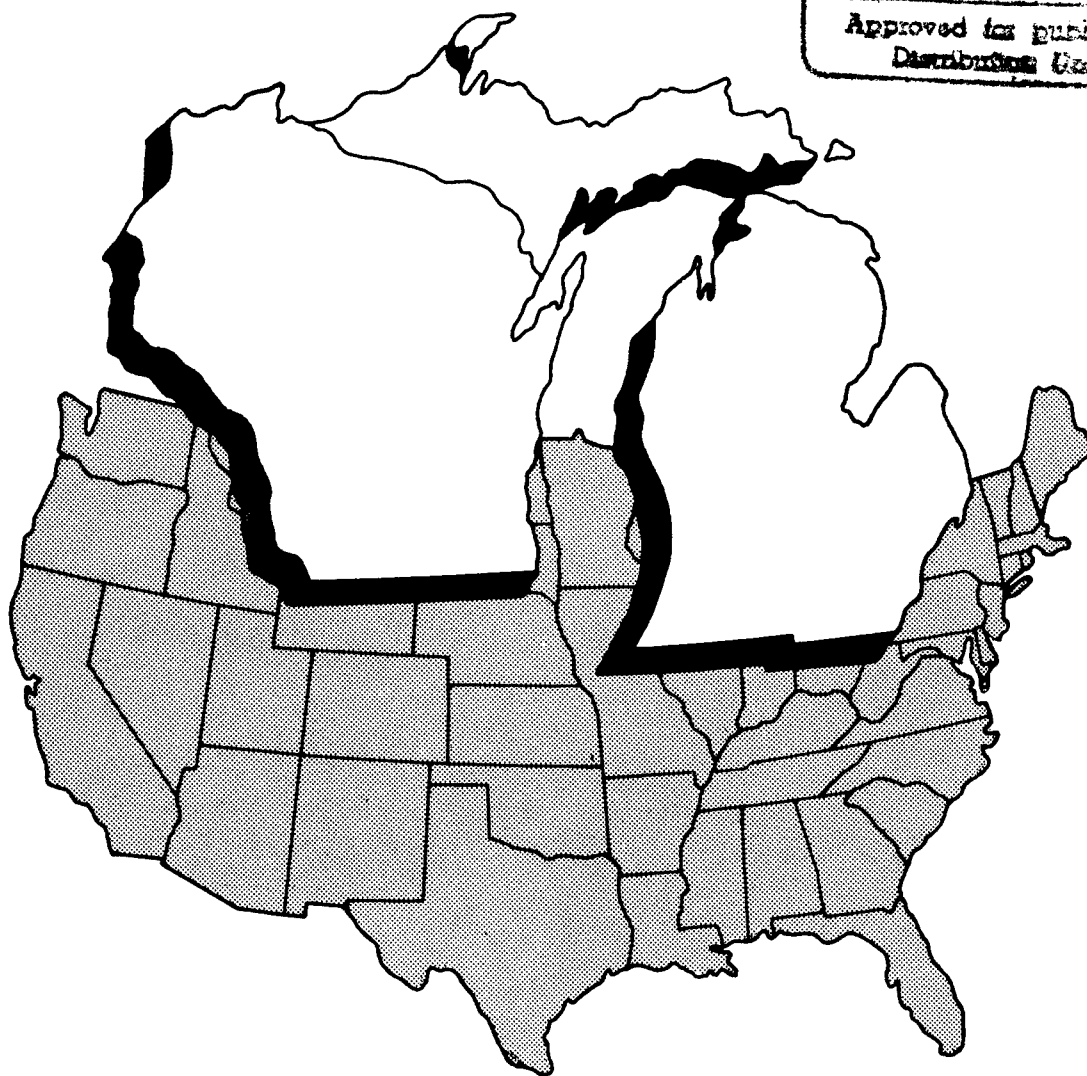


# OPPORTUNITIES TO PROTECT INSTREAM FLOWS IN MICHIGAN AND WISCONSIN

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OPPORTUNITIES TO PROTECT INSTREAM FLOWS  
IN MICHIGAN AND WISCONSIN

by

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## FOREWORD

In Opportunities to Protect Instream Flows in Michigan and Wisconsin, Dr. White provides the reader with a basic survey of State prerogatives and programs that may be used to protect the instream uses of water. Because of the interest and responsibilities of State fish and game agencies and other conservation organizations, most of these opportunities are related to fish and wildlife habitat. However, there are many other instream uses considered, including hydroelectric power production, recreation, navigation, downstream delivery, and waste load assimilation. The purpose of this document is to illustrate methods to manage these instream uses within the context of existing rules and regulations.

Even though Dr. White paid close attention to statutes, this document is not intended as a legal reference. It is designed to be a planning tool to survey current State programs, compare approaches to instream use protection, and index a preliminary evaluation of the costs and benefits of a wide range of programs. Dr. White has provided a summary table for each State, which serves as an index to available opportunities. We anticipate that these tables will be the reader's most valuable guide to these reports.

The Western Energy and Land Use Team, Division of Biological Services, U.S. Fish and Wildlife Service, has published a number of similar documents. Information is now available for 26 Western, Midwestern, and Southern States (Table 1).

In some reports, opportunities in each State are presented in a single document, but in several publications, opportunities in States from the same geographical region are combined. The complete list of reports in this series is displayed in Table 1. The combination of State reports presents an opportunity for easy comparison of specific programs. This is particularly useful because of the wide variety of instream flow protection programs or possibilities.

The primary purpose of this series of documents is to point out the opportunities in instream flow management that currently exist so that planners and managers can anticipate development, plan appropriate programs, and evaluate the costs and benefits of certain courses of action. In addition, the reports are brief histories of the level of success of various State programs. The use of this information can be a significant cost saving for planners and managers.

In summary, each document has an Executive Summary which discusses its purpose, uses, and limitations. Each document also has separate information tables (Table 2) which summarize the contents for each State. It is hoped that the research represented in these documents will provide the kind of overview and preliminary evaluation that will ease the burden of State, local, or Federal planners and managers as they seek to meet their increasingly complex responsibilities.

Table 1. Publications in the opportunity series.

| Title                                                                       | Publication Number       |
|-----------------------------------------------------------------------------|--------------------------|
| Instream Flow Strategies for Arizona                                        | FWS/OBS-78/35            |
| Instream Flow Strategies for California                                     | FWS/OBS-78/36            |
| Instream Flow Strategies for Colorado                                       | FWS/OBS-78/37            |
| Instream Flow Strategies for Idaho                                          | FWS/OBS-78/38            |
| Instream Flow Strategies for Montana                                        | FWS/OBS-78/39            |
| Instream Flow Strategies for Nevada                                         | FWS/OBS-78/40            |
| Instream Flow Strategies for New Mexico                                     | FWS/OBS-78/41            |
| Instream Flow Strategies for North Dakota                                   | FWS/OBS-78/42            |
| Instream Flow Strategies for Oregon                                         | FWS/OBS-78/43            |
| Instream Flow Strategies for South Dakota                                   | FWS/OBS-78/44            |
| Instream Flow Strategies for Utah                                           | FWS/OBS-78/45            |
| Instream Flow Strategies for Washington                                     | FWS/OBS-78/46            |
| Instream Flow Strategies for Wyoming                                        | FWS/OBS-78/47            |
| Opportunities to Protect Instream Flows in Alaska                           | FWS/OBS-82/33            |
| Opportunities to Protect Instream Flows in Nebraska<br>and Kansas           | FWS/OBS-83/02            |
| Opportunities to Protect Instream Flows in Minnesota<br>and Iowa            | FWS/OBS-83/07            |
| Opportunities to Protect Instream Flows in Georgia                          | FWS/OBS-83/20            |
| Opportunities to Protect Instream Flows in Michigan<br>and Wisconsin        | FWS/OBS-83/21            |
| Opportunities to Protect Instream Flows in Texas,<br>Oklahoma, and Arkansas | FWS/OBS-83/22            |
| Opportunities to Protect Instream Flows<br>in Missouri                      | IFG Working Paper 308.16 |
| Hawaiian Water Rights and Instream Flows                                    | IFG Working Paper 308.3  |

## EXECUTIVE SUMMARY

### OBJECTIVES

This document combines the efforts of several individuals, agencies, and organizations toward a common objective: the identification, description, and preliminary evaluation of promising opportunities for protecting instream uses of water under existing law in Michigan and Wisconsin.

This report is intended for the use of planning and management personnel who need an overview of potential opportunities for preserving instream flows. The term "instream flow" refers to that amount of water which remains flowing in a stream to sustain such uses as navigation, fish and wildlife habitat, water quality, hydroelectric power production, recreation and aesthetics. Several States have adopted programs for protecting instream flows. These States may use specific terms such as "minimum flow," "base flow," "seven-day ten-year low flow," "flow regime," or "flow standard" to describe the unique purpose or nature of their instream flow program.

This report is not intended to replace or challenge the advice of agency counsel and it is not written to provide legal advice. Instead, it is designed as a guide for the person trying to find his way among sometimes bewildering State statutes and administrative practices. This report is not, and should not be taken as, official policy or prediction of future actions by any agency. It is simply a summary of some potential opportunities for protecting instream flows.

Toward these objectives, the U.S. Fish and Wildlife Service, through its Water Resources Analysis Project, contracted with Dr. Mary Ray White to identify and describe opportunities under State laws and current State administrative practice. The project had two phases. In Phase I, Dr. White identified potential opportunities in each State being considered. These descriptions were reviewed for accuracy and utility by a wide range of State and Federal personnel. In Phase II, Dr. White prepared a report for each State. Each document has undergone extensive review by State and Federal personnel.

### BACKGROUND CONSIDERATIONS

Both State and Federal agencies have important roles to play in water management, particularly in instream flow preservation. The summaries offered here are not intended to suggest that Federal instream flow decisions will or should replace current State water management systems. It is very important

for Federal employees to recognize the importance of State water management policy and statutes. In addition, U.S. Department of the Interior employees should be aware that they are required to follow the water policies of the Secretary of the Interior.

Federal employees should recognize that a close working relationship with State agencies is often the most practical way of getting things done. Resources are always limited and, in some cases, gathering and developing information, as required by these opportunities, may be beyond the financial power of the agency most concerned. As a result, agencies and individuals should learn to cooperate with similarly oriented private, State, and Federal organizations to ensure success.

Many of the opportunities described in this booklet are frequently used and will be familiar to the reader. Some of them include activities that are required of U.S. Fish and Wildlife Service field personnel. Examples of some activities may be given, while no examples are necessary for others. The reader should refer to Table 2 for a guide to these opportunities.

Federal employees should be particularly cautious when using unusual or untried approaches and should refer legal questions to the office of their Regional Solicitor or general counsel. Close cooperation with the Solicitor or agency counsel will result in fewer lawsuits and more successful results overall.

The reader who wishes to protect or augment an instream flow should begin by looking at the physical and legal circumstances of the whole stream. A planner or manager should consider all types of land and water interests involved. The stream should be examined both up and downstream of the reach of interest. Downstream interests should be considered because often they have statutory or contractual power to hold water instream. This survey should include ownership, possession, and control of lands and waters, and the types of use to which the lands and waters are presently being put, such as agriculture, planned development, wilderness, or industry. It is important to remember that contracts or leases may be held by other organizations and individuals. In addition, government agencies may have authority over the land and water. Potential governing agencies are many and diverse, ranging from the Federal government to special districts and municipal bodies.

Often there is more than one way to solve an instream flow problem. When given a choice, the planner or manager should seek the least expensive, least disruptive, and simplest solution to the problem. In some cases, this may mean having a conversation with a land owner or local administrator, sending a letter to the owner or lessee of land and water, or simply arranging a meeting between two water users who could stagger their withdrawals or in some other way provide for a stream flow.

Offering information on stream flow needs to other agencies of the State or Federal government is complex and often provided for by specific statutes. A risky, complex, and often expensive approach to protecting streams is the use of lawsuits. In some cases, litigation may be a necessary part of protecting a right and cannot be avoided. When possible, the manager should

avoid litigation as the first resort. Lawsuits are expensive, but may be an effective way to protect instream flows.

In using this report, the reader should be aware of its purpose and limitations. First, only a few of many possible opportunities are described herein. The user should exercise initiative, judgment, and creativity in dealing with any specific situation. Second, this report should be used only as a starting point. In any situation related to the acquisition of water rights, legal advice should be sought. This report should in no way be construed as a substitute for the opinion of a private attorney, attorney general, or agency counsel. Third, this report is neither a policy nor a decision document; it is simply a collection of opportunities which appear to have utility in a variety of situations.

A purpose of this booklet is to encourage cooperative and innovative thinking by all persons interested in instream flows for fish and wildlife, and watershed management at Federal, State, or local levels of government, as well as private individuals and wildlife organizations. Many talented people want to protect instream flows; their cooperation in a variety of approaches will be necessary to solve the problem.

Table 2. Opportunities for protecting instream flows in Michigan.

| Title                                           | Identification                                                                                              |                                                             | Application                                      |                                                                                                       |                                                        |                                                                                                            |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|                                                 | General description                                                                                         | Applicable situations                                       | Initiation                                       |                                                                                                       | Implementation                                         |                                                                                                            |
|                                                 |                                                                                                             |                                                             | Parties                                          | Actions                                                                                               | Parties                                                | Expenditures                                                                                               |
| Dams<br><br>(see page 4)                        | Using dissection to benefit instream uses.<br>Mich. Stat. Ann. 11.421, et seq.; 28.430; 3.525.              | Permit applications.                                        | Department of Natural Resources.                 | Review dam applications.                                                                              | Department of Natural Resources.                       | Study costs.                                                                                               |
| Protection of Special Areas<br><br>(see page 7) | Designate stream segments, wilderness areas, species.<br>Mich. Stat. Ann. 11.501, et seq.; 13.734; 13.1204. | Free-flowing streams, wilderness areas, threatened species. | Local citizens; Department of Natural Resources. | Organize local support to urge legislative study of new areas, study streams, species.                | Michigan legislators; Department of Natural Resources. | Designate the free-flowing stream, wilderness, species.<br><br>Organizational costs, administrative costs. |
|                                                 | Study wetlands.<br>P.A. 203, 1980.                                                                          | Wetlands.                                                   | Department of Natural Resources.                 | Inventory wetlands.                                                                                   | Department of Natural Resources.                       | Inventory and study wetlands to protect instream flows.<br><br>Study costs.                                |
| Public Lands<br><br>(see page 11)               | Acquire and manage lands to protect instream flows.<br>Mich. Stat. Ann. 13.431, et seq.                     | Lands deeded to the State or acquired by the State.         | Department of Natural Resources.                 | Demonstrate interest in State acquisition; make donations; purchase, condemn, or negotiate for lands. | Department of Natural Resources.                       | Accept donations, purchase, or condemn lands.<br><br>Condemnation or purchase costs, management costs.     |
|                                                 | Condition leases to protect waters.<br>Mich. Stat. Ann. 13.700, et seq.                                     | Marinas and dock construction leases.                       | Department of Natural Resources.                 | Condition leases, agreements.                                                                         | Department of Natural Resources.                       | Drafting costs.                                                                                            |

Table 2. (Continued)

| Title                                      | Identification                                                                       |                                                     | Application                          |                                              |                                      |                                                          |
|--------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------|----------------------------------------------|--------------------------------------|----------------------------------------------------------|
|                                            | General description                                                                  | Applicable situations                               | Initiation                           |                                              | Implementation                       |                                                          |
|                                            |                                                                                      |                                                     | Parties                              | Actions                                      | Parties                              | Expenditures                                             |
| Iron Ore Beneficiating<br>(see page 13)    | Use experience under this act as a model for permit system. Mich. Stat. Ann. 13.145. | Development of a permit system.                     | Department of Natural Resources.     | Study results and acceptability of this act. | Department of Natural Resources.     | Study costs.                                             |
| Waterways Commission<br>(see page 16)      | Protect waterways in navigable waters. Mich. Stat. Ann. 3.54.                        | Boating.                                            | Michigan State Waterways Commission. | Study instream uses and boating.             | Michigan State Waterways Commission. | Acquisition, construction costs.                         |
| Department of Agriculture<br>(see page 16) | Study effect on instream flows of agricultural practices. Mich. Stat. Ann. 13.820.   | Preparation of Statewide soil erosion control plan. | Michigan Department of Agriculture.  | Include instream flow effects in study.      | Michigan Department of Agriculture.  | Study costs.                                             |
| Transportation Commission<br>(see page 17) | Use permits to protect water courses. Mich. Stat. Ann. 9.1195.                       | Artificial alterations in water courses.            | Michigan Transportation Commission.  | Exercise permit authority.                   | Michigan Transportation Commission.  | Review, restrict, or deny permits. Administrative costs. |

Table 2. (Continued)

| Title                             | Identification                                                                                  |                                                             | Application                      |                                                                              |                         |                                                                                                 |
|-----------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------|
|                                   | General description                                                                             | Applicable situations                                       | Initiation                       |                                                                              | Implementation          |                                                                                                 |
|                                   |                                                                                                 |                                                             | Parties                          | Actions                                                                      | Parties                 | Actions                                                                                         |
| Port Authorities<br>(see page 17) | Dredge and manage ship channels and ports. Mich. Stat. Ann. 5.2190.                             | Artificial alterations to construct ports. Port management. | Fish and Wildlife Agencies.      | Recommend to Port Authority.                                                 | Port Authority.         | Review, restrict, or alter development and management plans. Administrative costs, study costs. |
| Compacts<br>(see page 17)         | Compacts are authority for protecting water resources. Mich. Stat. Ann. 4.129.                  | Interstate users of water.                                  | Great Lakes Commission.          | Use compact to support other actions; petition Commission to protect waters. | Great Lakes Commission. | Study water uses and needs. Study costs.                                                        |
| Farm Bureau<br>(see page 18)      | 1980 Farm Bureau Water Rights Task Force recommends permit system.                              | Riparian, groundwater, water withdrawals.                   | Affected water users.            | Study effects of recommended programs.                                       | Farm Bureau.            | Carry out report recommendations. Study costs.                                                  |
| Cities<br>(see page 21)           | City powers can protect flows, watersheds, water works supply. Mich. Stat. Ann. 5.1179, et seq. | Stream in or near cities.                                   | City government, local citizens. | Organize and petition for action.                                            | City government.        | Exercise governmental taxing authority. Organizational and study cost.                          |

Table 2. (Continued)

| Title                                             | Identification                                                                                                                                                                                                                                                    |                                 | Application                                         |                                                                |                                         |                                       |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------|----------------------------------------------------------------|-----------------------------------------|---------------------------------------|
|                                                   | General description                                                                                                                                                                                                                                               | Applicable situations           | Initiation                                          |                                                                | Implementation                          |                                       |
|                                                   |                                                                                                                                                                                                                                                                   |                                 | Parties                                             | Actions                                                        | Parties                                 | Expenditures                          |
| Land Disposal of Municipal Waste<br>(see page 22) | Application of waste to land reduces demand on streams.<br>1980 Farm Bureau Water Rights Task Force Report.                                                                                                                                                       | Near cities.                    | City government, farmers, and other effluent users. | Study, establish a program.                                    | City government, chosen effluent users. | Planning costs, implementation costs. |
| Counties<br>(see page 23)                         | County land-use powers, water delivery powers, parks, and dam permit powers can protect streams.<br>Mich. Stat. Ann. 5.2, et seq.<br>County planning commissioner can control development; county can act for "surplus water" determination, may "improve" lakes. | Counties with flows to protect. | County Boards.                                      | Study needs.                                                   | County Boards of Commissioners.         | Study costs, administrative costs.    |
|                                                   |                                                                                                                                                                                                                                                                   |                                 |                                                     | Request Water Resources Commission act to protect local flows. | County, Water Resources Commission.     | Study costs, administrative costs.    |

