarding the development of the area.

In the event that the developer plans to locate his L.H.H. facility within the District, he must obtain a permit from the Commission. A permit will issue only upon approval of the developer's plans and specifications. No permit will issue unless the developer first obtains a certificate from the chief engineer of the Commission which indicates that the proposed facility meets the Commission's engineering standards.

F. Pinelands Environmental Council

The Pinelands Environmental Council (hereinafter Council) is an agency within the D.E.P. Its function is to protect the unique scenic and recreational values of the "Pinelands" region, which is located in the southern part of the state.

If it appears that the developer's project may destroy or substantially impair the significant historic or recreational resources of the Pinelands region, or bring about a major change in its appearance, then the project is subject to review by the Council. The developer must submit a description of his facility which is sufficient to enable the Council to determine whether the project is in "substantial conformity" with its comprehensive plan and to determine the effect of the project upon the scenic, historic, scientific and natural resources of the Pinelands region.

G. Review and Comment Power of the New Jersey Department of Energy

The jurisdiction of the State Department of Energy (D.O.E.) with respect to development is co-extensive with the jurisdiction of the D.E.P. The D.O.E. is to receive a copy of all pertinent papers,

documents and materials which have been submitted to the D.E.P. for the purpose of obtaining a permit. The D.O.E. then reviews this material and submits a report to the D.E.P. If the D.E.P. does not receive a report within ninety (90) days, the D.E.P. may proceed with its proposed action on the permit application. In the event that the D.E.P. does receive a report from the D.O.E., and the views of the D.O.E. conflict with those of the D.E.P. with respect to a given application, an Energy Facility Review Board is to be established (consisting of an officer of the D.E.P., an officer of the D.O.E. and a designee of the governor). Any decision by the Board regarding an application is binding.

1) Board of Public Utilities

The Board of Public Utilities (B.P.U.) is within the D.O.E. The jurisdiction of the B.P.U. extends to all public utilities within the state. A private developer is clearly a public utility under New Jersey law. A municipal developer is a public utility only to the extent that it sells electricity outside its corporate limits.

A developer, as a public utility, is subject to extensive regulation by the B.P.U. For example, before any function or privilege is granted to him by a political subdivision, the developer must obtain a certificate of public convenience and necessity from the B.P.U. In addition, the B.P.U. may also regulate the rates that a developer charges for his service.

## III. INDIRECT REGULATION

The developer must consider a number of "indirect" considerations which could quite possibly affect his project. The following present some of the most significant of those considerations:

A. If a developer's site is located on a navigable stream, he may be required to construct canals, locks, gates or shoots. He may also be required to construct fishways, irrespective of whether his facility is on a navigable or non-navigable stream.

B. If the developer's proposed site affects a river which is included within the state's Wild and Scenic River System, he may be completely barred from pursuing his endeavor.

C. Under the state's Environmental Rights Act, the developer is subject to suit for any "non-frivolous" claim that he is adversely affecting the environment. Litigation under this Act could conceivably constitute a significant cost in certain circumstances.

D. If it is determined that "active" state, county, or municipal action is enmeshed in the developer's project, he must not encroach upon, damage or destroy any area, site or structure which is within the state's Register of Historic Places without obtaining consent from the D.E.P.

E. A developer's project that falls within the Delaware River Basin is subject to extensive regulation by the Delaware River Basin Commission.

## IV. FINANCIAL CONSIDERATIONS

### A. Taxation

An L.H.H. dam, as a public utility, is required to pay franchise, excise and gross receipts taxes. This is in lieu of a personal property tax on the equipment and machinery. Any portion of the developer's product which is furnished to another utility is exempt from the tax.

The tax is required of all utilities which use or occupy public streets, highways and the like by virtue of a state or municipal franchise.

In addition to the franchise, excise and gross receipts tax, the

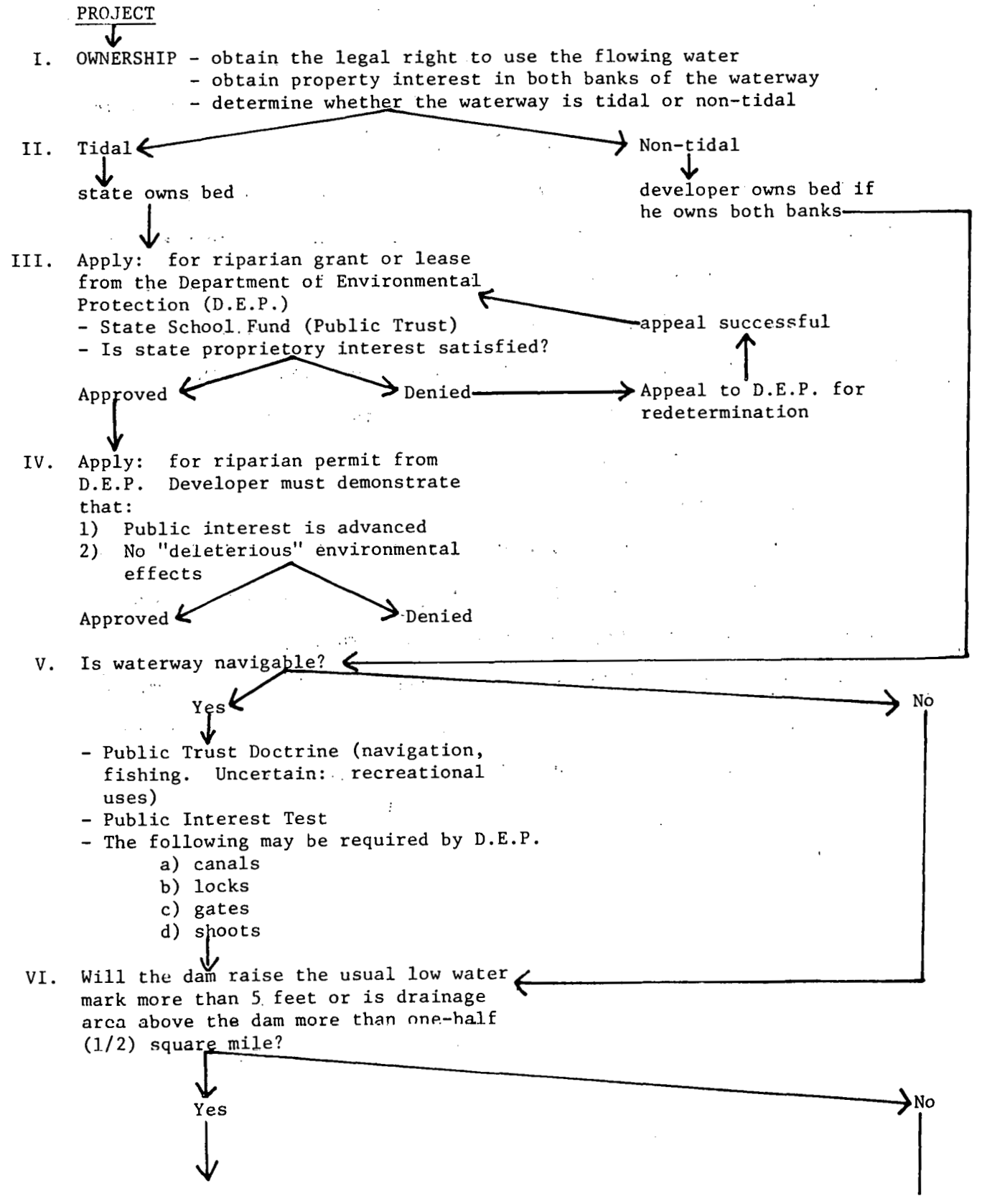
developer is subject to local tax assessments on real property. Real property assessments are computed at that percent of "true value" which is established by the county board of taxation. The true value is the full and fair value of each parcel as, in the assessor's judgment, would sell at a fair and bona fide sale by contract.