Table 2. (Concluded)

| Title                                      | Identification                                                                      |                                                  | Application                                            |                                                          |                        |                                 |
|--------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|------------------------|---------------------------------|
|                                            | General description                                                                 | Applicable situations                            | Initiation                                             |                                                          | Implementation         |                                 |
|                                            |                                                                                     |                                                  | Parties                                                | Actions                                                  | Parties                | Expenditures                    |
| Statutory Suits<br>(see page 28)           | Private suit for pollution relief, stream damage. Mich. Stat. Ann. 14.528; 27A.295. | Damage to specific interests.                    | Citizens, agencies, governmental subdivisions, groups. | Study causes of stream damage, negotiate with polluters. | Insured parties.       | Legal costs.                    |
| Cooperative Organizations<br>(see page 30) | Joining with others to protect streams.                                             | Additional experience or help needed.            | Organizations, individuals.                            | Seek out similar oriented parties.                       | Organizations. Others. | None.                           |
| Riparian Rights<br>(see page 31)           | Exercise riparian rights to preserve flow.                                          | Riparian landowners damaged.                     | Riparian landowners, including State owning land.      | Study injuries, negotiate with parties causing harm.     | Riparian landowners.   | Legal costs, negotiation costs. |
| The Public Trust Doctrine<br>(see page 64) | Public trust doctrine protects State natural resources.                             | Occasions on which State fails to protect flows. | State agencies, organizations, individuals.            | Use this doctrine in suits to protect State resources.   | Attorney General.      | Legal costs.                    |

Table 3. Opportunities for protecting instream flows in Wisconsin.

| Title                                        | Identification                                                                                                                                                                                                                    |                                                                                                    | Application                                 |                                                                         |                                                                                                                |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|                                              | General description                                                                                                                                                                                                               | Applicable situations                                                                              | Initiation                                  |                                                                         | Implementation                                                                                                 |
|                                              |                                                                                                                                                                                                                                   |                                                                                                    | Parties                                     | Actions                                                                 |                                                                                                                |
| Protection of Special Areas<br>(see page 39) | Identification and protection of wetlands, acquisition of natural and scenic areas, wild rivers, and areas important to endangered species can protect stream flows. Wisc. Stat. Ann. 23.32; 23.092; 23.27; 29.415; 30.26; 30.72. | Appropriate locations throughout the State, involving wetlands, natural areas, endangered species. | Public interest organizations, individuals. | Recommend that Department of Natural Resources study and protect sites. | Identify, acquire special areas. Study costs, negotiation costs, acquisition costs.                            |
| State Parks and Forests<br>(see page 41)     | Parks and forests can protect flows and watersheds. Wisc. Stat. Ann. 2701; 28.005, et seq.                                                                                                                                        | Areas where park or forest boundaries can be rounded off, or where new ones are needed.            | Department of Natural Resources.            | Locate suitable lands.                                                  | Acquire lands by gift, purchase, condemnation. Study costs, negotiation costs, purchase or condemnation costs. |

Table 3. (Continued)

| Title                                                                          | Identification                                                                                                                                 |                                                                   | Application                                               |                                                                                  |                                  |                                                             |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------|
|                                                                                | General description                                                                                                                            | Applicable situations                                             | Initiation                                                |                                                                                  | Implementation                   |                                                             |
|                                                                                |                                                                                                                                                |                                                                   | Parties                                                   | Actions                                                                          | Parties                          | Expenditures                                                |
| Dams<br>(see page 42)                                                          | Conditioning or preventing construction of dams can preserve stream flows. Misc. Stat. Ann. 31.01, et seq.                                     | Construction of dams.                                             | Builder, parties maintaining old dams or abandoning dams. | Seek permit or revised permit from Department of Natural Resources.              | Department of Natural Resources. | Study costs, permit process costs, including hearing costs. |
| Diversion of Water<br>(see page 45)                                            | Conditions and restrictions on diversions can protect flows. Misc. Stat. Ann. 30.18.                                                           | Application for diversion permits for agriculture and irrigation. | Department of Natural Resources.                          | Apply for permit, petition for denial of permit, study appropriation conditions. | Department of Natural Resources. | Study and hearing costs.                                    |
| Other Responsibilities of the Department of Natural Resources<br>(see page 51) | Enforcement of pollution standards, Outdoor Recreation Program, Conservation Works Program, non-game species study can benefit instream flows. | Pollution, other program development.                             | Department of Natural Resources.                          | Study statutory responsibilities.                                                | Department of Natural Resources. | No additional costs.                                        |

Table 3. (Continued)

| Title    | Identification                                                                                                                                                            |                                     | Application                                                         |                                                                |                                 |                                                                                                                              |                                                                     |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|          | General description                                                                                                                                                       | Applicable situations               | Initiation                                                          |                                                                | Implementation                  |                                                                                                                              |                                                                     |
|          |                                                                                                                                                                           |                                     | Parties                                                             | Actions                                                        | Parties                         | Actions                                                                                                                      |                                                                     |
| Counties | County Planning Boards can protect streams, Dept. of Natural Resources can assist financially. Wisc. Stat. Ann. 27.01; 27.015, 28.10; 28.11; 23.09, et seq. (see page 55) | Counties without active committees. | County Board.                                                       | Establish County Rural Planning Committee, Forestry Committee. | Appointed county committees.    | Include stream flow needs in acquiring and managing property, developing plans, apply to Dept. of Natural Resources for aid. | Property acquisition costs, planning, study, and enforcement costs. |
| Cities   | Municipal ordinances can protect streams Wisc. Stat. Ann. 144.26; 30.30; 17.08, et seq. (see page 57)                                                                     | Waterways in or near cities.        | Municipal officers.                                                 | Study possible protection of streams.                          | City Councils.                  | Pass ordinances to protect streams, develop parks.                                                                           | Study and enforcement costs, property acquisition costs.            |
| Compacts | Compacts protect the Great Lakes waters shared with Michigan. Wisc. Stat. Ann. 14.76; 14.82. (see page 60)                                                                | Interstate waters.                  | Great Lakes Compact Commission, joint regional planning commission. | Study project connecting Great Lakes with Atlantic.            | Great Lakes Compact Commission. | Make recommendations on problems shared with Michigan.                                                                       | Study costs.                                                        |

Table 3. (Concluded)

| Title                                      | Identification                                                                                                      |                                                     | Application                                     |                                                                         |                               |                                                                                                                        |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------|
|                                            | General description                                                                                                 | Applicable situations                               | Initiation                                      |                                                                         | Implementation                |                                                                                                                        |
|                                            |                                                                                                                     |                                                     | Parties                                         | Actions                                                                 | Parties                       | Expenditures                                                                                                           |
| Riparian Rights<br>(see page 62)           | Riparian owners may protect certain beneficial uses and protect streams.                                            | Riparian uses affected by other users.              | Riparian owners, agencies owning riparian land. | Study effects on lawful riparian uses of upstream consumption.          | Riparian owners and agencies. | Negotiate with upstream water users, initiate litigation to protect riparian uses.<br><br>Negotiation and legal costs. |
| The Public Trust Doctrine<br>(see page 64) | State must consider public needs and rights in administering natural resources. Wisc. Stat. Ann. 30.10; many cases. | State-owned property, public trust level of waters. | State agencies, public interest groups.         | Enforce public trust rights in administrative proceedings and lawsuits. | Attorney General.             | Administrative costs, legal costs.                                                                                     |



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PART I: MICHIGAN

## INTRODUCTION

The Michigan Constitution specifically provides that conservation and development of the natural resources of the State are of paramount public concern, and that the legislature must protect the air, water, and other natural resources of the State from pollution, impairment, and destruction.

In analyzing this section, the Michigan Attorney General has declared that State policy is that air, water, and other natural resources of the State must be protected, and that to this extent, the constitutional section prohibits the legislature from enacting any law which would violate this policy (Op. Atty. Gen. 27 Jan. 1969, No. 4590). A Michigan appellate court has held that the public trust impressed on submerged lands in the Great Lakes is to protect navigable waters, preserve fish, and assure the public right to fish and boat (People ex rel Director of Conservation v. Babcock, 38 Mich. App. 336).

Because the Constitution governs and is superior to all State legislation, any statute hostile to the conservation of natural resources may be unconstitutional in Michigan. The protection given by this section to Michigan natural resources is of great importance to groups ranging from the Michigan United Conservation Clubs to land developers; it permeates and informs all discussion of water needs in the State.

Michigan enjoys over 3,000 miles of shoreline and is surrounded by over 20% of the fresh water on earth. This abundant water has significantly contributed to Michigan's economy: In 1977, over 250,000 acres of agricultural lands were under irrigation.

Michigan enjoys an abundance of water and short watersheds; as a result, maintenance of adequate amounts of water is a less critical problem in Michigan than is pollution control. This is not to say that all instream flow needs are being met, but that, through a combination of physical blessings, a well staffed Department of Natural Resources, and an active and involved citizenry, Michigan streamflows enjoy a greater degree of protection than do those of many other States.

## ADMINISTRATIVE CONTROLS BY DEPARTMENT OF NATURAL RESOURCES

The Michigan Natural Resources Commission and Department are responsible for developing and coordinating all environmental functions and programs in the State, including protecting land resources, providing for recreation opportunities, protecting land-water interfaces, maintaining water quality, integrating environmental preservation programs through water resources management, and other activities.

The Department of Natural Resources (DNR) carries out powers and duties of the Public Domain Commission; the Game, Fish and Forest Fire Commission; Waterways Commission; Board of Fish Commissioners; the Geological Survey; and, the Michigan State Park Commission. General responsibilities of DNR include outdoor recreation, fire protection, reforestation, prevention of water pollution, law enforcement with regard to these duties, and game and fish protection and propagation.

The Natural Resources Commission, through DNR, has the power of condemnation and the power of holding title to real property. It also carries authority for the coordination of watershed development, the Boundary Commission, and the Advisory Council for Environmental Quality, and responsibility for development of a State land use plan, which was originally to be created by a special commission on land use. The Natural Resources Department is also in charge of regulating solid waste disposal and hazardous waste management [Mich. Stat. Ann. 13.2, and 3.29(250)].

The Water Resources Commission has special duties. They are to protect and conserve the water resources of the State, to control pollution, to control alteration of water courses and floodplains of all rivers and streams, to prohibit obstruction of floodways and streams, and generally to govern waste materials, requiring permits for discharge and storage of substances which may affect water quality (Mich. Stat. Ann. § 3.522, et seq.). The Water Resources Commission is empowered to initiate lawsuits to carry out these duties (Mich. Stat. Ann. § 3.523).

The Water Resources Commission includes among its members the Director of the Department of Natural Resources and a citizen selected from groups representative of conservation associations or interests.

The Water Resources Commission is responsible for controlling pollution both of surface and underground waters, including the Great Lakes. It is empowered to make surveys, studies, and investigations of water use (Mich.

Stat. Ann. § 3.522). The Commission is supposed to determine what volume of water actually flows in all streams in the State, and the high and low water mark of lakes, in order to make its rules and standards regarding pollution (Mich. Stat. Ann. § 3.525). It has not yet made this determination. This work, when completed, will make the Commission an excellent source of data for stream flows.

The Water Resources Commission is also the designated State agency for cooperating with other State governments and the Federal government in matters concerning water resources, including water quality control and flood control.

Figure 1 sets out the structure of the Department of Natural Resources. The members of the commissions are political appointees of the Governor. The Natural Resources Commission, in turn, appoints the Director of the Department of Natural Resources.

## DAMS

### Opportunity

Several statutes require permission from DNR before construction of a dam or other structure in a waterway. These can be enforced to benefit instream uses.

### Background

The Water Resources Commission is empowered to control the alterations of natural or present water courses to ensure that floodways are not inhabited and are kept clear of interference or obstructions which might restrict the floodway capacity. The power of the Commission to regulate floodways can protect instream flows in the stream within the floodway. In many instances, dams and other obstructions which would reduce or alter instream flows may also affect the flood absorption capacity of the floodway.

Subdivision plats abutting on water must be submitted to the Natural Resources Department for approval to determine whether the subdivision lies within the floodplain of a river, stream, creek, or lake. If the application is rejected, the reason for rejection must be given in writing [Mich. Stat. Ann. § 26.430(116)-(117)].

Occupation, filling, or grading (except for agricultural uses) of floodplain lands or streambed channels, is forbidden, as is any activity which is determined by the Water Resources Commission to be harmful to the discharge or stage characteristics of the stream, unless the activity is covered by a permit issued by the Department of Natural Resources [Mich. Stat. Ann. § 3.525(2)]. This very broad and wide-ranging statute requires a permit for virtually any alteration of floodplains, including the streambed itself, and constitutes a powerful weapon against unauthorized stream alteration.

Before constructing any dam which will impound more than five acres or have a head of five or more feet, the builder must first obtain a permit approving the plan from the Department of Natural Resources (Mich. Stat. Ann. § 11.421).

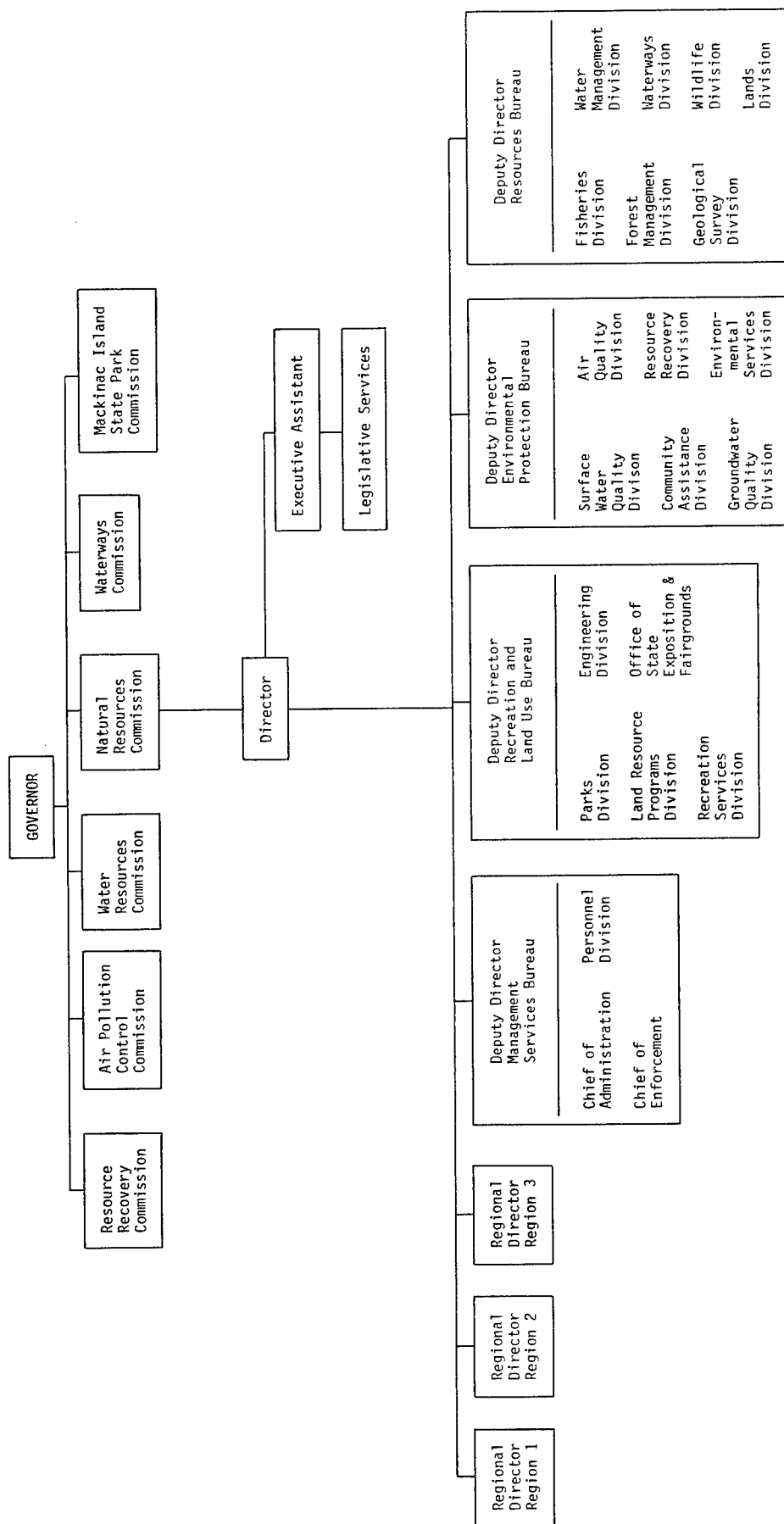


Figure 1. Organization of Department of Natural Resources.

As part of its duties to manage the State's water, the Water Resources Commission, upon petition by the governing bodies of any two or more local governments, may establish a river management district to act as an agency for water storage and river management, defined as control of river flow by the operation of dams and other manmade devices (Mich. Stat. Ann. § 11.431, et seq.). A district may be formed after a hearing before the Commission, if the Commission finds that the proposal is consistent with the public interest and that the operation of the district will not unreasonably impair riparian interests. The Commission will determine whether the district can include an entire river basin or as large a portion of a basin as is possible. The river management board may study the river use and requirements, impound and control the waters of the river system, and contract with the Federal government to operate control structures.

Once a river management district is established, the Commission is empowered, upon request by a watershed council or river management board, to determine the minimum level of stream flow (Mich. Stat. Ann. § 11.443). The Commission's determination, however, shall not prevent any industry along the stream from using water from the stream for industrial use if all the water is returned to the stream within 72 hours of the taking. This provision may effectively negate the usefulness of the determination of streamflow needs.

#### Example

When a request is made of the DNR to build a dam, after study by DNR, a permit may be issued. Conditions and restrictions are included to protect flow and other water uses. Reference is made to concurrent permits when appropriate.

Except for farm ponds, DNR is permitting almost no new dams in the State. The policy of the Fisheries Division is that if a dam is to be constructed there must be full mitigation conditions: The dam must permit as much water to leave as it receives from upstream.

The permitting system brings many points of view to bear on the process as can be seen in the sequence of events resulting in the denial of a permit to dam a small stream in 1979.

In June, 1979, a permit was issued to Victor and Leonard Weller allowing a dam, six cubic yards of dredging, and irrigation from the pond created by the dam. The stream involved was small, flowing between one and two cubic feet per second, but was upstream of Bear Creek, a designated trout stream. A number of people, both in and out of the Department of Natural Resources, became concerned about this small dam, resulting in its removal. Personnel within the Water Quality Division had objected to the original application before the original permit was granted. As a result, the permit was issued only temporarily, for one irrigation season.

The temporary permit included a number of conditions, including: "A minimum low flow of ten percent of existing flow shall be maintained at all times." In addition to the objection from the Water Quality Division, objections came from the Fisheries Division of the DNR. In August, a staff ecologist with the Michigan United Conservation Clubs requested further study

by the district fisheries biologist with the appropriate region of the Department of Natural Resources. The district biologist surveyed the creek with a back pack shocker to determine the presence of fish populations and calculated streamflows with the dam open. A local resident and fisherman wrote letters to the Department of Natural Resources in August and requested a contested case hearing on the issuance of the permit.

The dam site was inspected by the local DNR biologist in the first month after its construction. Another inspection, made by different personnel in September, revealed that the dredge area was three to four times larger than originally specified on the temporary permit, and that the dam effectively prevented migration up or down stream. Another visit to the site was made in August by additional DNR personnel.

In January, 1980, the Wellers were notified by the Chief of the Land, Lake and Stream Protection Section that their request for authorization to leave the dam in place was denied after consideration of the impact on fisheries. After removal of the dam, it was expected that the Wellers would irrigate from a "pit pond" dug into the high water table which would not directly affect the creek.