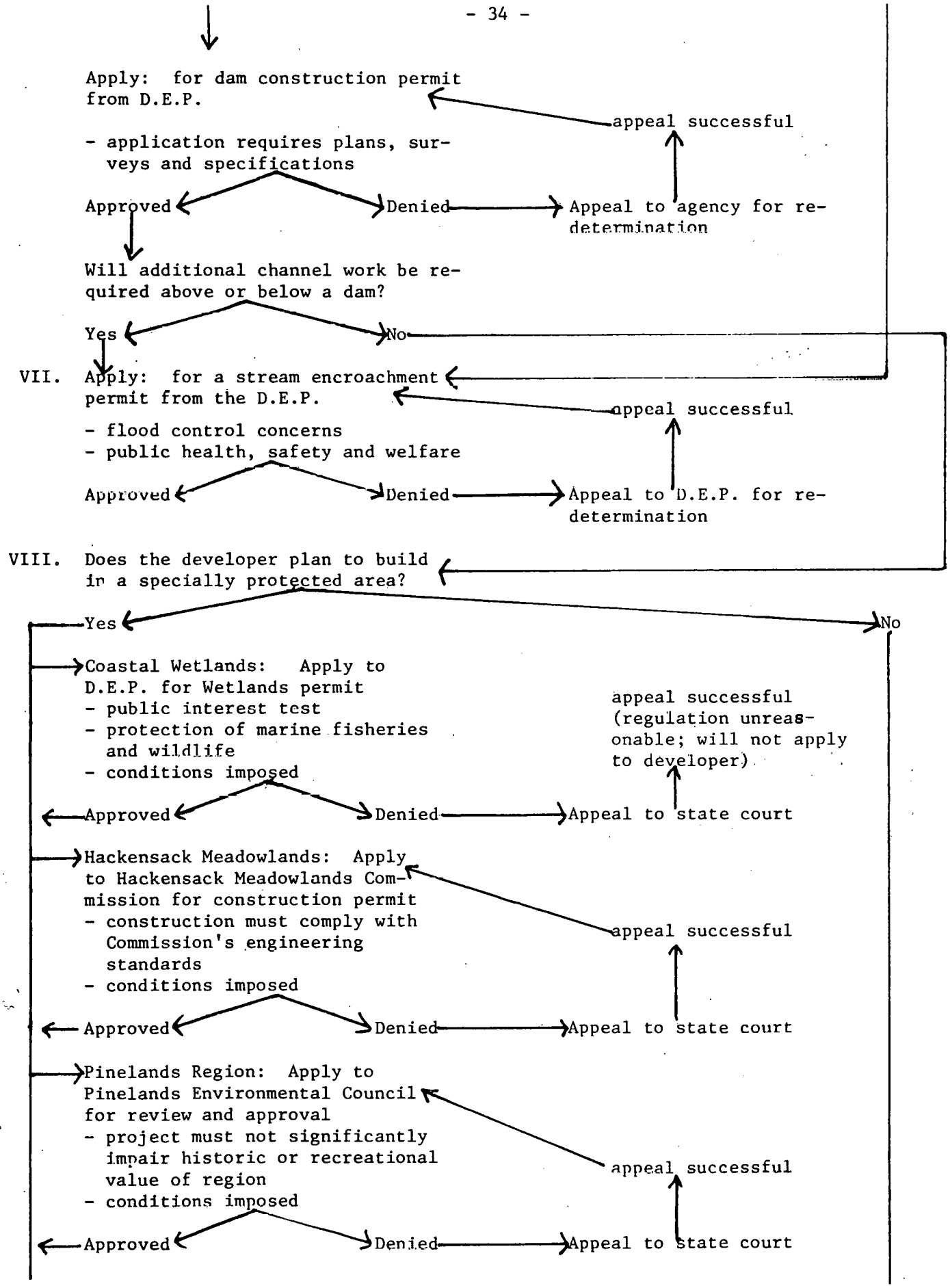
Municipalities are limited as to what items may be taxed as real property. For example, the New Jersey court has determined that a "dam" is personalty, not real property, and therefore it is not properly includable within a real estate assessment. Under state statutory provisions, real property, for local tax purposes, specifically excludes dams and reservoirs. However, water rights which are incident to ownership of land may be assessed.