Close work within the DNR (especially the Fisheries Division), augmented by the interest of the Michigan United Conservation Clubs and private citizens, combined to bring about multiple inspections of the dam, the small creek, and the impact the dam had on the fish population downstream. As a result of this good cooperation, the dam was removed (Schmidt 1980). The Weller dam project is only a small example of the role of DNR (Doyle 1983).

### Evaluation

The permit system employed for dams by the Department of Natural Resources can be affected by fishermen, other concerned citizens, farmers, and DNR personnel. Many Michigan experts believe that the dam permitting system works well, reliably, and fairly inexpensively.

The problem does exist, however, that no permit is required for pumping water out of a stream without a dam, which can be done by any riparian owner with a pump and a hose connection. In theory, the Department of Natural Resources can investigate the situation and obtain a cease and desist order when it can prove damage to the fish, although there appears to be some question about that authority to act within the Department of Natural Resources. Because of uncertainty within DNR about the range of its own authority, memos circulate from time to time dealing with that subject. DNR may be open to helpful interpretations by persons outside the Department on the extent of its authority.

## PROTECTION OF SPECIAL AREAS

### Opportunity

Four State statutes give the Department of Natural Resources the means to protect especially valuable lands and waters in Michigan [1980 Wetlands Act,

Act 203, P.A. 1979; Mich. Stat. Ann. §§ 13.734(1)-(13); Mich. Stat. Ann. §§ 13.1204(1)-(10); Mich. Stat. Ann. §§ 11.501 - 514].

### Background

Wetlands Act. The 1980 Wetlands Act provides the Department of Natural Resources with an extensive authority to control development of wetlands (1980 Wetlands Act, Act 203, Public Acts of 1979). The Act defines wetlands very broadly, including all land which supports wetland vegetation or aquatic life over five acres, and even areas under five acres if the areas must be protected to save natural resources from impairment. The statute requires inventory of all wetlands in the State by the DNR. Wetlands not adjacent to lakes, streams, or ponds in counties of less than 100,000 population are not regulated until that county's inventory is complete, except for exceptional wetland areas. The Act also sets out requirements for obtaining a permit for development, draining, dredging, or filling of wetlands. The activities of drain commissioners are, however, excepted from the permit requirements of the statute.

After application for the permit has been made, the DNR must balance benefits which will result from the proposed activity against the detriments which will result. A list of specific criteria is established in the statute, including the probable impact on fish and wildlife and the proximity of the activity to waterways. Permits are not to be issued unless it can be shown that unacceptable disruption of aquatic resources will not result. Permits shall not be issued unless the applicant shows either that the activity is dependent upon being located in the wetland or that a feasible and prudent alternative does not exist. These criteria and prohibitions make the statute a strong one. If actively enforced by the DNR, the statute, in conjunction with other laws, should adequately protect all wetlands.

A twice-monthly list of new applications for permits will be sent to persons who request to be on the notification list and pay an annual fee. Section 8 of the Act appears to require a public hearing to be held when a written request has been filed for hearing within 20 days after mailing of the notification of the permit application.

At the hearing, opponents of proposed developments can present evidence showing, for example, that the proposal does not come within the terms of the Act, that it specifically is not in the public interest, that it will have an adverse impact on fish and wildlife, that it is close to a waterway, that unacceptable disruptions will result to aquatic resources, that the activity is not primarily dependent upon being located in the wetland, or that feasible and prudent alternatives do exist. Opponents can be prepared with specific alternatives.

Wilderness Areas. Wilderness and natural areas are given special protection in Michigan. A wilderness area is defined as a tract of undeveloped land or water, designated by and under the control of the Natural Resources Department, which is an island of any size or includes 3,000 or more acres [Mich. Stat. Ann. § 13.734(1)-(13)]. The land or water must "generally appear" to have been affected primarily by the forces of nature; the imprint of man's work must be substantially unnoticeable. It must have outstanding opportunities for solitude or primitive and unconfined type of recreation. It must

also contain ecological, geological or other features of scientific, scenic, or historical value.

A "wild area" is a tract of the same size and type with only one or more of the characteristics of a wilderness area. A "natural area" is a tract of State land or water under control of the Department which has retained or reestablished its natural character or has unusual flora and fauna or other similar features. It need not be undisturbed. It must, however, have been identified and verified through research and study, and it may be part of a wilderness area.

Every year, the Department of Natural Resources is supposed to review all land under its control to identify the tracts which fit the categories of wilderness, wild, or natural areas.

Endangered Species. The Michigan Endangered Species Act excludes species of insects determined by the United States Department of the Interior to be pests, but includes every other species in danger of extinction through all or a significant part of its range [Mich. Stat. Ann. § 13.1204(1)-(10)]. The Natural Resources Commission is charged to act to conserve, protect, restore, and propagate endangered and threatened species in cooperation with the Federal government. The Director of the Department of Natural Resources is to conduct investigations to develop data necessary for management measures, and to consult with other scientists and those with specialized knowledge; the Commission is to review the State list of endangered and threatened species every two years.

The Director of the Department of Natural Resources is broadly authorized to establish programs, including acquisition of land or aquatic habitat, which are necessary for the management of endangered or threatened species. The Commission may enter into cooperative agreements with Federal and State agencies and political subdivisions for these purposes.

Any citizen may propose land to the Commission necessary for this management. If the Commission denies such a proposal, it must issue a written opinion within ninety days stating its principal reasons. The land use in these areas is to be maintained or restored to preserve its natural values. This includes swamps, marshes, bogs, beaches, and wholly enclosed waters which are also an integral part of the area and are to be included within and administered as part of the area.

Natural Rivers. The Natural River Act of 1979 provides that, after hearings, the Natural Resources Commission may designate a river as a natural river area to preserve its values for water conservation, fish and wildlife values, and other uses, as well as its free-flowing condition (Mich. Stat. Ann. § 11.501 - 514). Free-flowing is defined as existing or flowing in natural condition without impoundment, diversion, straightening, riprapping, or other modifications. The river area is to include adjoining lands when appropriate.

Categories of natural rivers are to be established by the Commission, including such categories as wild, scenic, and recreational. Adjacent lands may be acquired, including easements to limit development, but only with the

consent of the owners, which precludes the use of condemnation. Before designating a river as a natural river area, the Commission must hold hearings on the matter in the county. After the unit has been established, the Commission may advise and assist local zoning authorities; if the proper zoning is not in force within one year, the Commission on its own motion may promulgate zoning to accomplish the purposes of the act, protecting the river and its related land resources. The Commission is also to prepare a long-range comprehensive plan for each natural river area, including management measures.

Siting Plans. The Commission must also approve preliminary and final plans for siting and construction of utility lines, recreation facilities, access sites, highways, bridges, and other structures, and for water management projects within the area. The Natural Resources Commission may condition its approval of these plans on steps to be taken by the applicant to control erosion or flow alteration during construction.

#### Example

Michigan's Natural Rivers Program was initiated in 1971 following passage of the Natural Rivers Act in December 1970. Following consultation of the DNR sources staff and field personnel, local groups, and private organizations, 30 rivers were initially selected by the Natural Resources Commission in 1971 for study and possible inclusion in the State system. Recognizing that a coordinated approach was needed to implement the program, the Natural Rivers Task Force was formed in 1971 to provide assistance, review, and coordination with the varying programs and disciplines in the DNR.

Action to have a stream added to Michigan's system of natural rivers must be initiated locally. Following nomination, a long-range management plan for the stream is developed jointly by the DNR, local governments, and local citizens. This "natural rivers plan" is then reviewed by the public through hearings and other meetings, and revised to reflect citizen concerns. If the plan is then accepted by the Natural Resources Commission, the river may be designated a natural river under one of the three categories: wilderness, wild-scenic, or country-scenic. Appropriate zoning ordinances must be adopted by local authorities within one year or the State will use its administrative rules to zone the river.

In 1972, the Jordan River was designated Michigan's first "wild-scenic" river. The program gained momentum in 1973 with the designation of three natural rivers and initiation of the study of thirteen others. The Natural Resources Commission designated the Rogue and Betsie Rivers as "country-scenic" and "wild-scenic" rivers, respectively. In December 1973, the Two Hearted River was given "wilderness" river status. State administrative rules were developed to zone the Jordan River.

The White River was designated a "country-scenic" river in 1975 and the Boardman River was designated "wild-scenic" early in 1976. A total of 251 miles of mainstream and 390 miles of tributaries presently are included in the State's Natural Rivers System. Many other streams in Michigan have been locally zoned as a direct result of the Michigan DNR's efforts.

## Evaluation

Because the use of these statutes involves administrative action rather than private lawsuits, and because the Department of Natural Resources is already set up to administer and carry them out, the costs involved in pursuing these approaches are lower than might be involved in an approach such as a private citizen suit.

## PUBLIC LANDS

### Opportunity

Several State statutes give the Department of Natural Resources authority to acquire and manage land and water resources for the benefit of the public. Both acquisition and management processes can be performed to increase protection of instream flows [Mich. Stat. Ann. §§ 13.431 - 443; 13.701(1)-(15); 13.701 - 729; 13.1096(1)-(3)].

### Background

The Department of Natural Resources (exercising the authority of the original Public Domain Commission) has general jurisdiction over State-owned lands subject to entry and lands which shall later be deeded to the State (Mich. Stat. Ann. § 13.431 - 443). The Department is to manage and control the lands and interests of the State in connection with stream protection and control. This responsibility apparently includes lands which have reverted to the State through tax delinquencies as well as through other means of acquisition.

Sale of State Lands. The Attorney General has issued an opinion stating that the Commissioner of Natural Resources, in conveying land, may impose a restrictive covenant or a reversionary interest to itself in the conveyance or sale, in instances in which the covenant is imposed for conservation purposes (Op. Atty. Gen. 10 March 1978, No. 5276). Covenants, easements, and reversionary interests, imposed by the State when it conveys land to private parties or other public agencies, can protect instream flows by preventing overdevelopment and excessive use of water.

Leases. The Department of Natural Resources may also issue leases for overflowed lands, made lands, and lake bottom lands belonging to the State or held in trust by it (Mich. Stat. Ann. § 13.701 - 729). Section 13.712 requires that all leases shall be subject to the paramount right of navigation, hunting, and fishing by the general public. These leases include gravel and mineral removal leases.

Parks. The Natural Resources Department has jurisdiction over all State parks and has authority to acquire, maintain, and make available for public use open spaces for recreation [Mich. Stat. Ann. § 13.1011 - 1085(2)]. Land acquisition, or an improvement program, however, may not be undertaken until approved by the State legislature in its annual capital outlay appropriation act. Parks, when properly sited, can afford protection to flow watersheds and the streams themselves.

Master Plan for Trails. The Department of Natural Resources is to prepare a master plan for the State system of trails with campsites and facilities, and to make revisions of the plan from time to time [Mich. Stat. Ann. § 13.1096(1)-(3)]. The Department may accept gifts and grants of land and right-of-way for use of this system.

New additions or changes in the master system of trails may occur along streams in need of protection. This may bring to the attention of the public the need to protect the streamflow, and should help protect from further development that portion of the land where the trail is located.

Recreation Resources Plan. The Department of Natural Resources is also required to develop and maintain a comprehensive plan for the development of outdoor recreation resources in Michigan [Mich. Stat. Ann. § 13.1098(1), et seq.]. The Department is authorized to participate in Federal funding programs, but may make no commitment of funds until the legislature has appropriated enough money to meet Michigan's share of costs. After that is done, the Department may distribute grants-in-aid to political subdivisions for outdoor recreation projects.

Bonds. Governmental agencies, authorities, and subdivisions of the State may also issue general obligation bonds for building or managing public recreational facilities. Public recreational purpose means a project for the acquisition of land or an interest therein, as well as acquisition and development of waterways, forest, wildlife areas, fisheries, and other facilities. This definition would appear to include streams and water flows. Many subdivisions and agencies of the State have access to funds through the issuance of bonds and State grants for public recreation programs, which appear to include instream flow-based recreation.

Land Trust Fund. The Kammer Recreational Land Trust Fund Act of 1976 establishes a State recreational land acquisition trust fund board of trustees within the Department of Natural Resources [Mich. Stat. Ann. § 13.1095(21)-(20)]. This board is to administer a fund created by receipt of oil, gas, and mineral royalties from State land. A separate game and fish protection subfund has also been created within the trust fund.

Each January, the board is to submit to the legislature a list of lands, rights in lands and easements which should be acquired with fund money, in order of priority. The legislature must approve these lands and rights each year before their acquisition.

Public Hunting Areas and Refuges. Michigan owns a number of public shooting grounds for waterfowl hunting, located in swamps along rivers in the State (Mich. Stat. Ann. § 13.1101 - 1127). The State's riparian interests in the water along these rivers and swamps may be protectable if threats arise to the watershed or the water in the shooting grounds.

Refuges and sanctuaries may be established in Michigan by the State or by donation of lands to the State by any person controlling five acres or more (Mich. Stat. Ann. § 13.1131 - 1205). The Department of Natural Resources governs the refuges and sanctuaries through rules and regulations. The purposes of the various sanctuaries differ. The Natural Resources Commission is

also authorized to cooperate with the United States in wildlife restoration projects and, under § 13.1190(1)-(3), the Department may sell stamps, decals, and similar items to raise funds for wildlife preservation. The advantage of refuges and sanctuaries is that, in these lands, both the watershed and stream itself are protected by the existence of the refuge.

Forest Reserves. Forest reserves may be created in Michigan from delinquent State tax, homestead, swamp, and school lands [Mich. Stat. Ann. § 13.171 - 308(10)]. The Department of Natural Resources, along with its powers in dealing with trees, may purchase lands within the limits of its forestry reserve in order to connect and even up the boundaries of tracts in the reserve.

After application to the Department of Natural Resources, and a hearing, the owner of lands intending to use them for commercial forests can have his land classified as commercial forests and receive an exemption from the ad valorem property tax; the land shall also not be considered taxable by the County Board of Supervisors or the State Board of Equalization (Mich. Stat. Ann. § 13.211 - 238). In some situations, the presence of tax exemption may help the landowner keep the land undeveloped for a number of years.

#### Evaluation

Imposing conditions on DNR leases, like most of these strategies, is inexpensive in comparison to the interests protected. Careful selection of possible park sites, with an emphasis on protecting watersheds and drainage basins, is within the statutory mandate of DNR and should impose almost no additional cost. Because DNR is obligated to maintain Michigan public lands with the public trust paramount, emphasizing streamflow considerations should not add appreciably to the cost.

### IRON ORE BENEFICIATING

#### Opportunity

This statute can be used in situations involving water use for iron ore processing [Mich. Stat. Ann. § 13.145(1)-(8)].

#### Background

Persons and companies wishing to use water in the mining and beneficiating of low-grade iron ore must make application to the Water Resources Commission for permits to drain and use this water. After application, the Commission shall hold a hearing, and may grant the permit if it finds that the proposed use of the water is necessary, that other methods of obtaining water are not available, and that the proposed use of the water will not unreasonably impair the public interest or the interest of riparians or endanger public health or safety. The use of water for these purposes may adversely affect the waters of the State. (The permits are issued for up to fifty years.)

## Evaluation

This Act represents a successful attempt to enact a water rights permit system in Michigan, applied to a single type of use. It was designed and used for special needs on the Greenwood Reservoir on the Middle Branch of the Escanaba River, in Marquette County, in the Upper Peninsula. If the Farm Bureau recommendations (see below) are followed and a new water permit system is developed, the experience gained under this statute could offer guidance. According to one source, the act "is more likely to be disruptive than protective if utilized in the future" (Doyle 1983).

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## OTHER STATE ACTION

Since the 1965 State agency reorganization, the Department of Natural Resources has carried the great majority of the responsibilities for protection of Michigan streamflows. A few other agencies have responsibilities that affect that area, which offer opportunities for protection of Michigan waters.

### WATERWAYS COMMISSION

#### Opportunity

The Michigan State Waterways Commission is empowered to acquire and construct channels for vessels in navigable waters; to acquire by purchase, lease, gift, or condemnation, lands and easements necessary, and to deal with the Corps of Engineers [Mich. Stat. Ann. § 3.54(1), et seq.]. Waterway is defined as any body of water of whatever size, of natural or artificial origin, and navigable water is defined as any waterway presently navigable or capable of being made navigable through artificial improvements. The Commission may also enter into contracts with counties and towns. The Commission is empowered to grant concessions within harbors for furnishing of gas and oil, food, and other facilities. The statute imposes a tax of nine cents per gallon of gasoline sold for use by boats to fund the operations of the Commission.

This revenue-producing activity is a potential source of assistance to instream flows. Those areas in which instream flows are important for maintenance of harbors, ports, and other boating activities can be brought to the attention of this Commission so that the Commission may protect the boating activity and, thereby, the instream uses.

### DEPARTMENT OF AGRICULTURE

#### Opportunity

The Department of Agriculture is to prepare and submit to the Natural Resources Commission for approval a unified Statewide soil erosion and sedimentation control plan, identifying land uses to be governed by the statute and including recommendations and guidelines [Mich. Stat. Ann. § 13.820(4)]. The Natural Resources Commission is to make available to the Department of Agriculture information on the effects of sediment on water quality and damages

of water resources, those waters of the State which are degraded by sedimentation, and water quality standards. Review opportunity exists under the soil conservation statute for farming and soil management practices which may impinge upon instream uses.

## TRANSPORTATION COMMISSION

### Opportunity

No person, firm, corporation, or municipality is permitted to alter the stage of water, or widen or deepen any water course, without securing a permit from the State Transportation Commission (Mich. Stat. Ann. § 9.1195).

Michigan agencies can seek an agreement with the State Transportation Commission that such permit applications will be brought to the attention of the appropriate conservation agency. This may ensure that water course alterations do not slip by unnoticed.

## PORT AUTHORITIES

### Opportunity

Port authorities may dredge ship channels and turning basins and acquire and manage real and personal property for port purposes [Mich. Stat. Ann. § 5.2190(1), et seq.]. Port authorities are also to appear before State and Federal agencies on port matters. In occasional cases, the assistance or testimony of a port authority may be helpful in providing evidence of the usefulness of instream flows. The presently constituted port authorities have, however, much less power to regulate streamflow than did the previously existing power districts.

### Evaluation

Because these opportunities involve careful monitoring by these agencies of activities which they normally supervise, adding the consideration of instream flows will probably not increase their costs appreciably. Developing relationships with persons in these agencies and educating them about instream needs and values can be part of normal interagency contacts.

## COMPACTS

### Opportunity

The Great Lakes Basin Compact, if carefully enforced, can have a beneficial effect on instream uses of water [Mich. Stat. Ann. § 4.129(1)].

### Background

Interstate compacts are essentially contracts between States which have been ratified by the United States Congress. They can be enforced between the

States through general cooperation or through lawsuits brought before the United States Supreme Court.

### Example

The Great Lakes Basin Compact was entered into between Michigan, Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, Wisconsin, Ontario, and Quebec [Mich. Stat. Ann. § 4.129(1)]. It establishes the Great Lakes Basin Commission, which is to exercise jurisdiction over Lakes Erie, Huron, Michigan, Ontario, St. Clair, and Superior; the St. Lawrence River; and all rivers and streams which naturally or as they are presently constituted are tributary to these lakes or constitute part of any watershed draining into the lakes. The purpose of this compact is to promote the orderly development of the Great Lakes Basin, to balance various uses of the water resources in the basin, and to plan for the development of basin water resources.

The Commission has the power to collect and report data relating to water resources, recommend methods for the best use and conservation of water resources, consider public works, navigation, and fisheries, and recommend policies relating to water resources including institution of floodplain and other laws. Every State party to the compact agrees to consider actions which the Commission may recommend in respect to stabilization of lake levels, combatting of pollution, erosion, floods, uniformity in navigation regulations, diversion of waters from and into the basin, and other measures the Commission may recommend. Because of the breadth of representation of the Commission, its recommendations can affect flows in a number of States in a positive way.