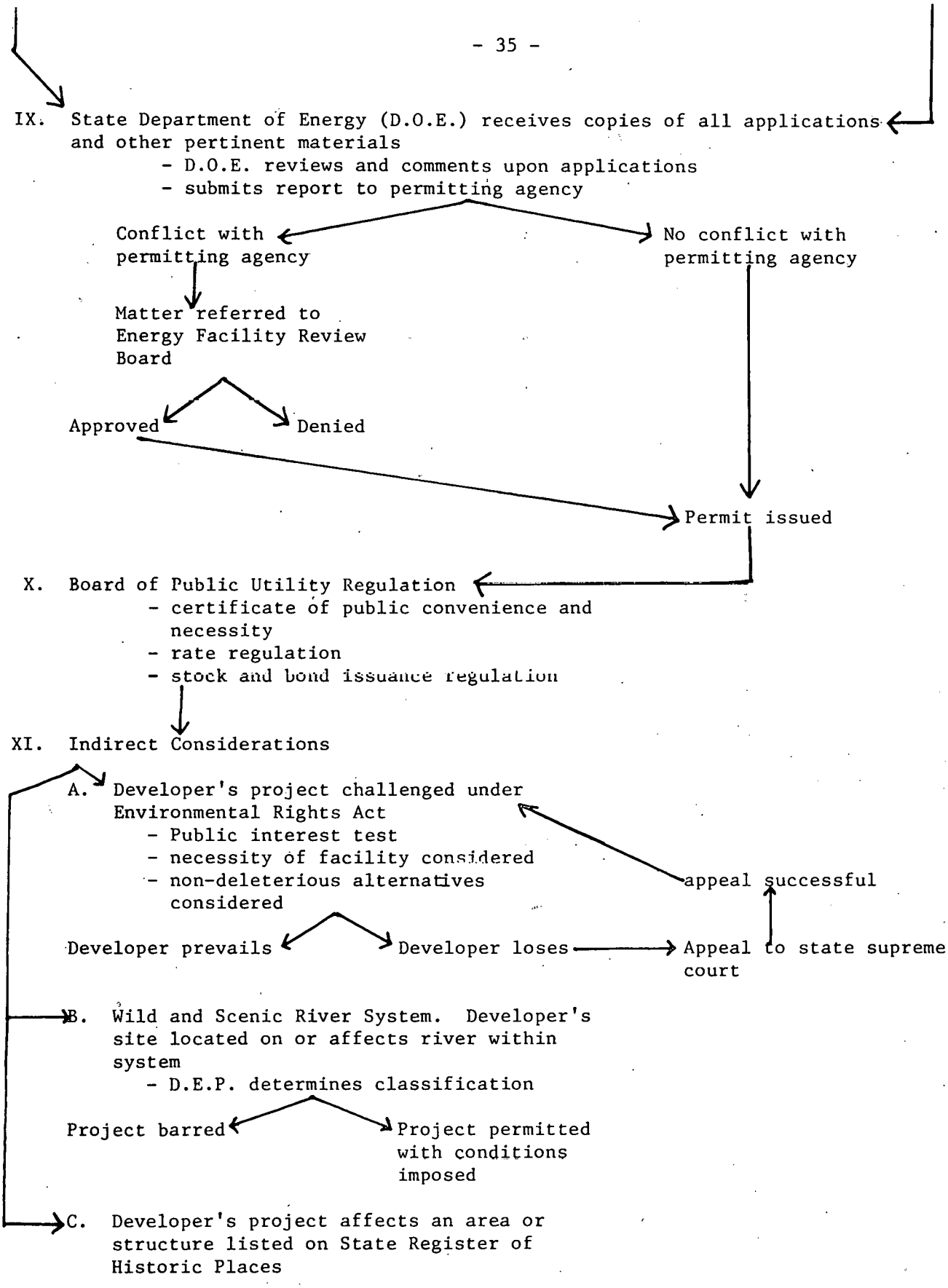
B. Financial Assistance

The New Jersey Economic Development Authority (E.D.A.) is authorized to extend credit or make loans to any person for the "planning, designing, acquiring, constructing, reconstructing, improving, equipping or furnishing of a project." The E.D.A. must determine that any assistance provided for a project will tend to maintain or provide employment for the inhabitants of the state and shall serve a public purpose.

FLOW DIAGRAM: REGULATION OF SMALL DAMS IN NEW JERSEY




Apply: for dam construction permit from D.E.P.
appeal successful
- application requires plans, surveys and specifications
Approved
Denied
Appeal to agency for redetermination
Will additional channel work be required above or below a dam?
Yes
No
VII. Apply: for a stream encroachment permit from the D.E.P.
appeal successful
- flood control concerns
- public health, safety and welfare
Approved
Denied
Appeal to D.E.P. for redetermination
VIII. Does the developer plan to build in a specially protected area?
Yes
No
Coastal Wetlands: Apply to D.E.P. for Wetlands permit
- public interest test
- protection of marine fisheries and wildlife
- conditions imposed
appeal successful (regulation unreasonable; will not apply to developer)
Approved
Denied
Appeal to state court
Hackensack Meadowlands: Apply to Hackensack Meadowlands Commission for construction permit
- construction must comply with Commission's engineering standards
- conditions imposed
appeal successful
Approved
Denied
Appeal to state court
Pinelands Region: Apply to Pinelands Environmental Council for review and approval
- project must not significantly impair historic or recreational value of region
- conditions imposed
appeal successful
Approved
Denied
Appeal to state court


IX. State Department of Energy (D.O.E.) receives copies of all applications and other pertinent materials
- D.O.E. reviews and comments upon applications
- submits report to permitting agency
Conflict with permitting agency
No conflict with permitting agency
Matter referred to Energy Facility Review Board
Approved
Denied
Permit issued
X. Board of Public Utility Regulation
- certificate of public convenience and necessity
- rate regulation
- stock and bond issuance regulation
XI. Indirect Considerations
A. Developer's project challenged under Environmental Rights Act
- Public interest test
- necessity of facility considered
- non-deleterious alternatives considered
appeal successful
Developer prevails
Developer loses
Appeal to state supreme court
B. Wild and Scenic River System. Developer's site located on or affects river within system
- D.E.P. determines classification
Project barred
Project permitted with conditions imposed
C. Developer's project affects an area or structure listed on State Register of Historic Places

- State, county, or municipal "action" is present

Project is barred ← → Project permitted with conditions imposed

XII. Construction, operation and maintenance
- construct fishways if required
- comply with all permit conditions
- obtain liability insurance for dam breach (New Jersey applies negligence theory)
- comply with all B.P.U. regulations

# EXECUTIVE SUMMARY
# THE REGULATION OF SMALL SCALE DAMS IN NEW YORK

## I. WATER LAW

### A. The Developer Must Acquire The Right To Use The Flowing Water, Banks And Streambed At His Proposed Site

#### 1. Requisite Property Interests

New York follows the riparian theory of water law. Under the riparian rights doctrine, the owner of land adjacent to a natural watercourse is vested with certain private rights which entitle him to use the flowing water of the watercourse as it passes his land. It therefore becomes essential that a prospective small-scale hydro developer acquire a property interest in the banks of a natural watercourse so he may ultimately utilize the flowing water to spin his turbine and generate electricity.

In addition to obtaining an interest in banks adjacent to a natural watercourse, the developer must have access to the underlying streambed. Land under non-tidal waters belongs to the riparian owner and the owner of the banks on either side of a natural watercourse owns the bed to the center of or thread of the stream. The riparian who owns both banks of a non-tidal watercourse also owns the entire bed.

However, where the watercourse selected for development is designated as a navigable water, private ownership is subject to the right of the public to use the waters for passage and transportation. Title to the bed of a navigable stream and lands under tidal waters is in the State, as trustee for the public at large. New York's derinition of navigability is in substantial comport with that which has been adopted by the Federal government for purposes of the interstate commerce clause of the Constitution.

Thus, if the prospective developer intends to construct his dam and electrical plant on a non-navigable stream, he must acquire the requisite property interests from the appropriate riparian owners. If his plant is to be located on a navigable stream permission to utilize the streambed and the flowing water must be obtained from the state.

2. Reasonable Use

While the riparian owner may claim title to the banks and bed of a stream, he does not own the water which courses through the stream. He is only entitled to a reasonable use of the flowing water as it passes his land.

The question of reasonable use is generally a question of fact. Use of a watercourse to run machinery has been determined to be a reasonable use so long as it is not out of proportion with the size of the stream or is inconsistent with the like reasonable use by owners above and below the riparian. According to the old and familiar rule, every man must so use his own property as not to injure that of his neighbor, and the fact that he has invested money and carries on a lawful and useful business upon his own land, does not change the rule. He is not permitted to permanently prevent a material portion of the water of a natural stream from flowing over the land of a lower riparian owner, or to so pollute the rest of the stream as to render it unfit for ordinary use. In short, a prospective small scale hydro developer must be prepared to articulate why his intended use should be viewed as reasonable in relation to other riparian owners.

3. Liability for Dam Breach

Another aspect of water law of which the prospective developer must be mindful is the measure of liability he would be subjected to in the event of the failure of his dam. In New York, the courts have

rejected the strict liability doctrine of Rylands v. Fletcher and have generally recognized that the owner of the dam is not liable for damages caused by the escape of water if his dam fails, except on a showing of his negligence.

4. Eminent Domain

In New York, land may be acquired for any power project built in the public interest through the exercise of eminent domain. Real property may be acquired when the state owns a water site, as well as in instances when a particular site cannot be developed separately, in which case the owner has the option of receiving a proportional share of the revenue from a site. Corporations may acquire property through eminent domain, as well as agencies and power authorities such as the Power Authority of the State of New York (PASNY), the New York State Energy Research and Development Authority (NYSERDA), and the Department of Environmental Conservation. Any entity acquiring property through eminent domain must comply with eminent domain procedure law by providing just compensation for the condemned property and holding public hearings.

5. Public Trust

The public trust doctrine provides that the state, as sovereign, holds its lands and navigable waters in trust for the benefit of the people of the state. This includes the land beneath navigable waters. Invasion of the trust is not allowed without an express grant from the sovereign. Waters held in trust include natural and artificially impounded waters whether owned privately or publicly. The state has delegated much of the performance of its duties as trustee to state agencies which require permits or licenses for "invading" the corpus of the trust. Thus, any developer wishing to obtain the rights to the bed of navigable water and use of the water itself must receive express consent from the state in the form of a permit to avoid exposure to liability.

II. DIRECT REGULATION

1. Department of Environmental Conservation: The Developer Must Obtain a Dam Construction Permit From The Department of Environmental Conservation (DEC).

In the exercise of its jurisdiction to regulate the development of water power, the DEC reviews applications and issues permits for: (1) the alteration and construction of dams and other impoundment structures; (2) the disturbance of the bed on banks of any stream; (3) the excavation from or filling of navigable waters. Applications for any of the above described activities will be granted and permits issued if the DEC finds that the proposed activity is within the public interest. DEC determinations are made pursuant to new streamlined procedures for public notice, public comments, and hearings on permits within its jurisdiction which require the DEC to take action within specified time limits on the applications for such permits. During the initial review of a dam construction permit application, DEC would determine whether the developer needs to apply for any additional permits before his project can be approved. The prescribed time frames for permit review do not begin to run until all applications for the various permits required have been received and deemed complete. Activities relevant to small scale hydro which are also subject to DEC jurisdiction and which may require additional permits include those which affect wetland areas and those which will take place in the wild and scenic river system.

In determining the completeness of an application DEC must also take into account the State Environmental Quality Review Act (SEQR). SEQR requires all permit issuing agencies in the state to determine whether the activities for which they issue permits will have a significant effect on the environment. Those activities which have been deemed to present a significant threat to environmental values would require the preparation of an environmental impact statement (EIS).

If the DEC determines that the proposed activity presents no such environmental threat they would then issue a negative declaration. In any case, review of the permit for the proposed activity would not begin until either an EIS is prepared or a negative declaration has been issued.

With respect to small scale hydro development, it is not likely that a state EIS will be required, especially in cases where a federal agency has already prepared one. DEC's function would only be to ascertain that the federal EIS has been adequately prepared and to make public comments on the draft EIS to the federal agency about the proposed activity.

DEC has a continuing duty to inspect and investigate dams to ascertain their soundness and stability. Structures exempt from DEC regulation are those which impound waters where the drainage area of the reservoir does not exceed one square mile. However, in any case where the structure is more than ten feet in height above the bed of the stream or where the quantity of water which the dam impounds exceeds one million gallons, a permit would be required.

The Environmental Conservation Law also requires the licensing of hydroelectric projects in the following cases: (1) where the state has a proprietory right to the water used; (2) where the streambed and real property required for the use of the waterpower is vested in the state; and (3) projects which involve boundary waters of the state where the state has sole or concurrent jurisdiction over the diversion of or interference with the flow. As a practical matter, there are only four such state licenses in existence today.

2. Public Service Commission

The developer must obtain a certificate of approval from the Public Service Commission prior to construction of his plant. The PSC thereafter has the power to (1) enforce safe and adequate service and just and reasonable rates which the developer may charge for his electrical power; (2) approve the incorporation of the franchises serving the public; and (3) approve the transfer of these franchises or the stocks of the franchises.

Jurisdiction of the PSC extends to all persons and municipal corporations who own, operate or manage an electrical plant. Municipal corporations need not obtain certificates of approval from the PSC and are not governed by the regulation of the PSC to the extent these regulations are inconsistent with the General Municipalities Law.

There are three exemptions from PSC regulation: (1) plants constructed entirely on private property where the electricity generated is for the owner's sole use (however, any use of public property to construct distribution and transmission lines would trigger PSC jurisdiction); (2) projects authorized by the Power Authority of New York, hence under their jurisdiction; and (3) rural electric cooperatives. Cooperatives, however, must file annual financial statements with the PSC.

III. INDIRECT REGULATION

1. Department of Transportation

The Department of Transportation is empowered to prepare the plans, specifications, designs, and estimates to construct the canals and waterways of the state. The Department also must maintain and operate the state-owned hydroelectric power plants on the Mohawk River at Crescent

and Uscher Ferry. In addition, the Department of Transportation is directly involved in the adjustment of claims of owners of private dams when the state has used the dams to achieve a sufficient depth or supply of water for canal purposes.

2. County Water Authorities

There are three county water authorities which are responsible for supplying water for domestic, commercial and public purposes in their respective counties: the Erie County Water Authority, the Suffolk County Water Authority, and the Onondaga County Water Authority. Although the water authorities have no direct impact on SSH development, their existence should be noted since they may condemn any water supply system, dam or reservoir for public use.

3. County Small Watershed Protection Districts

A county may establish a County Small Watershed Agency which will improve or safeguard a watershed. The watershed agencies are subordinate to other state water agencies and may not damage or interfere with any facilities, projects or water supply of any person, firm, municipality, corporation, or public authority. However, the districts may agree to sell any excess water at wholesale to any firm, municipality or project such as SSH, provided the district has received the approval of the Water Power and Control Commission.

## IV. INCENTIVES TO DEVELOPMENT

The New York State Energy Research and Development Administration and the State Office of Energy are perhaps the biggest proponents of small-scale hydro in New York. NYSERDA is specifically empowered to encourage the development of alternative energy sources, including SSH.

It has revenue-raising powers through its ability to sell bonds, and may provide loans or grants to SSH projects. NYSERDA also acts as the lead agency in licensing and permitting SSH, and as such, may streamline the regulatory process. The State Office of Energy cooperates with NYSERDA in actively seeking the development of renewable sources of energy. Its role as an information resource may spurn on the growth of SSH.

The Power Authority of New York is capable of serving as an incentive to SSH development through purchasing power from developers and constructing SSH facilities. With its broad powers to raise revenues and wide jurisdiction over water facilities in the state, PASNY may assist the growth of SSH development. In New York, the Albany Light, Heat and Power Authority may also encourage SSH development in a similar fashion.

## V. FINANCIAL CONSIDERATIONS

### 1. Taxation

All electric companies are subject to New York State Income Tax. The tax is 3/4 of one percent of gross earnings from New York sources. An additional 3% of gross revenues is imposed on utilities regulated by the Public Service Commission. Utilities must file their tax returns and pay their tax each year on or before March 15.

Utilities subject to the jurisdiction of the Public Service Comission must share in the costs and expenses of that agency. Each utility contributes a pro-rata share based upon its gross operating revenues in excess of $25,000.

Dam sites, dams, reservoirs and flowage lands are assessed in the town in which they are situated and are subject to a real property tax. To the extent that a developer is considered to have a special franchise,

that is, the right and monopoly to distribute electricity, all tangible property associated with his plant is included in the valuation.

2. Loan Programs

NYSERDA is in the process of preparing a loan and grant program for SSH. The agency may be able to supply funds for engineering and legal fees to assist a project get started.

Flow Diagram of Regulation of

of Small Dams in New York

Project

I. OWNERSHIP

- Does the developer have legal right to use flowing water?
- Does developer own both banks of watercourse?
- Is watercourse navigable or non-navigable?