### Evaluation

The Great Lakes Basin Commission has studied some watersheds extensively and has produced studies on winter navigation problems, but has taken no further action. Personnel in the DNR feel there is probably no real need for additional legislation or regulations coming from this Commission.

It occasionally happens that, while pursuing another course of action, an organization attempting to protect instream uses can be helped by the existence of a compact. Compacts can bring to bear a considerable amount of persuasive authority.

## FARM BUREAU

### Opportunity

The 1980 Farm Bureau Water Rights Task Force report offers a framework in its recommendations for establishing a water use permit program in critical areas. Implementation of these recommendations would protect instream uses by establishing a data base and some State control over unregulated water use (Water Rights Task Force 1980).

## Background

During the 1970's, conflict increased in Michigan among competing users of water. In 1977, the delegates to the Michigan Farm Bureau annual meeting directed that a water rights task force be established. This task force studied existing water laws, and came up with a series of recommendations aimed at providing agriculture with an equitable share of available water in the future. Members of the task force include Farm Bureau personnel, county health department representatives, academicians, representatives from the Michigan United Conservation Clubs, farmers, representatives from DNR, and representatives from the Department of Agriculture.

The substantial task force recommendations include:

1. Implement a water use permit program for surface and groundwater on a critical water area basis.
2. Identify critical water management areas on a watershed basis.
3. Allow establishment of minimum instream flow standards and/or maximum groundwater withdrawal rates to protect the natural resources of the State from pollution, impairment and destruction.
4. Clarify that commercial agricultural irrigation for food and fiber production is in the public interest and is a reasonable use of water.
5. Allow interbasin transfer of irrigation water and modify the severance rule by permitting irrigation water on land which is immediately contiguous and adjacent to lands which touch lakes, streams, or other watercourses so long as such land is held in the ownership of a single individual or other legal person and is held for the purpose of agricultural production of food and fiber.
6. Clarify that the riparian rights doctrine is applicable to groundwater.

## Evaluation

The Farm Bureau report is thoughtful and thorough. The report provides a framework for further work, authority for the value of instream uses and some incentive to protect instream values. The Farm Bureau recommendations may receive attention in the legislature.

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## LOCAL GOVERNMENT

### CITIES

#### Opportunity

Cities have powers to condemn property and responsibilities to supply certain services that can give them considerable influence over instream uses (Mich. Stat. Ann. § 5.1179, et seq.).

#### Background

Because of Michigan's short rivers, local influence exerted by a city can affect an entire river. City councils can enact ordinances to preserve the purity of waters within one-half mile from boundaries of the city (Mich. Stat. Ann. § 5.1179). This municipal authority is in addition to the State regulatory authority over water pollution.

Cities also have the right to appropriate property through condemnation for public purposes, including the improvement of water courses (§ 5.1855). Michigan cities, like cities all over the United States, have the power to construct water works for their inhabitants. The city may purchase or construct water works outside its corporate limits, and enforce its ordinances and police regulations over these works. It may not, however, protect its water supply by prohibiting riparian owners on lakes from bathing on the lake. This is true even when the city is also a riparian owner (People v. Hurlbert, 131 Mich. 156).

Whenever two or more cities in Michigan determine to extend and improve their municipally owned water system through the acquisition of an additional source of water consisting of a water supply line from one of the Great Lakes, bays and connecting waters, such cities may jointly acquire, own, or operate such source of supply [§ 5.2532(1)].

An authority may be incorporated for water supply to serve any two or more villages, towns, or townships. This authority and its constituent municipalities may purchase water for the water supply system.

In addition to their powers under specific organic and enabling statutes, counties, cities, villages, boards, commissions, agencies, and corporations for the management of public business and property may take private property for public improvement or purposes through condemnation proceedings.

A town may wish to preserve flows in streams that flow through its park. Summer resort and park associations also have a limited power of condemnation and may bring suit of condemnation in competent courts (Mich. Stat. Ann. § 21.807). The statute specifically mentions streams, and a summer resort or park association can be helpful in protecting a stream.

Like the State, a municipality may acquire lands for forestry purposes within or without its territorial limits (Mich. Stat. Ann. § 13.281 - 290). The city must then appoint a forestry commission for management of the forest. Cities may acquire forestry land by purchase, gift, or inheritance, and may purchase lands from the Director of Conservation of the State, when homestead, tax, swamp, or school lands are available. The city may make appropriation for forestry purposes and may set up a special forestry fund.

## LAND DISPOSAL OF MUNICIPAL WASTE

### Opportunity

Land disposal of municipal waste can be used to maintain instream flows in two ways: (1) Irrigating land with municipal waste water does not deplete surface or groundwater supplies; and (2) use of municipal water reduces the pollution load from irrigation runoff that streams might otherwise receive.

### Background

The application of waste water from municipal treatment plants and industrial sources to agricultural land has been practiced in the United States and in foreign countries for many years. When waste water is applied to the soil-plant environment, suspended solids and nutrients are filtered out, and the water is either utilized by crops or percolates to subsurface drains or to groundwater.

As a result of the Clean Water Act, many communities are upgrading their waste water treatment plants. Land application of waste water is an alternative treatment plan which is economically attractive to small rural communities.

### Example

In Michigan, 5,000 acres of land in Muskegon County are now growing corn as a result of irrigation by waste water. Other communities using waste water application to land include Colon, East Jordan, Harbor Springs, Leoni Township of Jackson County, Mackinaw City, Middleville, Roscommon, Wayland, and Belding. In these communities, the waste water is processed through secondary treatment before application on the land. Lagoon treatment and storage systems are generally used for this purpose, which provide for stabilization of organic materials and partial destruction of disease-causing organisms. Disinfection of the waste water is required when sprinkler application methods are employed. When municipalities own their own application sites, they often use solid set irrigation systems which can be completely automated, while for private farming traveling irrigation equipment is more suitable.

From the irrigator's point of view, the primary agricultural benefit of applying waste water is the water itself. Nutrient content in the water can improve crop yields and reduce the need for fertilizers, but the real impact on production comes from the irrigation. Waste water application can be adapted to private agriculture through agreements between the community and the farmer. These agreements can include purchase and lease back, purchase and resale on condition, negative easements, contracts, and the establishment of waste water cooperatives.

### Evaluation

In every situation, assistance and cooperation may be needed from local governments, based on their zoning, nuisance, and health codes. The early involvement of local officials may ensure that the process is fully understood before a campaign is begun. In some circumstances, it may be wise to restrict the type of crop grown to one which is not intended for human consumption in raw form.

Michigan farmers appear reluctant to participate in waste water application programs because proposals have not been developed in Michigan with private agricultural participation. The Water Quality Division of the Michigan Department of Natural Resources has specific regulatory authority for waste water application to agricultural land (Cooperative Extension Service 1977).

## COUNTIES

### Opportunity

Counties enjoy many general powers which can be exercised to benefit instream uses. In some cases, county boards of commissioners, acting in conjunction with the Department of Natural Resources, can provide a second hearing process for developments that may impinge upon water use (Mich. Stat. Ann. § 5.2, et al.).

### Background

Real Estate. Townships enjoy the powers of purchasing and holding real estate and can engage in such businesses as water supply systems under specific statutory limits upon the taxes they may impose (Mich. Stat. Ann. § 5.2, et seq.). Charter townships may acquire property by condemnation for such facilities as parks and also install water systems [Mich. Stat. Ann. § 5.46(1), et seq.]. Township park commissions may acquire or condemn land for parks and places of recreation, including beaches, and may issue bonds for the acquisition of land for those purposes.

Counties also have the powers of purchasing and holding real estate. Any county, city, village or township may incorporate for the purpose of acquiring or maintaining recreational facilities, and may employ the power of condemnation for those purposes [Section 5.301(1), 5.301(9)]. The powers of county departments and boards of public works are set forth in Mich. Stat. Ann. §

5.570(1)-(56). County and regional parks and recreation commissions are covered in Mich. Stat. Ann. § 5.570(101)-(117).

Navigable Streams. In order to protect the navigable qualities of streams, County Boards of Commissioners (Supervisors) have the power to prohibit construction of dams across navigable streams in their counties, and may provide for removing obstructions such as booms, logs, and rafts in the streams (Mich. Stat. Ann. § 5.344). The statute appears to have been directed at use of waterways for floating logs to mills.

Upon petition, the Board is to hold a hearing on an application to build a dam; when the petition is filed with the Board of Supervisors, a copy is to be sent to the Secretary of the Natural Resources Commission. Any person may speak at the hearing, which may offer an opportunity for instream needs and values to be heard.

Plans. In establishing county water supplies or sewage disposal systems, or making county lake improvements, the County Board of Commissioners may submit preliminary plans to the Department of Natural Resources for review and approval [Mich. Stat. Ann. § 5.570(10)]. Careful review by the Department of Natural Resources can spot harmful or beneficial effects on maintenance of instream flows. Negotiation with the counties involved can sometimes result in improved stream conditions or at least less harmful ones. [See the section above on municipal disposal of waste water.]

Counties may adopt and carry out a county plan through a Planning Commission under the County Board of Commissioners or County Board of Auditors [Mich. Stat. Ann. § 5.1192(1), et seq.]. In developing the plan, the Planning Commission is to cooperate with all State and Federal governmental departments and public agencies, including those concerned with the physical development of the county. The Board of County Commissioners may also transfer to the Planning Commission all responsibilities for zoning decisions. City, village, and municipal planning commissions under Section 5.2291, et seq., may also affect instream uses, as may regional planning commissions [Section 5.308(1)]. The plans developed by these Commissions may address instream uses of water and may be adopted by local governments.

Surplus Water Act. Under the Surplus Waters Act of 1964, it is possible for County Boards of Supervisors to request the Water Resources Commission to survey a river basin or watershed to determine whether "surplus water" exists, and how best to use it [Mich. Stat. Ann. § 3.533(21), et seq.]. The procedure under this act has not yet been used. After receiving a request, the Commission is to determine an "optimum flow" for rivers and streams which may be affected by removal of "surplus water." In determining optimum flow, the Commission and the Boards are to consider:

1. The range of streamflow variation;
2. Uses being made of the water at present or in the future by riparian owners;

3. The stream's waste assimilation capacity and its practical utility for domestic, fish and wildlife, recreation, municipal, and industrial use, navigation, utilities, and water storage; and
4. Other factors which are necessary to protect the rights of downstream riparians.

No plan is permitted to allow for impoundment when streamflow is below the determined optimum flow, and no plan is to be interpreted to authorize diversion of water from one watershed to another.

Before determining optimum flow, the Commission is to hold a public hearing. No diversions are permitted of surplus water created by release from dams under these plans unless the diversions are in accordance with the plan. In other words, this statute protects not only the optimum flow but also the "surplus waters," which are to be used nonconsumptively by riparian owners. This statute governs plans and dams constructed after 1964, and exempts River Management Districts under local river management acts. The statute has not been used; if it were, truly meaningful stream regimes could be adopted as "optimum flow" on each of these river basins or watersheds surveyed by the Commission.

Landowners abutting a lake may petition the County Board of Commissioners to determine the normal lake level; the Board may also take this step on its own (Mich. Stat. Ann. § 11.300). The Department of Natural Resources, through its Director, may also petition the Circuit Court of the county to determine the normal lake level. On public lakes, the Department of Natural Resources may join in the proceedings and require the installation of fish ladders on dams. After the level is determined, the county is to construct or maintain sufficient dams to keep the water at its normal height and level, and may pump well water for additional water to the lake. Costs shall be borne by a special assessment district, benefited by the establishment of a lake level. Navigable streams are specifically exempted.

The normal water level is to be established by a new survey, old surveys, testimony of old inhabitants, the extent to which artificial causes have lowered the natural ground water level in the area, and all other facts and circumstances. The normal water level is that which would be the most beneficial to the public and best preserve the natural resources of the State.

Under Section 11.300(22), a person who changes the level of a lake which has been established under this act is guilty of a misdemeanor and may be fined as much as \$1,000 or imprisoned for one year. This provision appears to include effects on lake levels resulting from alterations in streams.

Irrigation District Act. Although it has apparently not been used, the Irrigation District Act governs water in the Great Lakes including portions of the lakes and stream tributary to the Great Lakes where the natural water levels are controlled by the water level in the Great Lakes [Mich. Stat. Ann. § 11.302(1), et seq.]. Counties with fewer than 400,000 persons and with boundaries touching the Great Lakes may, alone or in conjunction with other counties, establish a special assessment district to provide for irrigation using water from the Great Lakes.

The Water Resources Commission must approve such a district. No counties have applied for approval to use this Act since it was passed in 1967. This statute limits withdrawal of water from these sources within irrigation districts when the withdrawal will not benefit agricultural crops or operations, will materially injure other water uses, significantly affect the level of the Great Lakes, adversely affect the fish and wildlife resources of the State, or be detrimental to the health and welfare of the people of the State. The Act goes on to establish the conditions under which irrigation districts may be organized.

In the organic statute permitting the organization of irrigation districts a limitation is placed upon the amount of water that may be withdrawn by those districts from both the Great Lakes and those tributary streams whose level is controlled by the level of the Great Lakes.

Water Management Districts. Water management districts may be established in three or more contiguous counties upon petition to the Director of Agriculture from three or more governmental subdivisions such as counties or cities (Mich. Stat. Ann. § 11.1511 - 1583). Projects to be undertaken by these water management districts may include alterations of streams, rivers, drains, lakes, reservoirs, swamps, marshes, or any other waters, and any watersheds, dams, or reservoirs. Before a project is undertaken, there should be a hearing before the Water Management District Commission. Both preliminary plans and late-detailed plans must be approved by the Michigan Water Resources Commission. The Water Management District may secure lands by condemnation, and may contract with the Federal government or private corporations for their projects.

Other Stream Protection. The Inland Lakes and Streams Act forbids dredging and filling of bottom land, erection and operation of marinas; creation, enlargement, or diminishment of inland lakes or streams; and interference with the natural flow of inland lakes and streams without permits from local health departments [Mich. Stat. Ann. § 11.475(1)-(15)]. Bottomland includes land below the ordinary high water mark of lakes and streams.

Persons interested in instream flows may be placed on a notification list, for a fee of \$25, in order to receive a list of pending applications for these activities. Each application is to be submitted for review by the Director of Public Health of the local Health Department for the city, village, and township and the county where the project is located, local soil conservation district, local watershed council, and the local port commission. Upon the request of the applicant, riparian owner, or a governmental unit entitled to receive a copy of the application, a public hearing must be held upon the application.

The health department shall not issue a permit if it finds that the project will adversely affect either the public trust or riparian rights [Section 11.475(7)]. The department is also obligated to consider effects of the proposed action on the stream and other waters affected, including recreation, fish and wildlife, and aesthetics. The act is not intended to modify the rights of any riparian owner regarding the use of his riparian water. There are several opportunities for instream flow values to be represented in this process.

## Evaluation

The varied powers of county boards of commissioners, combined with the widely varying hydrological situations in the many Michigan counties, offer a mix of opportunities to protect instream flows. Because county review is built into several statutes that affect streamflows, and because county commissioners represent a local constituency, protection of instream flows at this level may be less expensive than at a Statewide level. Decisions of county commissioners are often given great deference by trial courts reviewing their decisions; as a result, protection of a streamflow by the board of county commissioners may save the expenses of a long court fight later.

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## INDIVIDUAL ACTION

### STATUTORY SUITS

#### Opportunity

Several State statutes permit individuals to sue directly in order to protect environmental values [Mich. Stat. Ann. §§ 14.528(201)-(206); 27A.295; 13.268(1); 26.1287(1)-(111)].

#### Background

Equitable Relief. The Thomas J. Anderson, Gordon Rockwell Environmental Protection Act of 1970 permits persons to sue in the Circuit Court for declaratory and equitable relief from pollution [Mich. Stat. Ann. § 14.528(201)-(206)]. The following persons may sue: the Attorney General, any political subdivision of the State, any State agency, any person, partnership, corporation, organization, or other legal entity. The following persons may be sued: the State, any political subdivision or agency, any person, partnership, corporation, organization or other legal entity. This broad statute permits suit virtually to anyone against anyone under all standards regarding pollution. The person concerned about pollution in a situation in which the appropriate enforcing agency is unable to act may himself bring suit under this statute.

Reasonable Use. The Michigan Supreme Court has found that disposal of waste products by a papermill into a stream which caused the water to be so depleted of oxygen that it could not sustain fish is not a reasonable use, and that a lower riparian owner could complain of and forbid that use of the stream waters (Monroe Carp Pond Co. v. River Raisin Paper Co., 240 Mich. 279).

Navigation. As part of the statute regulating forest products, persons having logs or timber in navigable streams may boom such logs or timber along the shore and secure the boom by piles driven in the stream provided that they leave a sufficient channel to permit navigation by craft or rafts used in navigating the stream (Mich. Stat. Ann. § 18.237). Under this statute, a log runner who fills the bed of his stream with logs and interrupts the natural flow of the water is liable in damages to downstream riparian owners who are injured (Wooden v. Mt. Pleasant Lumber & Mfg. Co., 106 Mich. 412).

People concerned about overuse or misuse of a stream for booming logs can consult this statute and the cases under it for possible remedies. Generally,

damages occurring despite reasonable and careful use of a stream for booming logs are not compensable and will not be prohibited by the court.

Any artesian or flowing well which is allowed to run unnecessarily and unreasonably in such a manner as to deplete or lower the head or reservoir enough to damage other wells supplied from the same head or reservoir is a nuisance and is subject to civil action to abate the nuisance (Mich. Stat. Ann. § 27A.295). This statute could be used to protect streams affected by flowing wells.

Fire Breaks. The State, its agents, and political subdivisions, are forbidden to adopt or follow any law or practice which "tends to create a condition which promotes, fosters, or leads or may tend to promote, foster, or lead to the beginning or spreading of a forest fire which could jeopardize the public trust in the forests of the State or any private land contiguous thereof" [Mich. Stat. Ann. 13.268(1)]. This statute may have application in forest-related situations, because maintenance of adequate streamflows assists in fire prevention and control by acting as a natural fire break and by providing water for fire extinguishing.

The effect of the statute is to invalidate all acts, practices, rules, ordinances, and similar items which might endanger the forests. It is quite possible that acts which reduce instream flow could be interpreted, under this statute, as acts that endanger forests. In order to invalidate an ordinance or statute, however, it would be necessary for the concerned person, upon competent legal advice, to seek a judicial determination that this statute overrules the one attacked.

Open Space. The Farmland and Open Space Preservation Act provides for development rights and easements to be made in order to preserve open space and farmland which would otherwise be developed [Mich. Stat. Ann. § 26.1287(1)-(117)]. The development rights agreement is a restrictive covenant under which the owner and the State agree to hold jointly the right to develop the land and agree not to develop it. A development rights easement is a grant, from the owner of land to the public, of the right to develop the land. The Department of Natural Resources enters into these agreements on behalf of the State. To be eligible, land must fall within one of several categories, including land approved by the local governing body, the preservation of which would conserve natural or scenic resources, including wetlands and beaches.

Placing such a covenant or easement upon open land can protect instream flows directly, by preventing development next to the stream, and indirectly by protecting the watershed. These easements and covenants also benefit the owner of the land, by removing his land from liability for special assessments and giving him a credit against his State income tax liability.

### Evaluation

Lawsuits are expensive, time consuming, and uncertain of outcome. They have the advantage of being specific and easily enforceable after a decision is reached.

## COOPERATIVE ORGANIZATIONS

### Opportunity

Seeking the aid of organizations such as the Michigan United Conservation Clubs can bring in expertise and perhaps financial assistance that are not available to the single individual.

### Background

Organizations such as the Audubon Society, the Sierra Club, and the Michigan United Conservation Clubs (MUCC), bring together people of common interests and can apply greater resources of time and talent to specific local questions with beneficial results.

### Example

In 1979, the MUCC brought expertise to bear on a small problem that illustrates the strengths of cooperation. A construction permit was issued by the Land Resource Programs Division of the Department of Natural Resources for a dam on Bear Creek, a designated trout stream, under the provisions of the Inland Lakes and Streams Act. The permit stated that a minimum low flow of 10% of existing flows be maintained and that the permit was temporary. An interoffice memo had been sent through DNR in April pointing out that installation of the dam would probably block fish passage and dewater the downstream bed. Two interoffice memos between the Fisheries Division and the Land Resource Programs Division emphasized the concern of the Fisheries Division about the creek and stressed that the permit, if granted, should extend for only one year.

The MUCC became involved through the protests of a local fisherman who made inquiries of the local DNR fish biologist, upon whose evaluation of the stream the dam was allowed. Investigation by the Department of Natural Resources to ensure that the permit was being complied with revealed that the dredge area was three or four times larger than it should have been and that, while the permit was for construction of a low head weir, the structure was in fact a dam, without any flow measuring device, without any flow except for seepage, and with the effect of dewatering downstream portions of the stream.

The irrigator made request for revision of the original permit to allow continuation of irrigation. The request was denied. It was explained to the irrigator that the original placement of the dam was not consistent with the plans, no provisions were made for maintaining the minimum flow through the structure, and the dredge area was not constructed in accordance with the plan. As a result, the irrigator was instructed to take down his dam.

Cooperation between the public, the MUCC, and State personnel of the Department of Natural Resources resulted in overriding the recommendation of the local fish biologist and removal of the dam.

## Evaluation

This approach, of calling for help of other organizations with the same interests, is one that should be used in conjunction with any approach to assist maintenance of instream flows.

## RIPARIAN RIGHTS

### Opportunity

Riparian landowners may be able to assert their rights to protect stream-flows.

### Background

The riparian doctrine had its substantive beginnings in the common law of England, sometime after the reign of James I. At that time, approximately 1604, it appears that many of the English water law cases applied the concept of first in time, first in right (i.e., the appropriation doctrine) to settle disputes between millsites.

The riparian doctrine provides that only owners of land along a stream have any rights to use of the water. In the United States the riparian doctrine has been divided into two versions: the natural flow and the reasonable use versions.

The natural flow version is thought to be the traditional English version and simply states that every "riparian owner" is entitled to the undiminished flow of the stream past his property.

A "riparian owner" is a person who owns land which touches the stream. Land may be riparian regardless of its length along the stream. In theory, if only one molecule of dirt touches the stream, the land is riparian. Once one leaves the banks of the stream, however, the extent of riparian land becomes a complicated legal issue. In some States, after land is included within a larger parcel which touches the stream, that land becomes riparian and stays riparian, regardless of whether or not it is severed by a subsequent conveyance. In other States, however, land remains riparian only as long as it remains part of the land which is touching the stream and if, for some reason, that land is severed from that parcel, it loses its riparian character. If, for example, a riparian parcel was bisected by a highway which paralleled a stream, in some States the upslope portion of that parcel above the highway would lose its riparian character.

Within riparian law, Michigan follows the reasonable use test (Hoover v. Crane, 362 Mich. 36). This theory allows each riparian landowner to use the water passing by his land for his own purposes, on the condition that he pay due regard to the effect of that use upon other riparian owners and upon the public in general [Restatement of Torts, Section 1315d (1939)]. Some requirements or tests for reasonableness are: (1) The purpose of the use must be lawful and beneficial to the user and suitable to the stream; (2) the use must have some social utility; (3) the use must be made on riparian land;

(4) the quantity diverted must be reasonable in light of the total flow of the stream; (5) the use must not pollute the stream to the harm of lower users; and (6) the manner or rate of flow must not be appreciably altered.

In the context of preserving instream flows, the riparian doctrine offers many challenging problems, two of which are of immediate concern: (1) the case law which usually incorporates principles of prior appropriation; and (2) the concept of anticipatory damages or condemnation.

It appears from an analysis of many riparian cases that "riparian rights" is merely another way, and perhaps a less precise one, for applying appropriative rights. Although the case law in riparian States is full of talk concerning reasonable use or natural flow, the courts seem loath to curtail the earlier user for the benefit of the later user, regardless of the social value of the later user's use. Consequently, the riparian doctrine may simply be a less specific and less codified version of the essential common sense which is inherent in the prior appropriation doctrine.

It may be unreasonable to expect courts to consistently enjoin upstream uses which interfere with the flow of water needed for instream values when those upstream uses have significant economic value. The practice of condemning riparian water rights (or perhaps covenants not to sue for the violation of those rights) may well be the only certain approach available to those public agencies interested in maintaining instream flows.

Many individuals, organizations, and agencies in Michigan have riparian rights to water. These riparian landowners can protect their rights whenever their use of the stream is threatened or impinged by upstream uses; protecting riparian uses downstream may ensure that instream flows will be maintained.

Many State authorities feel that the riparian doctrine is a working doctrine which actually protects Michigan waters. To its supporters, the doctrine does not seem cumbersome or expensive, and attempts to modify it are perceived as threats to the public trust doctrine and the State's natural resources. The abundant fresh surface and groundwater with which Michigan is supplied explains the popularity of the riparian doctrine in that State, as does the fact that it enjoys interior lakes and short watersheds. No single point in the State is far from one of the Great Lakes. Riparian doctrine principles are much easier to apply to a short watershed than to a long one.

Michigan riparian doctrine prevents transfer between watersheds. In Michigan, the "severance rule" is applied when property is separated. The only land considered riparian is the original deeded property. Once separated from the original property, any parcel is never again riparian land, even if added to the original parcel at a later date.

A user of water who is nonriparian may be able to establish a claim to use the water through a type of adverse possession. If the non-riparian user makes open and hostile use of the water, which his riparian neighbor knows about, and is not challenged for 15 years, the non-riparian user can gain a prescriptive right to the water. In such a circumstance, the owner would need to bring a quiet title lawsuit to determine the relative water rights among the parties.

## Example

The recent Farm Bureau Water Rights Task Force has pointed out that riparian rights are often exercised at the District Court level, where they go unreported, and cites the case of Creeton Foster v. DNR&WCR (Ingham County Circuit Court, File No. 9906-C, 1972). This suit resulted from an attempt to implement the Surplus Waters Act, which is Michigan's legislative example of a combined riparian and appropriation system. The Water Resources Commission developed a "Plan for the Management of Surface Waters of the Pine River, a Segment of the Tittabawassee River Basin, as Revised by the Water Resources Commission, February 2, 1969." Creeton Foster claimed that his aesthetic riparian rights were jeopardized by this plan, which was held unconstitutional, along with the Surplus Waters Act, by the trial court. Since the decision was not appealed, this Act has been left in limbo, and the riparian aesthetic rights have been protected.

## Evaluation

Because of the many problems raised by varying and uncertain riparian water rights applicable to parcels of land which change periodically in size and nature, the Michigan Farm Bureau Water Rights Task Force recommended that legislation be enacted to implement a water use permit program for both surface and groundwater on a critical water area basis. Other recommendations of the Task Force included a legislative clarification that the riparian rights doctrine applies to groundwater, establishment of minimum instream flows and maximum groundwater withdrawal rates, identification of critical water management areas, and the abolition of the severance rule and permission of transfer of irrigation water. These are all substantial variations in the present riparian rights doctrine in the State.

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PART II: WISCONSIN

## INTRODUCTION

Wisconsin has a history of concern for the public trust, grounded in the navigability of waters, which predates and is included in the Wisconsin Constitution. Because of this overriding concern for the public trust, coupled with the fortunate rainfall and hydrological situation of the State, there are few streamflow problems in the State which have not been successfully solved.

There are some quality problems with groundwater in Wisconsin. Because a great deal of the soil is acidic or glacially deposited sands, some of the nitrogen applied to crops may go down into the groundwater supplies, if water is applied too fast.

Another characteristic of Wisconsin is its capacity to turn development into a resource benefit. An example of this can be seen in Portage County. In the Portage County Drainage District, in the middle of the State, there are a number of old drainage district ditches which replace natural streams in the area. These drainage ditches run through 11,000 acres owned by a society developed to protect prairie chickens, and are so clean that they are full of brook trout.

ADMINISTRATIVE CONTROLS BY THE WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

## INTRODUCTION

The Department of Natural Resources (DNR) is an all purpose agency and has within its control practically all matters which effect instream uses in the State. DNR is responsible for: the protection, development, and use of the Wisconsin water, air, forest, fish, wildlife, and other plant and wild animal resources; and for the control of solid waste and refuse disposal.

Policy decisions are made by a Natural Resources Board of seven members, appointed by the Governor with the advice and consent of the Senate. The Board appoints a Secretary, who is the chief executive officer of the Department. The Secretary is responsible for the management of the Department in accordance with the statutes, rules and policies of the Board and reports directly to the Board. The Office of the Secretary includes the Secretary, the Deputy Secretary, and an Executive Assistant. Also contained in the Secretary's office are the intradepartmental functions of planning and analysis, budget preparation, legal services, and coordinated intergovernmental programs. The department is divided into several divisions (Department of Natural Resources, 1980: 1-2). Even though the organizational structure sometimes changes, the functions described below for 1980 remain in effect.

- (1) The Division of Environmental Standards plans and coordinates water quality standards development, water supply, air, and solid waste management programs.
- (2) The Division of Resource Management plans and coordinates the development, protection, and utilization of forest, fish and wildlife resources, other wild plants and animals, and other outdoor recreation resources of the State.
- (3) The Division of Enforcement plans and coordinates a program of law enforcement encompassing all departmental enforcement responsibilities, including environmental actions, fish and wildlife violations, water management and zoning matters, air and solid waste management, park and recreation area responsibilities, and forestry matters.
- (4) The Division of Management Services provides administrative and technical services for the Department.

- (5) There are six field districts; each field district operates under the line control of a single district director who is responsible to the Office of the Secretary.

Each bureau within a division has several sections. Communications within the DNR are maintained informally between all the sections. The entire Department runs much like a successful business or military organization.

The Department of Natural Resources was created in 1966 as an umbrella agency. For five years, that agency was plagued with problems resulting from the forced marriage of different agencies. When Secretary Anthony Earl took over in 1971 he changed the agency into a more integrated one where traditional conservation functions and environmental protection programs work together.

There are some gaps/overlaps in statutes governing various resource problems such as handling of hazardous chemicals, groundwater protection, septic systems, and wetland protection. In each of these areas, the DNR shares regulatory authority with other agencies such as the Department of Agriculture and the Department of Health and Social Services. Part of the DNR wetland protection program is also dependent on the participation of local governments and zoning boards (Druckenmiller 1983). For instance, the Department of Natural Resources does not have control over wetlands which are not within the ordinary high water mark of the stream nor within 300 feet of the stream or 1,000 feet of a lake (this authority rests with local flood-plain-shoreland zoning authorities). From time to time water legislation is enacted and new permitting programs are initiated by the Department of Natural Resources. For instance, in 1967, the first permit was issued for instream dredging. The agency administers decentralized water regulation and zoning programs in which permits are granted at offices around the State. Appeals of denied permits are held before a separate agency hearing panel.

The Conservation Act guides the protection, development, and use of all Wisconsin forests, fish, game, waterways, and plant life by the Department of Natural Resources (Wisc. Stat. Ann. 23.09). The DNR has made rules to carry out the provisions of the Conservation Act, violation of which is a misdemeanor.

Among other duties, the DNR is to establish game and fish refuges, broadly described as "localities" "to secure the perpetuation of any species of fish and the maintenance of an adequate supply thereof ... for the purpose of providing safe retreats in which fish may breed and replenish adjacent fishing waters" (Wisc. Stat. Ann. 23.09). The DNR is empowered to purchase, lease, or receive by gift or agreement lands or waters, and may condemn lands or waters once the approval of the senate and assembly committees on natural resources has been granted. Purposes for these lands and waters include: State forests; State parks (for the purpose of preserving scenic or historic values or natural wonders); public shooting, hunting, or fishing grounds; fish hatcheries; game farms; forests; nurseries; and stations.

The Conservation Act allows the Department to acquire easements, including negative easements and restrictive covenants, for public access and use of lands for scenic beauty, hunting, and fishing. The DNR is also directed to extend and consolidate lands or waters by exchanging them with others.

Although blocking or consolidation of lands is not always the best way to protect a stream, blocks of land, rather than strips along the stream bank, can help protect watersheds. The Department of Natural Resources is also charged with fire fighting for forest protection.

The DNR is to develop a program for classifying lakes and streams by use and is to make recommendations to cities and State agencies for protection and development of recreational waters. Other provisions of the Conservation Act provide for cooperation between State departments, allow condemnation of public highways to navigable streams, and permit the Department to fund one-half of the cost of public access to navigable lakes or streams; funds are no longer available for this purpose (Druckenmiller 1983).

After preparation of a master plan for the area and public hearings in the affected county, the Department is empowered to acquire, develop, and maintain State recreation areas when State lands and waters are environmentally adaptable to intensive recreational uses. The proposed acquisition must be submitted to the Governor for approval before acquisition of any lands by the Department after 1977 for any new facilities or projects (Wisc. Stat. Ann. 23.14). Although this applies to a broad range of projects, including State parks, State forests, recreation areas, and fish hatcheries, it does not, by its terms, apply to old projects and would probably not cover rounding off or blocking of old units of land.

## PROTECTION OF SPECIAL AREAS

### Opportunity

The Department of Natural Resources has a statutory opportunity to protect areas which are uniquely valuable, including wetlands, natural and scientific areas, wild rivers, and areas important to endangered and threatened species (Wisc. Stat. Ann. 23.32; 23.092; 23.27; 29.415).

### Background

Wetlands. The Department of Natural Resources is preparing maps to identify individual wetlands in the State of five acres or more (Wisc. Stat. Ann. 23.32). Wetlands include marshes, swamps, thickets, bogs, or wet meadows and other specifically defined areas. These maps are to be completed by 1 July 1984 and may be made through soil surveys, aerial photographs, and on-site surveys.

Natural areas. Natural and scientific areas are defined as tracts of land or water with native biotic communities, unique natural features, or significant geological or archaeological sites. Natural areas are "remnant areas which have largely escaped disturbance ... or which exhibit little recent disturbance" (Wisc. Stat. Ann. 23.092). Scientific areas are natural areas of State-wide significance which are useful for education or research. The Department of Natural Resources may acquire, manage, and operate natural areas to protect natural values, including wetlands, flood plains, wildlife habitat, and shoreland. The Department may acquire these areas only after a master plan has been prepared and public hearings have been held in the county.

The Scientific Areas Preservation Council examines and makes determinations on acceptance or rejection of scientific areas offered as gifts by individuals or organizations (Wisc. Stat. Ann. 23.27). It also makes recommendations to the appropriate Federal agencies or National organizations of State areas that are of National importance. Similarly, it advises the Department of Natural Resources and publishes an official list of scientific areas.

Endangered species. The Wisconsin endangered species statute urges "all persons and agencies to fully consider all decisions" in light of the fact that activities of both individuals and governmental agencies are destroying the few remaining whole plant-animal communities in this State (Wisc. Stat. Ann. 29.415). The Department is directed to assemble a list of endangered and threatened species in Wisconsin, including animals and plants on the United States lists of endangered and threatened foreign and native species. The list is to be revised periodically and may be amended after petition by three persons and a hearing.

The statute forbids the taking, transportation, processing, or selling of animals on the list; it also prohibits the removal or transport of any endangered and threatened species of wild plant away from its native habitat on public property, except for forestry or agricultural purposes or the construction of a utility facility. Wisc. Stat. Ann. 29.475 extends the protection of this statute to wildlife on Indian reservations. The provision prohibiting removal of wild plants from their native habitat is useful to persons seeking to prevent, for example, riprapping or straightening of a stream.

Wild and scenic rivers. The Wisconsin legislature has declared its intention to include the Lower St. Croix River in the National wild and scenic river system. It has also established zoning ordinance guidelines for the Department of Natural Resources and cities, counties, towns, and villages in the areas affected (Wisc. Stat. Ann. 30.72). The Pike River in Marinette County and the Pine and Popple Rivers in Florence and Forest Counties have been established as wild rivers by statute (Wisc. Stat. Ann. 30.26).

#### Example

The history of wild river preservation in Wisconsin goes back to 1905, when the State legislature prohibited the building of dams on the Brule River and established the Brule River Forest to protect the river. Similar legislation in 1908 protected a portion of the Flambeau River. During years of water power growth and development, power companies sought to inundate several wild rivers in Wisconsin by damming to provide electric power. For the first time, in 1937, the utility regulating agency in the State refused to grant a dam permit on the basis of the dam's effects on scenery and sport fishing.

Formal legislation in 1965 named the Pine, Popple, and Pike rivers as "wild rivers" and gave DNR the responsibility of implementing the law through leadership and coordination. A Land and Water Conservation Fund matching grant of \$750,000 is assisting the State in acquiring 7,000 acres of land along the three rivers in order to protect their scenic values.

The Board of the DNR has designated portions of the St. Croix, Wolf, Brule, and Flambeau rivers as "wild rivers" in policy decisions and is taking steps to protect their scenic and recreational values.

In most of the county forests in Wisconsin, of which there are over 2.6 million acres, scenic zones have been established on the banks of rivers to limit timber cutting. The U.S. Forest Service's forest management plan for Nicolet National Forest, through which portions of the Pine and Popple rivers flow, also recognizes the stream banks as "water influence" zones, deserving special consideration because of their scenic values.

## STATE PARKS AND FORESTS

### Opportunity

The State parks and forests are elements in protecting streamflows, both for watershed and to prevent development along the streams. Conservation easements or development rights may be acquired by the DNR as part of the park system in order to protect flows (Wisc. Stat. Ann. 27.01; 28.005 - 23).

### Background

Purposes of Wisconsin parks include public recreation, public education, conservation, and nature study (Wisc. Stat. Ann. 27.01). Areas may be included in the park system because of their scenery; plants and wildlife; or historical, archaeological, or geological interests. To acquire these parks, the Department of Natural Resources may purchase, lease, or acquire lands by agreement. It may acquire lands by condemnation if it has the approval of the legislative committees on natural resources. Roadside parks (five acres or more) next to State trunk highways are to be named and developed as part of the State park system.

The Attorney General has given his opinion that the State may develop dams and impoundments within parks [36 Op. Atty. Gen. 264 (1947)]. He has indicated that the DNR can acquire a life lease, in conjunction with fee title, on certain lands. It may also be possible for an easement or other limited ownership interest to be acquired by the Department as part of the park system.

Private properties which would round off or fill in State forests may be acquired by the DNR for the benefit both of the forests and the streams in them. The DNR may acquire lands or interests in lands by gift, purchase, or condemnation outside the boundaries of established State forests. The primary purpose of the State forests is silviculture and the growth of forest crops. Stabilization of stream flow is, however, mentioned as an extra benefit (Wisc. Stat. Ann. 28.005 - 23).

### Example

The Department of Natural Resources has vigorously exercised its statutory mandate to acquire lands. A 1970 Supreme Court of Wisconsin opinion helped set the limits of the Department's authority. A review of the case helps show

the persistence with which DNR has carried out its duties [Martineau v. State Conservation Comm'n, 46 Wisc. 2d 443, 175 N.W.2d 206 (1970)].