II. IF NAVIGABLE: State owns bed, holds right to use flowing water in trust for public

IF NON-NAVIGABLE and developer owns both banks, he has right to use flowing water

III. Seek approval from legislature to use trust resource

Appeal issue of navigability to state court

Appeal Successful

IV. File application with Department of Environmental Conservation for permits to:

(1) disturb bed and banks
(2) excavate/fill navigable waters
(3) construct dam or reservoir
(4) construct in wetland

Agency screens application and determines

Minor Project

Permit Review

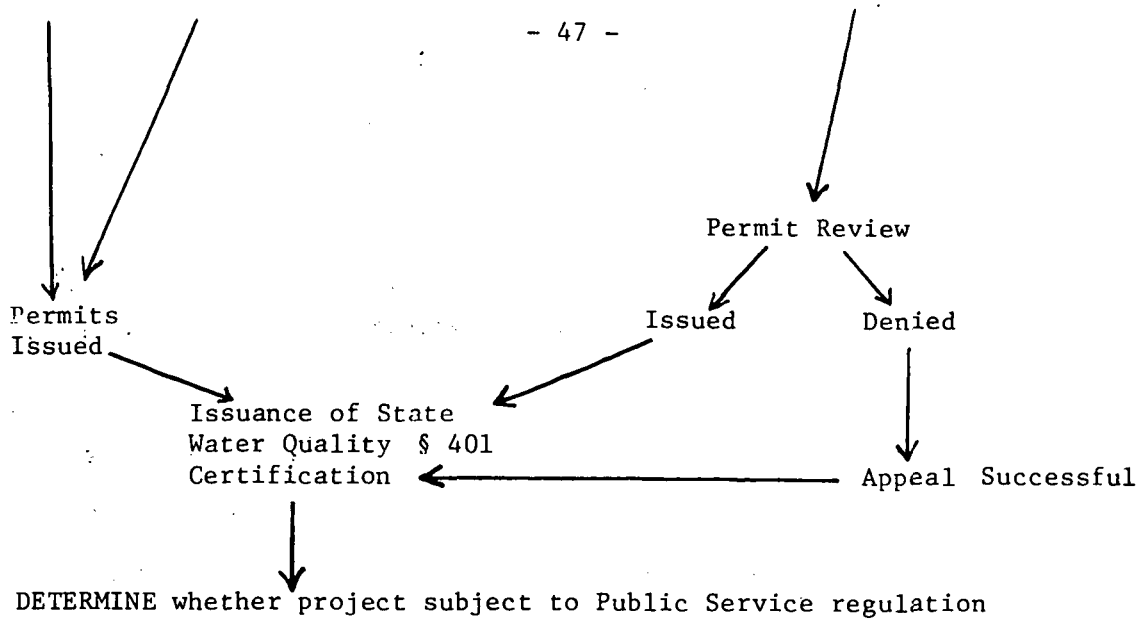
Issued

Denied → Appeal Successful

Major Project

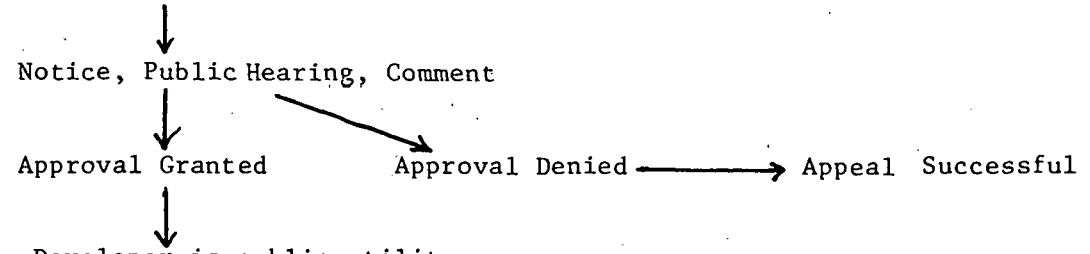
Notice, Hearing, Public Comment

State Environmental Quality Review: preparation of environmental impact statement or negative declaration




V. DETERMINE whether project subject to Public Service regulation

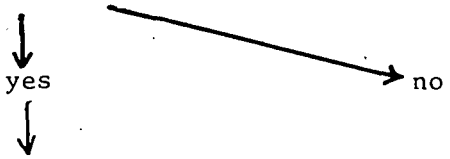
- Municipal corporation
- Under jurisdiction of P.A.S.N.Y.
- Rural Electric Cooperative
- If none of the above is applicable, developer must apply to Public Service Commission for Certificate of Approval to construct electric plant




Developer is public utility

- has right of eminent domain
- all transactions, sales, distribution of electricity subject to approval by Public Service Commission

VI. Is project located in the Adirondack State Park or other heavily regulated land use area?




Developer must seek approval from agency or local land use board to construct, and operate dam and electric plant

VII. Operate.

# EXECUTIVE SUMMARY OF THE REGULATION OF SMALL DAMS IN PENNSYLVANIA

## I. WATER LAW

### A. Property Interests

The hydroelectric developer in Pennsylvania must first acquire the land parcel upon which to place his dam. This involves acquisition, in some manner, of the bed, banks, and any upstream land necessary for an impoundment. In Pennsylvania, like most eastern states, ownership of the streambed is contingent upon a determination of the navigability or the non-navigability of the watercourse.

A riparian estate adjacent to a non-navigable stream includes ownership of the bed to the center point. Ownership of the estate on both banks will include ownership of the whole of the bed. Thus, the bed of a non-navigable stream may be acquired by purchase or adverse use for a prescriptive period of twenty-one (21) years.

The beds of watercourses found to be navigable are held in trust by the state for the public. A developer cannot acquire absolute ownership of such a bed, but may acquire the use of it by a legislative grant.

### B. Riparian Law

Acquisition of the riparian estate gives the developer the right to make use of the flowing water. This right is not absolute; rather, it is a right circumscribed by common law doctrines. Pennsylvania utilizes a combination of the riparian doctrines of natural flow and reasonable use. Under this system, all riparians have a right to a natural flow subject to an exception for extraordinary uses. Reasonable use is the rule applied to extraordinary uses. Such uses include the generation of hydroelectric power. The reasonableness of an extraordinary use is dependant upon all the relevant factual circumstances of each case. Factors which

courts have considered in determining whether the use of a certain amount of water was reasonable include the character of the stream, the purpose to which the water is applied, the stream size and the requirements of lower riparians.

C. Dam Breach Liability

Dam owners and operators are held liable for damages proximately caused by breach of dams due to negligent operation or maintenance.

II. STATUTORY LAW

A. Direct Regulation

1. Public Utility Commission

The Commission has jurisdiction over any person or corporation owning or operating facilities for generating electricity. Excluded from the Commission's jurisdiction are electric cooperative associations, persons who produce for their own consumption and any municipal corporation operating within its corporate boundaries.

All entities within Commission jurisdiction are public utilities and must apply for and receive a certificate of public convenience and necessity from the Commission. Only a utility operating under such a certificate may exercise the power of eminent domain. The Commission also subjects public utilities to its continuing supervision. In this regard, the Commission has broad authority to investigate the financial and managerial conditions of the utility. The Commission is further empowered to insure that adequate and safe facilities are available and that utilities receive a just and reasonable rate in return for its service.

2. Department of Environmental Resources

The Department of Environmental Resources administers a number of statutes which have a direct effect on dams. They include:

i. The Limited Power Act

The Limited Power Act requires any person or corporation

who uses a dam to change the course or cross-section, for the development of water power, of any water-body subject to Federal Energy Regulatory Commission (F.E.R.C.) jurisdiction, to obtain a Limited Power Permit. This permit is conditioned upon receipt of a F.E.R.C. license.

ii. Dam Safety Act

The Dam Safety Act requires a permit for any dam not subject to the Limited Power Act. Under either the Dam Safety Act or the Limited Power Act, the Department of Environmental Resources may condition a permit on the construction of fishladders at any dam site.