In 1962, the then State Conservation Commission (now DNR) attempted to purchase and then tried to condemn approximately 58 acres in Jefferson County, of which 30 acres constituted a large pond, originally a mill pond. This property belonged to a Mrs. Martineau. The property lay entirely within the boundaries of the Kettle Moraine State Forest. The Supreme Court held that the statute establishing State forest lands [Wisc. Stat. Ann. 28.02(2)] did not give the Department the power to condemn Mrs. Martineau's property. As a result of the Martineau case, in 1977, the legislature granted the Department the power of condemnation for private lands within the boundaries of the State forests to fill in or reforest. To bring a suit of condemnation the DNR must obtain approval from the appropriate standing committees of each House of the legislature.

### Evaluation

The persistence of the Department of Natural Resources in the case above indicates the vigor with which this policy is being pursued, to the benefit of instream flows and fishery resources in the State.

### DAMS

#### Opportunity

The Department of Natural Resources may control construction of dams for the protection of instream flows (Wisc. Stat. Ann. 31.01, et seq.; 29.59).

#### Background

The Department of Natural Resources is empowered to regulate and control the flow of all navigable waters and may require bench marks that show the maximum level of water that may be impounded and the lowest level of water that may be maintained by any dam in the State (Wisc. Stat. Ann. 31.01, et seq.). The DNR may also establish a level for any navigable water below which the water shall not be lowered. It may also require fishways and other appliances and devices on dams.

Application for permits to construct dams must include purposes, general descriptions, maps, and additional information required by the Department. A hearing is held on each application and evidence is taken in support or opposition to the dam, including such information as water temperature and testimony by fishermen. The Department may grant the permit if it finds that the dam is in the public interest, after considering ecological, aesthetic, economic, and recreational values, and if it also finds that the application indicates that the construction will comply with the Department's regulations on flowage. Section 31.06 declares that the enjoyment of scenic natural beauty and environmental quality are public rights to be considered, along with other public rights, such as economic need for electric power. The Department is directed to weigh the present recreational use and scenic beauty of the river against the proposed recreational use and scenic beauty of the proposed lake. The

Department shall deny the permit if: (1) it appears to the Department that the river in its natural state offers greater recreational facilities and scenic value for a larger number of people than can by proper control of the flowage level, be obtained from the use of the lake and lakeshore; (2) it appears that the remaining sections of the river and other rivers in the area provide an insufficient amount of recreational facilities and scenic beauty; and (3) it further appears to the Department that the economic need of electric power is less than the value of the recreational and scenic beauty of such rivers. The Department shall also deny the permit if it finds that approval will cause environmental pollution.

Under Section 31.07, persons, firms, corporations, or municipalities who wish to maintain a dam constructed without specific legislation approved before 1915 must apply for a permit from the Department of Natural Resources, and a hearing is then held substantially like the one described in Section 31.06.

This statute thus includes both existing and proposed dams. The applicant for a new dam is to submit to the DNR a detailed and complete map and profile of the dam showing hydrographic, flowage, and topographic data as the Department may prescribe. Under Section 31.13, the owners of existing dams who wish to raise or enlarge their dams must also apply to the Department for permission to do so and must go through approximately the same procedure as is required of the builder of a new dam. Further, the owner of a dam must obtain a permit before he may abandon, remove, or alter the dam, and must go through the same hearing procedure as if he were constructing a new one. Transfer or assignment of any permit granted under these statutes must be approved in writing by the Department of Natural Resources.

Under Section 31.25, any dam, bridge, or other construction built or maintained over any navigable waters of the State in violation of this statute is a public nuisance. This means that the construction and maintenance of the dam may be stopped at the suit of the State or any citizen of the State.

The owners of land on nonnavigable streams may construct dams for any purpose whatsoever, subject to regulations of the Department, on the condition that the dam will not injure other dams or dam sites. These dams are also licensed by the Department and subject to the regulations of the Department. Special civil liabilities and procedures exist for damages caused by dams or privately owned bridges across the Wisconsin River and the Black River or any of their tributaries (Wisc. Stat. Ann. 31.26).

Every dam on a navigable stream is required to pass at all times at least 25% of the natural low flow of the water of each stream, except as otherwise provided by law, unless the water is discharged directly into a lake, millpond, storage pond, or marsh, or when, in the opinion of the Department, this discharge is not necessary to protect fish life (Wisc. Stat. Ann. 31.34). Fines are provided for violation of this statute, which establishes a minimum below which downstream flow may not go without special permission from the Department.

After notice to the owner, the DNR may remove old and abandoned dams in streams. Conversely, if the Department determines that conservation may be

promoted, it may maintain and repair any dams located on State lands, after "...giving due consideration to fixing the level and regulating the flow of public waters" (Wisc. Stat. Ann. 29.04). The Attorney General has indicated that State funds will be available for conservation of fish and game through reconstruction of deteriorated milldams (Op. Atty. Gen. 2 July 1974).

The Department of Natural Resources is authorized to remove all detrimental structures built by beavers, on consent of the owner of the land on which they are located (Wisc. Stat. Ann. 29.59). If the owner refuses to give consent to the Department, he is liable for damages arising from the beaver structures, such as damage by blockage of a drainage ditch.

There is considerable interest throughout Wisconsin in reinstalling hydroelectric power plants in small dams. This program does not, however, have much potential for meaningful generation of electricity. In 1964, 10% of Wisconsin's electricity came from hydropower; in 1980, between 3 and 4% of the electricity came from hydropower. At the present, the largest dam in the State, the Wissota Dam on the Wisconsin River, produces 38 megawatts of power. The capacity of the 55 best new candidates for dams in the entire State combined would amount to 18 megawatts of power. This proposed program has two disadvantages: capacity to damage instream flows and the inability to increase electrical power supply substantially. This can lead to problems such as the one now experienced in the lower White River. A power dam in Washura County on a good trout stream is now storing water at night and reducing instream flows. The fish management staff of the DNR is investigating the stream to determine the amount of flow required to support the fisheries resource. The DNR may order that this amount of flow be released continually by the dam, making it a river-run dam rather than a storage dam.

Because the DNR operates reactively, it does not fully review every dam permit application that comes in. All permits are, however, reviewed to some degree (Druckenmiller 1983). The citizen with a problem may make a complaint. The U.S. Fish and Wildlife Service (USFWS) generally asks the Department of Natural Resources for information on permit applications which come in under Federal programs and relies on the Department to supply this information.

#### Example

In 1977, the Northwestern Wisconsin Electric Company made application to purchase the Black Broom Dam from Polk County. The company wished to use the dam to produce hydroelectric power. Some \$65,000 was spent by the county to improve and maintain the dam before its sale. The company made two applications: One to the Federal Energy Regulatory Commission (FERC) for a minor license to install and place in operation a hydroelectric generating facility; another to the DNR for a permit under Section 31.185 to transfer ownership of the Black Broom Dam. The DNR permit was granted and an order issued in April, 1977. The findings of fact stated that the proposed transfer of ownership would not adversely affect water quality, increase water pollution in the Apple River, nor cause environmental pollution.

During the hearings before FERC the DNR submitted, through the USFWS, information to assist FERC in its decision whether or not to permit the dam to be operated for hydroelectric power. As part of the information supplied, the

DNR reviewed the present uses of the water above and below the dam, such as fishing, hunting, trapping, and recreational boating; evaluated the effect of the dam on those activities; and made recommendations regarding water level fluctuations. The DNR also considered the effects of the proposed project on fish and wildlife interests. The Department evaluated the types of fish which used the water and the purposes for which they used the water, the types and uses of wildlife, and the potential effects of the dam on fish and wildlife. These evaluations included such matters as the fact that Black Brook Dam is a complete barrier to the passage of carp. This is an important consideration because it results in a carp-free environment upstream.

The Department of Natural Resources listed measures necessary to protect fish and wildlife interests affected by the proposed use of the dam and recommended that the FERC take measures necessary to ensure:

1. That access remain adequate;
2. That maximum pool fluctuation be established and tied to appropriate vertical controls;
3. That operation and maintenance of the dam guarantee that no carp or other undesirable fish be allowed to pass upstream;
4. That during the period of ice formation, pool water elevations be kept constant; and
5. That discharge or tailwater elevation (tied to appropriate vertical control) be established so as to reasonably protect public interests downstream.

The USFWS has asked the Department of Natural Resources to establish minimum flows downstream from that dam. This case illustrates the fine-tuned cooperation of the Department of Natural Resources, USFWS, and FERC in protecting instream flows and habitat in Wisconsin.

#### Evaluation

The Wisconsin DNR uses its statutory powers to review, condition, and carefully grant dam permits in a way that takes instream uses into consideration, at little additional administrative cost.

#### DIVERSION OF WATER

##### Opportunity

Diversion of water from lakes and streams, both navigable and non-navigable, is governed by statute and DNR regulations (Wisc. Stat. Ann. 30.18; DNR 1982: Chapter 90).

## Background

It is lawful to temporarily divert and use surplus water from any stream in order to maintain the normal level of a navigable lake or stream, regardless of whether the waters are in the same watershed. Water which is not surplus water may be diverted for agriculture or irrigation purposes with the consent of riparian owners who may be damaged by the diversion. "Surplus water" means the water of a stream which is not being beneficially used. The Department of Natural Resources determines how much of the flowing water at any point in the stream is surplus water (Wisc. Stat. Ann. 30.18).

Any person wishing to divert water must apply for a permit from the DNR giving the point of diversion, the location and description of the diversion works, the amount to be diverted, proposed time of diversion, and any additional information the Department requires. A public hearing is held for each application, and a permit may be issued if the water is surplus water or if the riparian landowners injured by the diversion have consented to the diversion.

No new permits shall be issued for diversion of water from any trout stream designated by the Department in Publication 213-57, and subsequent versions, without prior written approval by the DNR [Wisc. Stat. Ann. § 30.18(5)]. Permits issued after 1 August 1957, are reviewed annually and are subject to revocation if the Department finds that the withdrawal of water is detrimental to the stream or lake or other riparians. The Department can revoke any permit for diversion from any trout stream when it is desirable to do so for conservation purposes. The Department has continuing jurisdiction and control over the quantity of water to be taken, so that only surplus water is to be diverted from the natural channel. All reviews and determinations made by the Department are subject to judicial review. A permit for diversion of water from a trout stream requires prior written consent of the DNR, originating with the District's staff specialist for fish management [Wisc. Stat. Ann. 30.15(5)].

The DNR permit program regulates diversions for agriculture and irrigation only and controls industry use of water through DNR's pollution program. Because all these activities are located in the same agency, they can be quickly and accurately correlated.

Prior use. The permit requirement has changed the common law riparian right of irrigation and has introduced the element of prior use into Wisconsin water law [*Omernick v. Department of Natural Resources*, 71 Wisc. 2d 370, 238 N.W.2d 114 (1956)]. The following history of the diversion statute is taken from the DNR Water Regulation Training Material (DNR 1982: Chapter 90).

The State legislature adopted the surface water diversion statute, which became Section 31.14, Wisc. Stat. Ann., on 26 July 1935. The legislation originally intended to allow temporary diversion of surplus water to restore or maintain the levels of lakes lowered during the drought of the early 1930's. However, the bill was amended to include the permit requirement for agricultural and irrigation diversions.

Major amendments to the statutes took place in 1957, 1959, and 1963. The 1957 amendment allowed the diversion of water onto contiguous land and provided a mechanism to revoke permits. The 1959 amendment included the various provisions relating to trout streams and specified that, following an annual review, permits could be revoked. In 1963, the "contiguous land amendment" was renewed. The 1963 amendment made a biannual review provision permanent.

In addition to the training materials, statutory interpretation has been made by several Supreme Court decisions:

Nekoosa - Edwards Paper Company v. Public Service Commission  
[8 Wisc. 2d 582 (December 1, 1959)]. This case resulted from the Public Service Commission's (PSC) issuing permits to two irrigators on Buena Vista Creek in Portage County. The PSC determined that the diversion was of nonsurplus water but that no injury would result to the Nekoosa-Edwards Paper Company and various other downstream beneficial users. The court held that the PSC had no authority to rule on the question of injury. Once the diversion had been determined to be of nonsurplus water, consent was required for the downstream beneficial users and the alleged lack of injury was not a basis for issuing the permit.

State ex rel. Chain O' Lakes Protective Association v. Moses  
[53 Wisc. 2d 579 (February 1, 1972)]. The decision emphasized that permits under Section 30.18 are required only for the three specific purposes enumerated in the statute and not for all diversions.

Ray Omernick v. State of Wisconsin  
[64 Wisc. 2d 6 (June 4, 1974)]. The decision answered a variety of questions relating to Section 30.18. Section 30.18 clearly applies to both nonnavigable and navigable streams. The permit requirement is not limited to diversions from one stream to another and is required for all types of diversions specified under the statute. A permit is required to divert surplus water. The statute does not deny equal protection of the laws and does not take property without just compensation and, therefore, is constitutional.

Ray Omernick v. Department of Natural Resources  
[71 Wisc. 2d 370 (February 10, 1976)]. The court held that the "veto power" of downstream riparian property owners is constitutional. The thrust of the decision is that the permit system introduces the element of prior appropriation into Wisconsin water law.

Circuit and County Court decisions have also interpreted the statute. A 1977 case in Sawyer County somewhat clarified the status of cranberry growers with respect to Section 30.18. The decision in the case of State of Wisconsin, et al. v. William D. Zawistowski, et al., held that Section 30.18 does not apply to cranberry culture in spite of the provisions of Chapter 94 of the Wisconsin Statutes. In this particular case, the court determined that the respondent would not need a permit to continue diverting. This opinion was upheld on appeal by the Supreme Court.

Other diversions. While several opinions of the Attorney General deal with related subjects, only one (39 OAG 564-568) specifically deals with surface water diversion. This opinion responds to several questions. The opinion discusses what constitutes an injury to public rights in the stream or to any riparian landowner on the stream. The opinion does not provide a clear answer but it does state that to merely reduce streamflow does not by itself injure either public rights or other riparians. (Because of the Nekoosa case, determination of injury with regard to lower riparian landowners is not up to the DNR). To determine if a diversion will injure public rights requires some factual basis. A mere percentage reduction of flow or reduction of water level is insufficient without being related to its effect on public rights.

The opinion further states that the riparian landowners whose ability to use water needs consideration are those located along the stream below the proposed diversion to the point where it flows into a larger stream and loses its identity. This interpretation of "on the stream" has been followed off and on by the Department and its predecessor agencies. At the present time, no specific meaning has been given to the term "on the stream" by DNR staff.

The opinion also discusses water reallocation among prior permittees when another permit is granted on the same stream. The Attorney General indicated that there is nothing in the statute which requires such a reallocation. The Supreme Court decision in Ray Omernick v. Department of Natural Resources, would appear to preclude reallocating any water without the consent of earlier permittees. Water uses not covered by Section 30.08 are subject to the common law rule that each riparian owner has the right to make a reasonable beneficial use of the water coming to him or her. Diverting water from a lake which results in a reduced flow of its outlet stream is a diversion from the outlet stream (the "outlet stream" must be a watercourse; i.e., there must be a defined bed and bank associated with it).

In 1974, the Attorney General indicated that a ditch connected by a watercourse to a navigable body of water is subject to Department jurisdiction regardless of its navigability before or after ditching or regardless of previous stream history. A permit, therefore, is required to divert from any artificial waterway which ultimately connects to a natural stream system (DNR 1980).

The DNR Training Materials (1982) outline the steps to be followed by applicants seeking diversion permits. After an application is submitted, DNR makes a field investigation to determine whether the proposed diversion would cause injury to public rights in the stream. The Department's establishment of the "public rights stage" (minimum water level necessary to allow diversion) is a major part of this investigation. The "public rights stage" is the highest minimum stream stage that will meet the needs of: (1) navigation; (2) fish and wildlife water based recreation; (3) aesthetic enjoyment; and (4) water quality preservation. This investigation has not taken into account downstream riparian owners (DNR 1982).

Under Section 30.08, when an application comes into the Department of Natural Resources, an environmental impact assessment screening worksheet is completed, describing the project in physical, biological, social, and economic terms. The worksheet is used to evaluate the adverse environmental impacts of

the irrigation, break out those that cannot be avoided, evaluate irreversible or irretrievable commitments of resources, establish alternatives, go through an elaborate evaluation process, and establish a checklist-type recommendation whether an EIS is required or not. On the basis of the study underlying the environmental impact assessment, a permit may or may not be granted. In order to prevent the diversion going below the "public rights stage" of flow, diversion is limited to a particular elevation, such as 88.17 feet in relation to the benchmark. The gallon-per-minute withdrawal rate is established and the months within which the water is to be used are also fixed. The maximum acreage to be irrigated is established by the permit. The permittee is required to install those devices required by the Department to monitor use, such as totalizing flow meters and other devices.

Before the permittee can sell or lease the lands, the permit must be transferred. The transfer must be approved by the Department before it can be exercised.

When the permit application is filed, and notification of it is received by a downstream user, the downstream user may object. Typically, this user is a valley improvement or power company district which is seeking a contract and payment for loss of its rights downstream. Notice of application for every upstream right is sent to all permitted downstream diverters and such groups as Trout Unlimited, the Wisconsin Ecological Society, the Sierra Club, and others who are on the notification list. Any party with just cause can petition the DNR to hold an advocacy hearing on the permit application and, thereby, become a primary party.

Several other statutes address specific diversion problems. The Great Lakes may be used by public utilities within 50 miles of the Lakes for water intake uses with the provision that each municipality must completely treat all sewage of the municipality and return the purified effluent to the Great Lakes Basin (Wisc. Stat. Ann. 30.21). Such public utilities may also improve the navigability of any of these waters and construct harbor facilities for the use of vessels carrying supplies for the operation of the utility. All these operations are subject to rules and orders of the DNR. For example, efforts to improve navigation on the Wolf River in southern Shawano County are prohibited.

Persons engaged in mining may, with the permission of the DNR, take water out of shafts and from lands upon which mining is conducted and convey them to another watershed (Wisc. Stat. Ann. 107.05). A hearing is required for such a permit. The statute declares that development of the iron ore resources of the State and consumptive use of the water to develop that iron ore are in the public interest. In considering whether or not to grant the permit, the DNR is to weigh the public rights in the stream, which may be adversely affected, against the public benefits which will result from iron ore mining and processing. Such granting or denial of permits is subject to judicial review. The Department is also to determine whether downstream riparian owners are to be given notice of the hearing, and, if the permit is granted, the applicant may acquire private rights of these riparian landowners by purchase or condemnation. The Department may impose conditions upon its permit for restoration of waters after the mining has been completed.

Enforcement of the conditions placed on permits is usually precipitated by three things: flow meters based on the downstream site of the diversion; monthly reports made by the diverter on the amount of water diverted; and observation by the conservation wardens in the district.

The DNR can issue permits for "non-surplus water" only if all the other beneficial users of the stream consent. It often happens that these beneficial users will consent for a fee. Beneficial users include diverters, power dam operators, discharge permittees, water suppliers, and permitted irrigators.

There are approximately 500 beneficial surface water users presently permitted by the Department of Natural Resources. The complexity of the permit process restricts the number of people who apply for diversions. As a result, diverters are turning to wells and the number of well permits is climbing for wells over 75 gallons per minute (Riebau, et al. 1980). These wells can be denied only if they interfere with municipal water supplies. Generally, there is adequate groundwater in the State and sufficient recharge to supply all the wells presently in use. There are regions, however, where groundwater supply is limited in dry years. DNR's Bureau of Water Quality covers private water supply by these wells.

One reason there is no drawdown of the aquifers involved is that most of these wells are used for irrigation of crops, which generally use only 15 inches of water per year, as opposed to 22 inches used by the conifers or 17 inches used by the grass which existed before the row crops were planted (Riebau, et al. 1980).

Well disruptions caused by the Bayfield hatchery operation are specifically covered by statute (Wisc. Stat. Ann. 29.512). If an owner or lessee of land complains to the Department of Natural Resources that operation of the well by the Department at the Bayfield fish hatchery has caused damage by disrupting well operations located within 10,000 feet of the fish hatchery well, the Department is to inquire into the matter. If it appears that the facts stated in the complaint are true, the Department will pay the claimant the amount of damages determined by the Department. If the amount of damages cannot be agreed upon, the claimant may present his claim to the Claims Board under 16.007. This statute, directed to a specific situation, could serve as a model for broader legislation covering groundwater interference or stream loss through well activities.

#### Example

Fish management guidelines are used by the Department to aid and determine the "public rights" stage of a stream, the stage or flow below which private water users may not draw. These apply to all streams, large and small, and require evaluation of instream and on-bank cover, food production, and available living space. In determining the public rights stage of streams, DNR employs several methods to ensure the accuracy, consistency, and reliability of its data. On nonnavigable streams, the flow or stage is at least that which represents a seven-day ten-year low flow. The stage or flow selected also is one which will preserve the existing aquatic habitat when fishery values exist. If the stream additionally contributes a major portion of the flow of

downstream navigable waters, the stage selected preserves downstream navigability. Navigable streams also require consideration of stream margin terrestrial habitat which depends on water levels for protection of natural scenic beauty, environmental quality, and navigability. The Montana Method is used as a rough rule of thumb to estimate minimum flow between 30 and 60% of the mean annual flow (DNR 1982). Various stream measuring techniques are employed to determine each portion of the public rights stage. On streams where U.S. Geological Survey (USGS) gaging stations are located and time constraints are substantial, the DNR investigator can use the variation of average flows between the different gaging stations.

On the Wisconsin River, diversion for cranberry bogs is finely tuned to the needs of the power companies, golf courses, and other large irrigators lower on the Wisconsin valley. Because the return flow from the cranberry bogs bypasses these power dams, irrigators advise the power company in advance so that power generation is not interrupted (Riebau, et al. 1980).

### Evaluation

The careful development, emphasis on accuracy and protection of the public rights in the streams involved, and consistent application of internal procedures by DNR offer more protection to instream flows than is found in nearly any other State. The protection is built into statutory requirements and protects instream flows as an integral part of the Department's operations. Protecting additional streams or handling unusual situations are unlikely to increase the Department's costs significantly.

## OTHER RESPONSIBILITIES OF THE DEPARTMENT OF NATURAL RESOURCES

### Opportunity

In some cases, powers of the DNR in water quality, recreation, and conservation may help protect instream flows (Wisc. Stat. Ann. 144.01, et seq.; 147.01, et seq.; 29.29; 23.30; 23.43; 29.175).

### Background

Water quality. Even though most States do not consider water allocation and water quality questions together, water quality rules occasionally affect water supply. The Department of Natural Resources serves as the central unit of State government to protect, maintain, and improve the quality of the waters of the State, both ground and surface, public and private (Wisc. Stat. Ann. 144.01, et seq.). The statute organizes a comprehensive program under a single State agency to enforce water quality, management, and protection programs and processes. The Department is required to formulate a long range comprehensive State water resources plan for each region of the State and submit to the Governor a report on the plan by 1 September of each odd numbered year. The Department also has broad powers to formulate plans and programs for: preventing and ending water pollution; adopting rules setting standards of water quality for the various waters of the State; issuing general orders and rules for various systems and means for preventing pollution; issuing special orders to particular owners; and issuing emergency orders without

prior hearing. The Department has control over all wells drawing over 100,000 gallons a day. It must approve such wells before their construction or operation. The DNR has other wide ranging powers under this statute, including all the powers of municipalities in cases of non-compliance with their orders. Findings and orders of the Department are reviewable by the courts.

The powers of the Department under this statute are indicated by an opinion of the Attorney General of 31 December 1971, in which he declared that the Department could order a municipality to construct a public water supply even though the electors of the municipality had voted against the construction of such supply. The State is divided into 12 regions, each with a regional water resources board, to advise the Department on regional water quality standards and problems.

The Department of Natural Resources has authority to issue pollution discharge elimination system permits, which may require that the capacity of water intake structures reflect the best technology available for minimizing adverse environmental impacts (Wisc. Stat. Ann. 147.01, et seq.). The pollution standards adopted by Wisconsin are the same as National standards under the Clean Water Act (FWPCA) (33 U.S.C. 1151, et seq.). This stipulation in the statutes had the effect of invalidating the Department of Natural Resources thermal regulations in 1979 (Wisconsin Electric Power Co. v. State Natural Resources Board, 90 Wisc. 2d 656, 280 N.W.2d 218).

It is a criminal offense in Wisconsin to deposit in any waters within the State a number of specifically listed substances, including oil, tar, garbage, refuse, debris, and the like (Wisc. Stat. Ann. 29.29). Operations of the State Department of Transportation are excepted. This statute is in addition to the FWPCA and Wisc. Stat. Ann. 144.01, et seq.. The Supreme Court of Wisconsin has determined that willfulness is not required for imposition of penalties under this statute. In other words, pollution that is claimed to be accidental can still trigger penalties [State v. Deetz, 66 Wisc. 2d 1, 224 N.W.2d 407 (1974)]. Under this statute and the regulations deriving from it, the Department of Natural Resources has extensive powers to control pollution within State waters.

Recreation. The Outdoor Recreation Program statute puts into effect a long range plan for a comprehensive system of State and local outdoor recreation facilities and services (Wisc. Stat. Ann. 23.30). The program includes lake rehabilitation, salmon production, wildlife management, fish and game habitat areas, creation of new lakes, lake and stream classification, and scenic or wild river preservation and use, among others. All governmental and nongovernmental agencies may coordinate their activities in this area through the Natural Resources Board, which recommends, to the Governor and legislature, policies and standards to guide the development of outdoor recreation resources in Wisconsin. The Board also coordinates the comprehensive long range plan, recommends legislative appropriation and fiscal allocations, advises Federal agencies of the best way Federal financial assistance and loan programs can implement the Board's plan and policies, and negotiates agreements between agencies which have overlapping authority or responsibility. In the absence of specific legislative instructions, the Natural Resources Board is also

charged with making the proper allocations of State funds in accordance with legislative intent [53 Op. Atty. Gen. 48 (1964)].

Conservation. The Conservation Works Projects Program is intended to develop human resources while conserving natural resources through projects designed to protect, develop, and provide for the use of forests, fish and game, lakes, streams, and other outdoor resources (Wisc. Stat. Ann. 23.43). The Conservation Works Board is empowered to establish rules for the operation of conservation projects, to establish camps either on or off the site of work projects, and receive assistance from all other agencies of State government to carry out its work. Programs under the Conservation and Works Projects Board can benefit instream flows by removing abandoned dams, clearing out industrial debris, or improving watersheds by planting.

Nongame species. In addition to regulating fish and game activities, the Department of Natural Resources is authorized to investigate nongame species to develop information on population, distribution, habitat needs, and other matters in order to determine necessary conservation measures. The Department has developed rules and programs to ensure the continued survival of nongame species (Wisc. Stat. Ann. 29.175). The Bureau of Endangered Resources, Division of Resource Management, DNR, conducts the nongame species program.

Impairment of natural resources. Persons owning all the land around a navigable lake which is completely landlocked may apply to the DNR for a permit to remove, destroy, or introduce fish in the lake (Wisc. Stat. Ann. 29.513). After holding a hearing, the DNR may issue a permit authorizing this activity, subject to conditions. It is possible that a permit of this nature would be applied for before persons begin filling in or otherwise destroying a "landlocked" lake with an eye to development. Wisc. Stat. Ann. 23.095 provides for a \$50 total fee for unreasonable waste, injury, destruction, or impairment of natural resources within the State.

While the fine is small, the range of activities covered is very large, and actual cases of waste or destruction that affect streams may be stopped by prosecution under this statute. In any case in which the Department has received application for a permit or statutory approval, the Department may require submission of an environmental impact report when the affected area exceeds 40 acres or the cost of the project exceeds \$25,000 (Wisc. Stat. Ann. 23.11). Preparation of an environmental impact report can be beneficial in several ways: It can help pinpoint potential problems; it puts the cost of planning solutions on the applicant; and it makes clear which permits should be denied.

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## COUNTIES AND CITIES

### COUNTIES

#### Opportunity

Wisconsin counties enjoy considerable autonomy in managing the land within their boundaries and offer a backup for consideration of instream flow needs and values (Wisc. Stat. Ann. 27.015; 28.10 et seq.; 23.09, et seq.; 59.07, et seq.; 92.01, et seq.).

#### Background

Planning. Rural planning includes planning for the health, general welfare, and "amenity of the settler," for county parks, recreational fields, fairgrounds, and community woodlands, and for the reservation of land for public uses along river fronts, lake shores, "fine outlooks from hilltops," and preservation of the native landscape (Wisc. Stat. Ann. 27.015).

Each Wisconsin county is to establish a County Rural Planning Committee, which is to propose to the County Board the setting aside of places of historic interest and protection and the preservation of unique and picturesque scenery along rivers, lakes and streams, and other remarkable scenery. The Planning Committee is also to consider and provide for the establishment of community parks and woodlands, and may, under the direction of the County Board, operate county parks for tourists, camping, and public amusement. To carry out these duties, counties may acquire land for public use by gift, grant, purchase, condemnation, or otherwise. Counties which have park boards do not need to have Planning Committees, but may have the park board carry out these functions. The County Board of any county with a population of less than 500,000 has local legislative and administrative powers to care for public parks in the county and may levy taxes, issue bonds, and make assessments against property for these purposes.

Public forests. County Boards may also establish county public forests and acquire land for these forests by tax deed or otherwise (Wisc. Stat. Ann. 28.10). This provision has resulted in the setting aside of 2.6 million acres of Wisconsin land for county forests, which offers a substantial protection to wilderness values and watersheds. Under Section 28.11, a comprehensive forest land use plan is to be prepared by the county forestry committee and is to include land use designations, land acquisition, and fish and game management. This plan is to be revised as conditions require.

General welfare. Cities and counties in Wisconsin, as in all the United States, have broad powers to provide for the general welfare of their citizens (Wisc. Stat. Ann. 59.07). The Board of each county has general powers, such as to hold and acquire real property, and it has specific powers through the county recreation committee to promote recreational activities, to appropriate money to assist in developing watershed protection areas, to improve artificial lakes within or next to county parks, to advise governmental bodies on matters affecting preservation of natural beauty in the county, and to deal with county forests.

The county, in some cases, may be more receptive than either State agencies or municipalities to protecting instream flows in their county through acquisition of county park or forest lands or other county powers. For instance, county zoning ordinances under Wisc. Stat. Ann. 59.97, can specifically protect natural watercourses from filling, dumping, and building.

The DNR is empowered to grant counties up to 50% of the cost of certain outdoor recreation projects (Wisc. Stat. Ann. 23.09, et seq.). Application may be made by the County Board of any county for such facilities as picnicking areas, camping grounds, nature trails, snowmobile trails, beaches, wells, and pumps. In making these grants, the DNR is to consider whether the proposal is an integral part of an official comprehensive land and water use plan for the area, and proposals of this type shall be given first priority if funds are limited. On the assumption that a comprehensive and official land and water use plan for a countywide area will be beneficial to instream flows, this statute, if properly administered, could act as a considerable incentive for the development of those plans and thus protect streams.

County Boards which have passed resolutions indicating their desire to carry out a program of coordinated fish management projects may also apply to the DNR for State aid. These fish and game projects may include, among others, such projects as: creation of impoundments; construction of nature trails; fish and game habitat creation or improvement; construction of fish shelters; stream-side fishing; rough fish control; and other approved fish and game management projects. While the statute does not address itself directly to the acquisition of water or maintenance of flows, such projects would seem to be within the intention of the statute, and State aid should be available for such projects.

The Department may also allocate funds to County Boards which desire to improve the natural environment for game and nongame species on county lands, if the counties satisfy certain conditions [Wisc. Stat. Ann. 23.09(17m), et seq.]. Similarly, the Department may allocate funds for State aid to be given for park and other outdoor recreational facilities in accordance with comprehensive plans.

Conservation Districts. The Department of Natural Resources administers the nonpoint source water pollution program in the State and makes water quality rules after consulting with the Board of Soil and Water Conservation Districts affected. The Department is to identify plans provided for under Section 208 of the Federal Clean Water Act (FWPCA) and identify local management agencies and the best management practices for controlling nonpoint

sources of water pollution which are eligible for cost-sharing grants (Wisc. Stat. Ann. 144.25). Soil and Water Conservation Districts are responsible for assisting local management agencies in preparing detailed programs and in local coordination, technical assistance, and public education. Grant payments may be made by the State not to exceed 50% of the cost for nonpoint source projects.

Soil and Water Conservation Districts take their statutory authority from Wisc. Stat. Ann. 92.01, et seq., which direct each District to carry out measures for the conservation, development, and utilization of both navigable and nonnavigable water, including but not limited to engineering operations such as floodways, dykes, ponds, and floodwater retarding structures.

Soil and Water Conservation Districts will have special expertise as a result of long continued work with the problems of these counties in natural resources. The Soil and Water Conservation District is the authority to make grants to farmers for abatement of agricultural nonpoint source water pollution and establishes eligibility and priorities for distribution of grants. Distribution of these grants has a significant effect on instream flow and pollution.

## CITIES

### Opportunity

Like counties, cities, towns, and villages have extensive general powers and, in some cases, similar funds. They may assist instream uses by protecting waterways, either through city or town forests and parks, or regulations protecting their watershed. Municipal disposal of waste water, used in other States, may protect and assist instream flows in Wisconsin (Wisc. Stat. Ann. 144.26; 17.08, et seq.; 30.30, et seq.).

### Background

City Park Boards have considerable power in establishing parks, within, partly within, and without the city limits (Wisc. Stat. Ann. 17.08, et seq.). When a stream is located in or near a city, the City Park Board may wish to locate or expand parks along the stream, which should protect flows by preventing development adjacent to the waterway.

Municipalities can make harbor improvements within or adjoining their boundaries (Wisc. Stat. Ann. 30.30, et seq.). They may fill, excavate, dredge, construct docks, build dock walls and shore protection walls, and take other steps which they feel are necessary. They may also make special assessments for benefited lands and acquire lands or interests therein to carry out these powers. They may cooperate with the Federal government in harbor improvements. Cities may lease wharfing privileges and may, operating through a board of harbor commissioners, construct or maintain railway facilities or harbor beltlines. They may also sell revenue bonds to finance harbor improvements.

In addition to these statutory possibilities, cities and townships can initiate land disposal of municipal waste programs, to the benefit of streams and taxpayers. Land disposal of municipal waste helps maintain instream flows

in two ways: (1) land which is irrigated by municipal waste is not drawing on surface or groundwater supplies as an independent source of water (in other words, the city's water is being used twice, and the irrigating farmer is not imposing a drain on the water source); and (2) irrigation use of municipal water reduces the pollution load that streams might otherwise have to carry.

The application of waste water to agricultural land from municipal treatment plants and industrial sources has been practiced both in the United States and in foreign countries for many years. When waste water is applied to the soil-plant environment, suspended solids and nutrients are filtered out, and the water is either utilized by crops or percolates to subsurface drains or to groundwater.

As a result of the FWPCA, many communities are upgrading their waste water treatment plants. Land application of waste water is an alternative treatment plan which is economically attractive to small rural communities.

### Evaluation

In every case, assistance and cooperation may be needed from those implementing local zoning, nuisance, and health codes. A supporter of the program should seek the early involvement of local officials to ensure that the process is fully understood. In some cases, it may be wise to restrict the type of crop grown to one which is not intended for human consumption in raw form. For example, the crop grown on fields irrigated with Lubbock, Texas, waste water is cotton.

Key factors, which assist in establishment of this kind of program, include:

- 1) A long term contract between the city and the irrigator;
- 2) Close control of municipal sewer uses so that toxic chemicals or heavy metals are not introduced;
- 3) Adequate storage and water routing facilities so that several days water can be held when weather conditions prevent disposal on the land;
- 4) Land with less than 1% slope, so that water can be applied quickly and uniformly over the fields with reduced danger of runoff into nearby surface water supplies;
- 5) High soil organic matter levels to improve water intake rate, and soil aeration;
- 6) Proper crop management to maximize water and nutrient intake; and
- 7) Matching the type of crops grown, crop rotation, and acreage irrigated to the volume of water in the system.

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## COMPACTS

The Great Lakes Compact Commission reports biennially to the Governor on the work of the Great Lakes Compact (Wisc. Stat. Ann. 14.76). Under Section 14.78, the Great Lakes Compact Commission investigates the project connecting the Great Lakes with the Atlantic Ocean by means of the Welland Canal and the St. Lawrence River and urges Congress to enact additional legislation for this waterway.

The boundary area compact, signed between Michigan and Wisconsin, is designed to develop recommendations relating to the present and future protection, use, and development of the lands, river valleys, and waters which separate these two States (Wisc. Stat. Ann. 14.82). It promotes consideration by joint regional planning of boundary areas; measures for controlling air and water pollution; maintenance of water quality and control of water use in the area; programs for control of soil and river bank erosion; general improvement of river basins; diversion of waters from and into rivers in the area; and restrictions and regulations of land use development to preserve scenic attributes of the river basins.

The Minnesota/Wisconsin Boundary Area Commission sets overall policy for management of the St. Croix River. The St. Croix is a boundary water between Minnesota and Wisconsin. The lower portion of the river is managed by the U.S. Park Service as part of the National wild and scenic rivers system. Policies developed by the Commission most frequently address land development and recreational use of the river. Commission members consist of a representative from each State and the Park Service (Lokkesmoe 1983).

Under Section 14.85, the Mississippi River Parkway Planning Commission assists in coordinating a program for the development of the Great River in Wisconsin and such aspects of it as parks, forests, and water-oriented facilities.

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## RIPARIAN RIGHTS

### OPPORTUNITY

Individual riparian owners can protect their rights to a stream and benefit instream uses. The following discussion is a very brief overview of the law of riparian rights as it operates in Wisconsin. For a more comprehensive discussion see Dewsnap and Jensen (1975).

### BACKGROUND

Wisconsin riparian rights in surface streams are subject to the doctrine of reasonable use. Similarly, the withdrawal of groundwater is limited. It must be used for a beneficial purpose, it must not cause unreasonable harm through lowering the water table or reducing artesian pressure, and it must not have a direct and substantial effect on a water course or lake. If the withdrawal causes any of these conditions, it is subject to liability for interference with the use of water by another riparian owner [State v. Michels Pipeline Construction, Inc., 63 Wisc. 2d 278, 217 N.W.2d 339 (1974), supplemented on rehearing 63 Wisc. 2d 278, 219 N.W.2d 308].

In Wisconsin, riparian rights rest on title to the bank of the stream, not the soil under the stream, although the owner of meandered streams owns the land under the river, subject to public right of navigation. Rights include bathing, boating, and swimming and are compensable property rights. A riparian owner may pump part of the water out of the stream to irrigate his crops and water his cattle, and "his muskrats" may use the stream to gather vegetation for the construction of muskrat houses or for food [Munninchoff v. Wisconsin Conservation Comm'n, 255 Wisc. 252, 38 N.W.2d 712 (1949)].

No person, whether riparian owner or not, may destroy or impair navigable waters in the State. Conversely, Congress may not impair riparian rights by legislation which has no substantial relation to navigation control [State of Wisconsin v. State of Illinois, 278 U.S. 367, 49 S.Ct. 163, 73 L. Ed. 426 (1929)].

The title of a riparian owner on a navigable stream extends to the middle of the stream, but is qualified and subject to the public right and all its incidents. This is in distinction to the State's title, which is to the navigable waters. On the other hand, the State owns the beds of navigable lakes (Minehan v. Murphy, 49 Wisc. 14, 134 N.W. 1130).