B. Indirect Regulation

1. Zoning

Local governments may regulate subdivision and local development and enact zoning ordinances. Under the zoning ordinance power the municipality may regulate the uses of land and watercourses and the size, location and use of any structure. As each municipality may adopt its own zoning laws, the developer must consider this indirect effect as site specific. However, developers who are subject to the Public Utilities Commission (P.U.C.) regulation of the need for a certificate of public convenience will not be subject to local zoning.

2. Historical Sites

The Pennsylvania Historical Commission supervises the designation and protection of landmark sites in the state. Construction in any area classified as historic requires a certificate of appropriateness from the governing body of the municipality involved.

3. Wild and Scenic Rivers

The Wild and Scenic Rivers Act administered by the Department of Environmental Resources will prohibit development on any such classified waterbodies.

4. Clean Streams Act

To the extent that an operating dam can be classified as a polluter, the developer should be aware of the Water Quality Criteria published by the Environmental Quality Board. Any discharge not in accordance with this criteria is unlawful unless the Department of Environmental Resources has issued a permit. At present, there is no indication that this Act applies to activities connected with hydroelectric generation.

C. River Basin Commissions

Pennsylvania is a member of two river basins compacts of significant interest, the Delaware River Basin Commission and the Susquehanna River Basin Commission. These Commissions are empowered to establish standards and review projects having a substantial effect on basin waters. It also should be noted that the Philadelphia Navigation Commission has extensive regulatory authority over projects in the Philadelphia area.

D. Financial Considerations

1. Taxation

A small scale hydroelectric facility is subject to two (2) types of state taxes. The first tax is that on real property, the second tax is a tax on gross receipts.

The Realty Tax is levied at the rate of thirty mills upon each dollar of the state taxable value of utility realty. Taxable value is the cost of utility realty less reserves for depreciation and depletion. A dam used for producing hydroelectric power is exempt from assessment

as real estate. However, the entity will still have to pay realty taxes on the land and other appurtenant works.

The gross receipts tax is a tax of 45 mills upon each dollar of gross receipts received from (1) the sale of energy within the state except sales for the purpose of resale, and (2) the sale of energy sold outside of the state as computed by a formula.

2. Loan Program

Pennsylvania has enacted an Industrial Development Authority Law. The Authority exits to provide financial assistance to industrial development projects in critical economic areas. To be eligible, the area must have a minimum unemployment rate of four percent (4%). The authority can finance projects such as buildings, rights on lands, water rights, machinery and utilities.

## Flow Diagram of Regulation of Small Dams in Pennsylvania

Project

I. OWNERSHIP

- Does the developer have legal right to use of the flowing water?
- Does the developer own both banks?
- Is the water navigable, public or non-navigable?

II. IF NAVIGABLE: State holds bed in trust for the public

State Legislation may confer the use and enjoyment of the watercourse on a developer subject to the public trust

IF NON-NAVIGABLE: Developer owns bed if he owns both banks and has right to use of flowing water

III. DETERMINE: Is project subject to Public Utilities Commission jurisdiction?

- Will power be ultimately available to the general public?
- Or is developer generating power for his own use? → If so,
- Or is developer an electric cooperative? → If so,
- If developer is a municipality, is power being made available beyond the corporate limits of the municipality?

If yes,

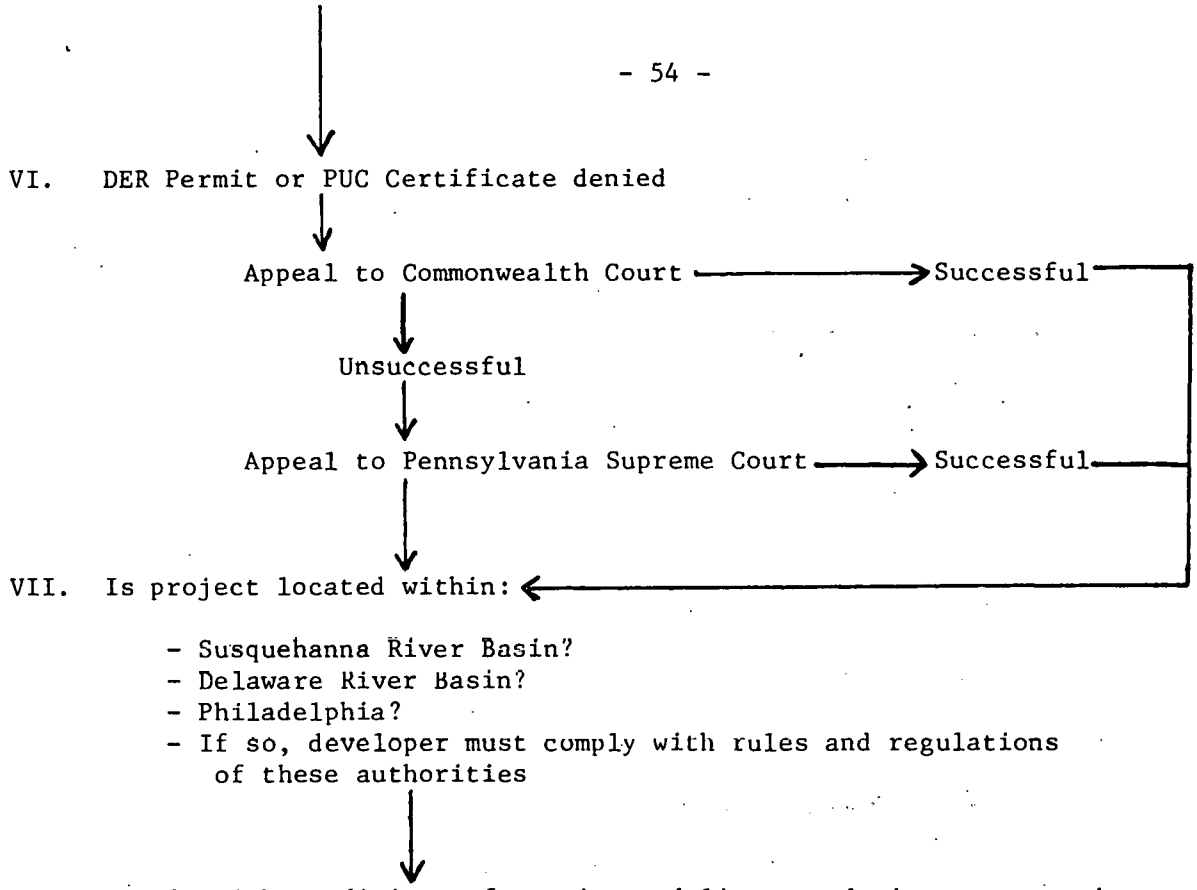
Project is not subject to PUC jurisdiction

IV. Project is subject to PUC jurisdiction

- Apply for a Certificate of Public Convenience which must be obtained prior to beginning construction
- File plans, specifications, location maps financial situation, etc. with PUC.
- PUC may hold hearing

V. Apply for a DER Permit

- File plans, specifications, etc. with DER
- DER may hold hearings on the application


VI. DER Permit or PUC Certificate denied
Appeal to Commonwealth Court
Successful
Unsuccessful
Appeal to Pennsylvania Supreme Court
Successful
VII. Is project located within:
- Susquehanna River Basin?
- Delaware River Basin?
- Philadelphia?
- If so, developer must comply with rules and regulations of these authorities
VII. Comply with conditions of permits and licenses during construction and operation.

# EXECUTIVE SUMMARY OF THE REGULATION OF SMALL DAMS IN VIRGINIA

## I. VIRGINIA WATER LAW

### A. The Developer Must Acquire Certain Property Interests At His Proposed Site

#### 1. Property Interests Required

Virginia follows the riparian theory of water law. Under the riparian theory, private rights in the flow of water are vested in landowners whose property borders the river or stream. The riparian theory requires the acquisition of property interests in the abutting lands on both sides of the particular waterway for the developer to acquire the use of the flowing water.

The developer must also be able to use the streambed of a river or stream. Ownership of a streambed turns on whether the stream or river is navigable or non-navigable. Title to the bed of all navigable watercourses in Virginia lies in the state for the benefit of the people. Title to the bed of non-navigable watercourses lies in the respective riparian owners. Title to such non-navigable watercourses follows the edge of the abutting estate and extends to the middle thread of the watercourse.

Owners of land abutting navigable waters own land to the mean low-water mark, or ordinary low-water mark. The test used in Virginia to determine whether a stream is navigable is whether the flow of water is sufficient to be useful to the public for transportation.

A developer proposing to build his project on a non-navigable watercourse must first acquire the necessary property interests in the banks and beds from the appropriate riparian owners. If the developer proposes to build on a navigable watercourse, he must obtain the necessary property interests in the banks from the abutting landowners and receive permission from the state for the use of the bed.

2. The Reasonable Use Doctrine

The theory of riparian rights followed in Virginia is one of reasonable use. Under this doctrine, each riparian owner has an equal right to the reasonable use of the water flowing by or through his land. The reasonableness of a use depends upon the nature and size of the stream, the business or purpose to which it is made subservient and other varying circumstances. Generally, the use of a watercourse for generating power would constitute a reasonable one.

3. The Virginia Milldam Act

The Virginia Milldam Act, like its contemporary in many other states, was passed to decrease the common law impediments to the development of water power. The Act allows a riparian owner the opportunity to apply for a permit which would allow him to erect a dam across a non-navigable watercourse. The Act permits a developer to flow a portion of upstream land without fear that his dam will be adjudged a nuisance and ordered removed. The developer must pay the overflowed landowners for the value of the land flowed, but title does not pass to the developer. Milldam Acts have been challenged in other states as violating the U.S. Constitution and have generally been upheld. The Virginia Act has yet to be so challenged.

## II. DIRECT AND INDIRECT REGULATION

### A. Any Developer Proposing To Build A Dam In Virginia For The Purpose Of Generating Hydroelectric Power In The State Must Receive A Permit From The State Corporation Commission

A dam developer must submit an application to the State Corporation Commission and it must contain all the essential facts to enable the Commission to arrive at a decision on the merits of the proposal. Applications must include maps, plans and any other information which will give the Commission a clear and full understanding of the proposed development. Once the application is received, the Commission will set a date for a public hearing. The applicant is responsible for providing notice to the public as the Commission requests.

The State Corporation Commission is to consider all pertinent information concerning the proposed project and evaluate any information provided by other state and local department and agencies. The Commission must also consider the probable effects on the state and the people directly affected. The Commission may include any terms or conditions in the permit they deem necessary. If the dam will likely obstruct the free passage of fish, the Commission may require that fish ladders be built by the developer.

While technically the State Corporation Commission has absolute authority in deciding whether or not to license a dam project in the state, practically they have very little opportunity to have any direct effect on the final decision of whether a project will or will not be built. Because the requirements of applications for meeting the federal license requirements are substantially the same, and in many cases more stringent than state requirements,

the Commission has in effect been relieved of the necessity of scrutinizing the contents of the applications.

The State Corporation Commission is also responsible for the issuance of certificates of convenience and necessity. These certificates are required for any public utility desiring to construct, enlarge or acquire any facility for use in the public utility service. This certificate is not required for developers who intend to consume their entire production of power.

The State Corporation Commission is responsible for setting or approving rates at which electricity may be sold within the state. If a developer intends to sell electric energy in Virginia, he may be subject to extensive regulation by the State Corporation Commission.

B. Various Indirect Regulations Which May Have Some Effect on a Developer's Project.

A number of state agencies may have authority to impose conditions on a given project. Developers should consider the following agencies prior to construction:

1. State Water Control Board. (SWCB) This agency is responsible for maintaining existing high water quality and restoring any degraded state waters. The SWCB is also responsible for administering the Ground Water Act of 1973. The Act's purpose is to conduct groundwater area studies to maintain reasonable control of groundwater resources in that area. Another area of SWCB's authority is the coordination and enforcement of the Flood and Damage Reduction Act. The Board has the duty to collect and distribute information on flooding and floodplain management and coordinate various activities under the Act. Finally, the SWCB is charged with the administration of the Virginia Erosion and Sediment Control law. Under this law, the SWCB is required to advise the Virginia Soil

and Water Conservation Commission in the development of an effective erosion and sediment control program.

2. Wetlands Act. Under the Act, counties, cities and towns are authorized to adopt wetlands zoning ordinances for the purpose of regulating the use and development of the wetlands.

3. The Soil and Water Conservation Commission. The Commission is responsible for monitoring the activites of local soil and water conservation districts and administers the Conservation, Small Watersheds, Flood Control and Area Development Fund.

4. Division of State Parks. The Division has the authority to acquire lands of scenic beauty, recreational utility or historical interest.

5. Commission of Outdoor Recreation. This Commission is responsible for the development of an up-to-date comprehensive plan for the development of outdoor recreational facilities, and to establish and promote standards for such facilities.

6. The Scenic Rivers Act. The purpose of the Act is to provide for the identification, preservation, and protection of scenic rivers before alternative plans are approved.

7. Environmental Acts. These Acts include: the Virginia Environmental Quality Act; Critical Environmental Areas; and, Environmental Impact Reporting. The first two acts are designed to provide that adequate consideration be given to the state policy of promoting the wise use of the state's resources. The Environmental Impact Reporting was enacted to require that a report be filed on the environmental affects of any major state project.

8. Commission of Game & Inland Fisheries. The Commission is generally consulted with regard to major power projects to evaluate the affects of such projects on fish and game of the state.

9. Historical Preservation Acts. Virginia has two State Historical Preservation Acts: the Act which established the State Historical Landmarks Commission; and, the State Antiquities Act. The State Historical Landmarks Commission is empowered to designate historic landmarks and to take steps to protect and preserve them. The State Antiquities Act provides that a permit must be acquired by anyone seeking to remove, destruct or disturb any object of antiquity on state controlled land.

10. Virginia Endangered Species Act. This Act is designed to operate in conjunction with the Federal Endangered Species Act, but also allows the state to characterize species not included in the federal list to the state list.

11. The developer would be wise to check local zoning ordinances and if necessary, seek approval from local zoning boards.

C. Liability for Dam Breach in Virginia

The issue of the liability of a dam owner for the breach of his dam is an important consideration. At this point in time, liability for dam breach in Virginia is based on the theory of negligence, but it should be noted that other states appear to be moving in the direction of strict liability.

## III. FINANCIAL CONSIDERATIONS

### A. Taxation

The Virginia Constitution allows for the taxation of all property within the state at uniform rates unless expressly exempted. Dams

and equipment do not fall within one of these exemptions. All assessments of property within Virginia are to be made based on their fair market value. Property is also to be assessed at its highest and best use.