## EXAMPLE

In a recent case, the Wisconsin Supreme Court again discussed riparian rights to use of water and the requirements for a diversion permit from the Department of Natural Resources [Wisconsin v. Zawistowski, 95 Wisc. 2d 250 (1 April 1980)]. Mr. Zawistowski, a riparian landowner who raised cranberries, did not formally apply for a permit, nor was a permit issued to him for his considerable use of water drawn from a navigable lake. His conviction of diverting water without a permit was appealed to the Supreme Court, which found that a special statute exempted him from the permit requirement (Wisc. Stat. Ann. 94.27). Everyone, however, is limited by the reasonable use doctrine established by State common law. Reasonable use is to be determined by the extent and capacity of the stream, the uses to which it has been put, and the rights of other riparian owners.

## EVALUATION

Lawsuits to enforce riparian rights are expensive and uncertain of outcome. Once a decree has been entered, however, it gives a clear and definite guide to all the parties for their future behavior. Other persons not included as parties in the suit are, of course, not bound by the decree, which may mean later problems.

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PART III: THE PUBLIC TRUST DOCTRINE IN  
MICHIGAN AND WISCONSIN

## THE PUBLIC TRUST DOCTRINE IN MICHIGAN AND WISCONSIN

### OPPORTUNITY

Each State owns certain property which it holds in trust for public uses. It holds this property not as a proprietor, free to sell or exchange it at will, but as a government, which must consider and benefit the entire public in any transaction involving public trust property. The responsibility of the State as trustee is the heart of the public trust doctrine. Under this doctrine, sale or grant of this trust property to private people can be examined very carefully by the courts, which may invalidate such sales or grants if the rights of the public have been slighted.

### BACKGROUND

The public trust doctrine has the breadth and substance to be useful as a tool of general application for citizens trying to develop a comprehensive legal approach to resource management problems. It provides the concept of a legal right in the general public, it is enforceable against the government, and it can be interpreted consistently with present concerns for environmental quality. The public trust doctrine is both a source of legislative power and a court-enforced restraint on legislative and administrative power.

It is the duty of the State to exercise its control of the public trust waters within the State borders in the public interest. Cases concerning public trust rights in land can generally be applied directly to interests in water. While the doctrine is ancient, going back to the time of the Romans, vigorous application of it is relatively recent in this country. As a result, many States do not have a well developed body of case law on the public trust. This means that public trust rights in instream flow are not likely to be precluded by previous decisions, but offer a fresh new opportunity for protecting those waters.

As a general rule, public trust waters are navigable waters, and a division of waters into "navigable" and "nonnavigable" is another way of dividing them into public and private waters. This State power of control cannot be surrendered, alienated, or delegated, except for a public purpose or a use which is for public benefit. The power to make rules and regulations governing these navigable waters may be delegated to administrative agencies, however. This power of the State to govern and control public waters is perpetual, and all privileges or uses granted in public waters are subject to this power.

State grants and administration of water rights fall under the public trust, especially in cases in which State administration of water leads to severe damage to public rights or use of that water. There also appears to be a definite trend to extend the public trust to waters alone, without adjacent lands, and to include nonnavigable as well as navigable waters, regardless of ownership of the stream bed. This trend affects instream flow protection, because, when diversions and other activities in the streams reduce the instream flow and the public right of use is diminished, the public trust may have been violated. It may be possible, in such cases, to rectify the situation by resorting to the public trust doctrine in the courts.

Similarly, wildlife is the property of the State and may be a resource protected by the public trust doctrine in various States. If instream flows are so reduced as to destroy fish and wildlife, it may be possible to use the public trust doctrine to restore the flows.

On the other hand, this public trust doctrine is not a sure-fire way to cure all instream flow ills. It must be examined carefully, and each State's cases and statutes on the question must be thoroughly considered by counsel.

A review of court decisions in this area produces many general statements that seem to say that the government may never sell or alienate trust property by giving it to a private owner and that it may not change the use to which that property has been devoted in the past. Careful study of the cases, however, shows that this language does not, in fact, determine the limits of the State's legitimate authority in dealing with its trust property. There is no general prohibition against disposition of trust properties, even on a large scale. A State may, for example, recognize private ownership in tidelands and submerged lands below the high water mark. On the other hand, courts do not look kindly on such grants and usually interpret them restrictively. What is found in the cases is neither a hair splitting preservation of every inch of public trust property against any change nor a precise maintenance of every historical pattern of use. When the Wisconsin Supreme Court permitted a portion of Milwaukee harborland on Lake Michigan to be granted to a large steel company to build navigation facilities, it made the point clearly:

It is not the law, as we view it, that the state, represented by its legislature, must forever be quiescent in the administration of the trust doctrine, to the extent of leaving the shore of Lake Michigan in all instances in the same condition and contour as they existed prior to the advent of the White civilization in the territorial area of Wisconsin. [City of Milwaukee v. State, 193 Wisc. 423, 214 N.W. 820 (1927)]

The traditional cases do suggest that no grant may be made by the State to a private party if the grant is so large that the State will effectively have given up its authority to govern. On the other hand, a grant is not illegal merely because it diminishes in some degree some traditional public use.

The most celebrated public trust case in American law is the decision of the United States Supreme Court in Illinois Central Railroad Company v.

Illinois, [146 U.S. 387 (1892)]. In 1869, the Illinois legislature made an extensive grant of submerged lands, in fee simple, to the Illinois Central Railroad. That grant included all the land underlying Lake Michigan for one mile out from the shoreline and extending one mile in length along the central business district of Chicago. This amounted to more than 1,000 acres of incalculable value, including virtually the whole commercial waterfront of the city. By 1873, the legislature had repented of its generosity and repealed the 1869 grant. The legislature then sued to have the original grant declared invalid.

The Supreme Court upheld the State's claim and wrote one of the very few opinions in which direct conveyance of trust lands has been held to be beyond the power of a State legislature. The court did not actually prohibit the disposition of trust lands to private parties; its holding was much more limited. What a State may not do, the court said, is to divest itself of authority to govern the whole of an area in which it has responsibility to exercise its police power. To grant almost the entire waterfront of a major city to a private company is, in effect, to abdicate legislative authority over navigation.

But the mere granting of property to a private owner does not automatically prevent the exercise of governmental authority; for States routinely regulate privately owned land. The court's decision makes sense only because the court determined that the States have special regulatory obligations over shorelands which are inconsistent with large-scale private ownership.

The court pointed out that the title that Illinois held to the navigable waters of Lake Michigan is:

...different in character from that which the state holds in lands intended for sale.... It is a title held in trust for the people of the state that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein free from the obstruction or interferences of private parties.

This language expresses the central theme of public trust cases. When a State holds a resource which is available for the free use of the general public, a court will be displeased with any governmental conduct which will either reallocate that resource to more restricted uses or subject public uses to the self-interest of private parties.

In the development of the public trust doctrine before and after the Illinois Central case, three types of restrictions are often imposed on governmental authority: (1) the property subject to the trust must not only be used for a public purpose, but it must also be held available for use by the general public; (2) the property may not be sold even for a fair cash price; and (3) the property must be maintained for particular types of uses. These types of uses are usually either traditional uses, such as navigation, recreation, or fishing, or uses which are in some way related to the natural uses peculiar to that resource. For example, San Francisco Bay can be said to have a trust enforced on it so that it may be used only for water related uses. A dock

marina might be appropriate, but filling up the bay for trash disposal is not. These three restrictions are at the center of all public trust cases.

The public trust doctrine is supported by a mixture of ideas. One recurring idea is that certain interests or resources are so important to every citizen that the free availability of the resources is imperative. Another idea in these cases is that some resources are so particularly the gift of nature that they should be preserved for the use of the entire population. This idea led to the laws of early New England reserving "great ponds" for general use. A third idea is that certain uses have a particularly public nature which makes exclusive use by private persons not appropriate. For example, it is a general rule of water law that a water user does not own property rights in water in the same way he owns the clothes on his back. He owns only a right of use, which incorporates the needs of others. Water has a public nature which makes its adaptation to entirely private use inappropriate and obliges the government to regulate water use for the benefit of the general community.

A critical question is "What lands or interests in property does the State hold?" Within each State, this question may be answered differently. With respect to waters, this question is often answered in terms of navigation. For example, the State may have declared itself the owner of all navigable waters or have defined navigable waters as waters of a certain width or waters capable of supporting a certain kind of commerce. These definitions may come from the State constitution, legislation, or the courts. In each State, it is important to first look at what the State owns before applying the public trust doctrine to that property, whether it is land or waters.

Some States have declared all waters to be the property of the State. Generally, however, the idea of navigability is fundamentally important to the public trust doctrine. Dividing waters into navigable and nonnavigable waters is another way of dividing them into public and private waters in many States and, therefore, into public trust and non-public trust waters. The Federal test for navigability for determining title to submerged lands derives from the case of The Daniel Ball [77 U.S. 557 (1871)]. This test defines public navigable rivers as those which are navigable in fact, i.e., those which are used or could be used as highways for commerce in the customary mode of trade and travel on water. Navigability for title purposes is to be tested as of the date of Statehood for States other than the thirteen original colonies. This test is rather vague, and capacity for use in commerce may be shown by experimentation as well as by actual use.

States are free to impose the public trust on waters which are not navigable under Federal title standards. States can and do imply their own State tests of navigability to determine whether waters are public for State purposes. Some States have adopted statutory definitions of navigability. For example, in Texas, the statutory test of navigability in non-title streams is whether the State's stream maintains an average width of 30 feet from its mouth up. Texas holds title to streams that fit this description in trust for the people. The Michigan test of navigability is the saw log or floating log test. Under this test, a stream is navigable if it can float logs to market. In Wisconsin and Minnesota, the recreational use or pleasure boat test is used. So long as lakes or streams are capable of use for pleasure boating,

they are navigable. As the definition of navigability expands through the activity of Federal and State courts, the area of waters and lands subject to the public trust doctrine expands.

This can be seen in a recent Arkansas case Arkansas v. McIlroy [Ark. Sup. Ct. (Docket No. 79-320, March 17, 1980)]. A riparian owner on the Mulberry River sued a number of canoeists to prevent their traveling down the river, a stream suitable for expert canoeists. The court found that the stream was floatable for six months of the year and expanded the Arkansas definition of "navigability in fact" from the old Federal test of commercial usefulness, which the court described as "a remnant of the steamboat era", to a new test. The court found that the stream was navigable because it could be used for a substantial portion of the year for recreational purposes. The court compared the stream with a public highway, and declared that the neighboring owners could no more close the stream to travelers on such a public waterway than they could close a public highway. An interesting aspect of the case for persons interested in instream flows is that this radically expands the Arkansas definition of navigable waters and should, as a result, expand those portions of Arkansas' streams which are subject to the public trust.

Because public trust law is in a constant state of change and development, principles from other States are useful and sometimes necessary for development of another State's laws.

United States courts have generally been willing to interfere in four types of situations: (1) when public property has been disposed of at less than a fair market price and nothing indicates an obvious reason for a subsidy; (2) when authority to make resource use decisions has been granted to a private interest which may subordinate public uses to the private interest; (3) where broadly based public uses have been reallocated to private uses or to narrower public uses; and (4) where the resource is not being used for its natural purposes.

The usefulness of the public trust doctrine in promoting instream flows could arise in the situation in which a State had made an improper grant of some or all of its State owned waters for private purposes to the detriment of the public. This might arise in several ways. A State might have permitted overappropriation resulting in the dewatering of a navigable stream. Suit could be filed against the State to cancel those permits or sales of water, based on the idea that they are invalid because they are in violation of the public trust which the State must uphold. Another example would be an administrative program in which a bare minimum of the necessary instream flow was retained, effectively destroying the stream for public use for navigation and recreation. In that case, suit could be brought against the administrative agency of the State.

In any case, using public trust arguments for preserving instream flows involves a court suit, protracted litigation and appeals, but also possibly great rewards. The doctrine is like the reserved rights doctrine to preserve instream flows. It involves considerable costs and risks, but potentially great returns. Flows that are once declared part of the public trust are unlikely to be allocated later to private uses.

Most States have had regretful experiences with the sale of public trust property to private developers and agencies which seem to promote the interests of private developers. Many public trust cases result from efforts to retract the excessive generosity of early State legislatures and land management agencies. Several specific approaches have been adopted to deal with the broad range of public trust questions: (1) State constitution and legislative enactments have restrained sale of trust property; (2) courts and legislatures have required that the public trust be preserved in any sales or grants; (3) sales and leases have been restricted to ensure that they are consistent with the public trust; (4) courts and legislatures have required that sales may be made only for full market value and that the money from the sales is devoted to replacing the trust uses given over to private or to other Statewide public purposes; and (5) courts have read legislation narrowly to limit the power of the government to convey public trust lands and the authority of administrative agencies to dispose of them.

## MICHIGAN

The State Constitution specifically provides:

The conservation and development of the natural resources of the state are hereby declared to be of paramount public concern in the interests of the health, safety, and general welfare of the people. The legislature shall provide for the protection of the air, water, and other natural resources of the state from pollution, impairment, and destruction (Mich. Constitution, Section 52).

In analyzing this section, The Michigan Attorney General has determined that it declares the public policy of the State is to protect the air, water, and other natural resources of Michigan from pollution, impairment, and destruction; to this extent, it prohibits the legislature from enacting any law which would violate such a constitutionally declared public policy (Op. Atty. Gen. Jan. 27, 1969, No. 4590). As a result, statutes or other State action that appear to threaten the public trust in Michigan have a formidable foe in this constitutional section.

The Michigan Environmental Protection Act of 1970 was the first State environmental protection statute to be based in part on a statutory recognition of the public trust doctrine [Mich. Stat. Ann. § 691-1201].

As to the navigable versus non-navigable question, Michigan permits public use of all "boatable" lakes, whether navigable or non-navigable [Kerley v. Wolfe, 394 Mich. 350, 84 N.W.2d 748 (1957)]. At least one Michigan Court, however, feels that reliance on representative government, rather than on due process as interpreted by the court, is the appropriate method to protect public trust lands (Superior Public Rights, Inc. v. Department of Natural Resources, 80 Mich. App. 72).

## WISCONSIN

The Supreme Court of Wisconsin has worked out a clearer meaning of the public trust doctrine than has any other State. Its cases can be seen as examples of the best use of this doctrine. The first important case, Priewe v. Wisconsin State Land and Development Co. [93 Wisc. 534, 67 N.W. 918 (1896)], invalidated a State statute permitting a promoter to drain a public lake. In later cases, the court has been able to oppose the tendency of the State legislature and administrative agencies to subordinate public advantages to private enterprises.

The Wisconsin Supreme Court has taken the position that when the public interest of a project is unclear, those who promote the project must justify it and cannot simply rely on the old assumptions of legislative wisdom or administrative discretion. This justification can, in fact, be made, and the Wisconsin court, in later cases, permitted navigable waters to be converted to private land in cases where the broad impact of the change promoted public use.

The Supreme Court established five factors which are useful in evaluating situations in which the public trust doctrine may permit private control: (1) where public bodies will control the use of the area; (2) where the area will be devoted to public purposes and open to the public; (3) where the diminution of lake area will be very small when compared with the whole; (4) where public use of the lake as a lake will be destroyed or greatly impaired; and (5) where the disappointment of those members of the public who may desire to boat, fish, or swim in the area to be filled is negligible when compared with the greater convenience to be afforded those members of the public trust who use the city park [State v. Public Service Comm'n, 275 Wisc. 112, 81 N.W.2d 71 (1957)].

The result of these five factors is that administrative agencies must show, from time to time, that they possess the expertise and concern for the public interest which they claim to hold.

Wisconsin has also developed a line of cases in which the court has held that the governmental body whose decisions are being questioned does not represent the public interest at large. A municipal act might possibly be struck down because the subject matter of the act is a Statewide concern and could be affected only by the State legislature.

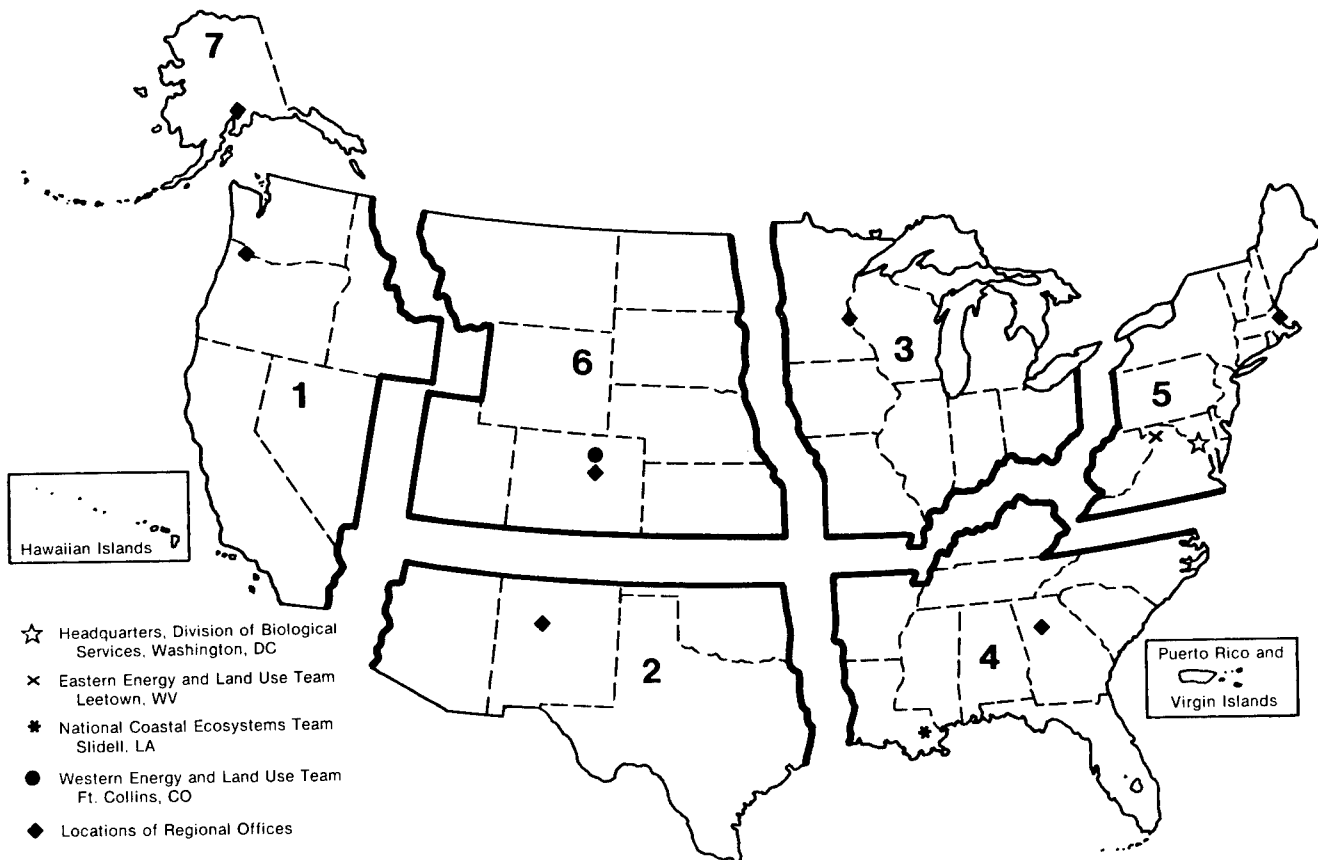
In Wisconsin practice, the use of the public rights doctrine seems to be a way of saying that public interest in recreation is one of the most important of the State's interests to be protected by water law. The public trust is a method used by the courts to protect this interest. The balancing of costs and benefits under this approach can permit, for instance, filling in part of a lake or a park or granting a substantial area of harbor to a steel company for docks and loading facilities.

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