Virginia law also allows for a state annual franchise tax and local license tax on power companies. The maximum limits of such taxes are set out in the statutes.

B. Financial Assistance

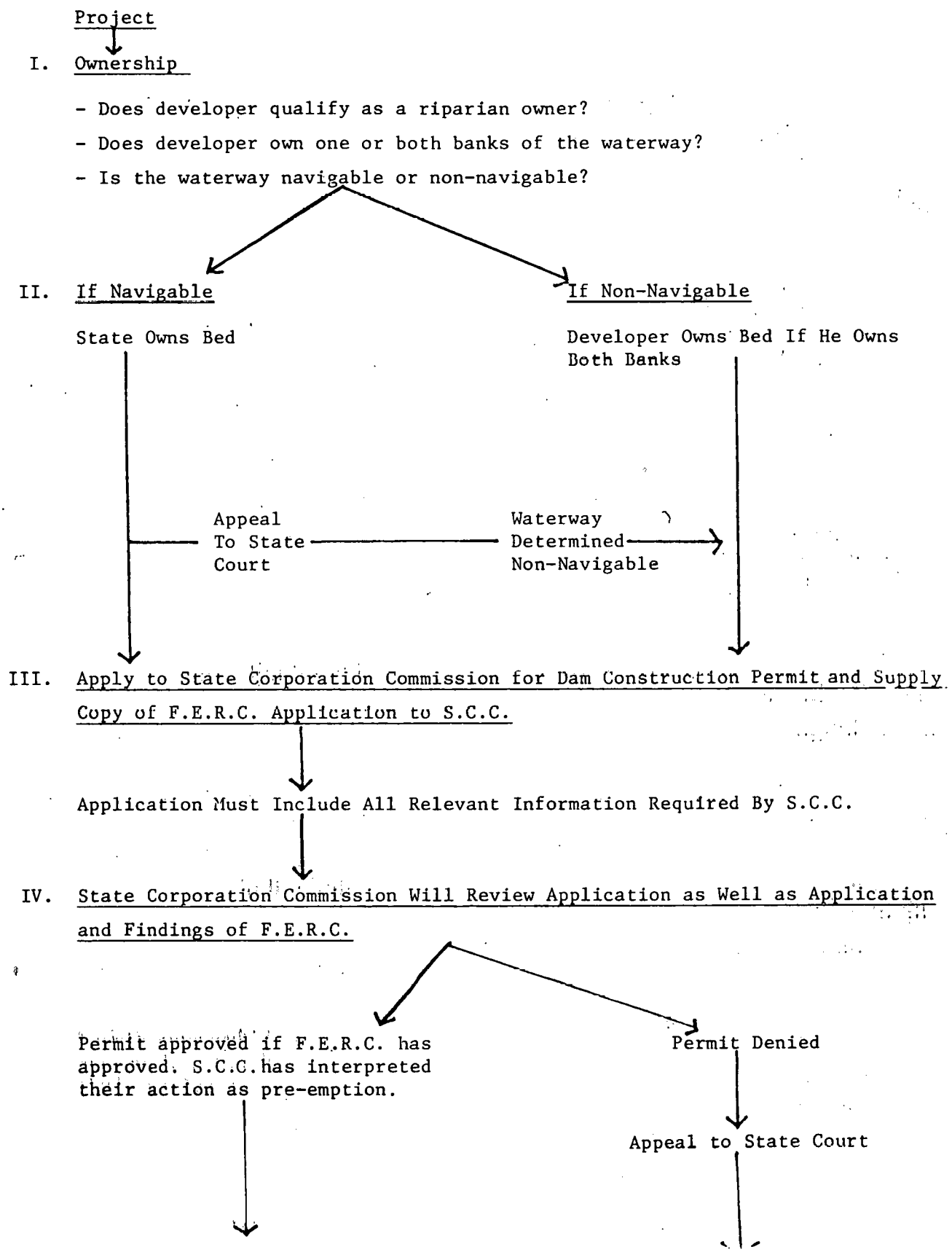
The Division of Industrial Development (D.I.D.) was established to manage a program, provide information to prospective industrial developers, and to accept and utilize grants from public and private sources.

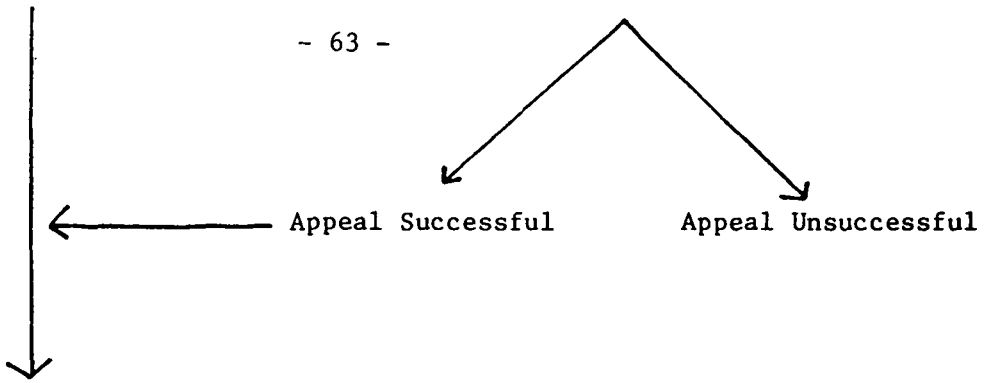
The Virginia Industrial Building Authority (V.I.B.A.) was established by statute to guarantee loans for industrial projects and to acquire, purchase, manage, and operate and enter into contracts to encourage and assist in the location and rehabilitation of new and existing businesses and industries.

State law allows for financial institutiona in the state to establish Industrial Development Corporations for the purpose of selling stock and debentures to finance the location and rehabilitation of new and existing industrial and business projects within the state.

Another possible financial incentive is that developers may by able to qualify their hydro facility as a pollution control facility which would exempt them from state taxes and partially from local taxes. The argument for this classification has been successful in the case of a facility in Massachusetts, but as of this time, its acceptance is very uncertain.

Flow Diagram of Regulation of
Small Dams in Virginia





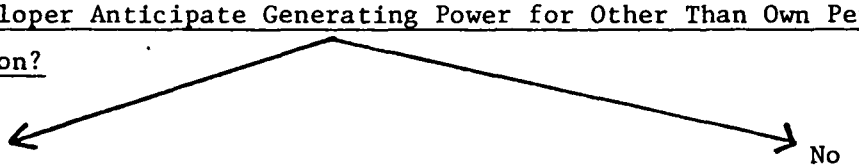

V. Does Developer Anticipate Flowage Upon Adjacent Property?


- Developer must institute action against owners for a flowage easement.

- If valid public use, easement granted and may specify dam height and dimensions and period of time which dam may be maintained.

- Court would compute damages which developer must pay adjacent landowner to flow land [title does not pass].

VI. Does Developer Anticipate Generating Power for Other Than Own Personal Consumption?




(If Public Service Company, developer may be able to acquire property through eminent domain with approval of State Corporation Commission.)

Must receive certificate of convenience and necessity from State Corporation Commission.

Must file rate schedule with State Corporation Commission for approval and have schedules available for public inspection.

*U.S. GOVERNMENT PRINTING OFFICE : 1980 0-311-119/140

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