

# Summary of Fisheries Division Documents Outlining Habitat Goals

## **Fisheries Division Draft 2012 Strategic Plan**

(Public availability ~ December 2012)

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations.

Objective 2: Conserve and manage aquatic species and their habitats.

## **Fisheries Division 2002 Strategic Plan**

<http://dnrintranet/pdfs/divisions/fish/strategicplan/March2002.pdf>

### **Resource Protection and Mitigation**

Although fishery regulation, stocking, and other fishery management measures can optimize fishery values of a water body, the values are ultimately limited by the productivity and features of the habitat. Our proposed strategy increases our emphasis on protecting habitat and mitigating habitat problems.

Over the next five years, most of the hydropower dams in Michigan will be licensed or relicensed by the Federal Energy Regulatory Commission. Such licenses are generally issued for 50 years. Their purpose is to balance the values of electric power generation with the many other values of water resources, particularly including fish and wildlife values and recreational values. Hydropower facilities are situated on most of Michigan's important rivers and have profound influence on their fisheries. Thus the Division's participation in these licensing proceedings is particularly important.

In addition to hydropower dams, many other activities can severely impact fishery resources through habitat alteration as well as through directly killing fish. For example, steam electric plants which draw cooling water from Michigan waters are known to indiscriminately kill large numbers of fish. Other activities which can be detrimental to fishery resources include: land-use patterns, logging, shoreline development, wetlands filling, storm water management, and mineral development. The Division should concentrate attention on both reducing losses and mitigating the effects of remaining losses on fishery values.

### **Promoting Responsible Conservation**

The perception by the general public that conservation and preservation are the same can create obstacles for natural resource managers. As defined by Webster's dictionary, conservation is "a careful protection of something; planned management of a natural resource to prevent exploitation, destruction, or neglect". Preservation can be defined as "to keep safe from injury or harm". Conservation has been used as an umbrella term that includes utilitarian use, management for multiple use, and preservation.

Preservation is a very "hands-off" approach and is one mechanism that can be used to conserve natural resources. The public must be educated so that they understand that management is an integral part of natural resource conservation (for example, without explicit management strategies, many endangered species would be lost).

As land use and human behavior patterns change in the State of Michigan, it is ever more important for the Department of Natural Resources to take a strong stand in defense of the traditional values of resource management and the sustainable productivity of our land and water resources. The environmental and natural resource challenges we face in the next several decades require changes in individual behavior and acceptance of individual responsibility to preserve and protect, as well as to allocate, scarce resources. Our governmental response to these issues will reflect the values of the individuals who lead our agencies and the public who supports them. The Department has the opportunity and responsibility to inform and educate the citizens of this State concerning the options available in the public policy arena, so that responsible, deliberate choices can be made. Preserving the full range of resource uses and opportunities that have been made available to this State will depend upon a knowledgeable and supportive public.

### **Ecosystem Management**

The ecological and institutional complexity of fishery management on the Great Lakes and their watersheds requires agreement on guiding management principles. A set of guiding principles has been developed to establish a decision-making framework for rehabilitating and maintaining the integrity of these ecosystem fish communities. These principles are well-accepted, fundamental concepts, and recognized as having wide application. They are essential for defining a consistent approach for cooperative fishery management. Below is a principle regarding habitat:

- Preserve and restore fish habitat. The physical and chemical integrity of Lake Michigan as defined by the Great Lakes Water Quality Agreement is important for achieving biological integrity. Identification of habitat impairments that impede the achievement of fish community objectives is specifically mentioned in the Strategic Plan. Rehabilitation of riverine spawning and nursery habitats used by Great Lakes fish is a high priority for the management agencies.

### **Fisheries Resources Program**

**Goal:** Through the Fisheries Resources Program, the Division seeks to protect and maintain healthy aquatic ecosystems and fish communities, and to rehabilitate those now degraded.

#### **Key Result Areas**

Resource Inventory: For Michigan waters, maintain a current inventory of selected stocks of fish and other aquatic species and aquatic habitats. Keep a continuous record of numbers of fish stocked. Estimate fish extracted from selected waters. Identify fishery opportunities and problems and record results of management actions.

Management Operations, Experiments and Evaluations: Implement and evaluate prescribed management actions. Develop, test, and improve decision models for the management of fish communities and habitats.

**Resource Protection, Rehabilitation and Mitigation:** In cooperation with other Divisions, agencies and organizations, work to protect and rehabilitate aquatic resources and habitats.

The Fisheries Division can also improve fishery habitats in much of Michigan by assiduous cooperation with the other DNR Divisions and the federal agencies who regulate the activities which affect those habitats. The strategy addresses greatly increased effort to work with these agencies.

### **Fisheries Division 1994 Strategic Plan**

<http://dnrintranet/pdfs/divisions/fish/strategicplan/June-1994.pdf>

(language similar to that of 2002 Strategic Plan)

### **Fisheries Division 5 Year Budget Plan Fiscal Years 2005-2009**

[http://dnrintranet/pdfs/divisions/fish/Budget\\_Programs/5yr-plan/5-year-Budget-Plan-FY05-09-intranet.doc](http://dnrintranet/pdfs/divisions/fish/Budget_Programs/5yr-plan/5-year-Budget-Plan-FY05-09-intranet.doc)

***Fisheries Resources Sub-program*** – In this area our goal is to protect and maintain healthy aquatic ecosystems and fish populations, and to rehabilitate those now degraded.

#### o Habitat

- Conduct habitat inventories as part of statewide 'Status and Trends' effort.
- Develop and maintain software and databases for statewide habitat inventory.
- Develop base geographic information system maps and database structures for spatial analyses of inventory data at both regional and local levels.
- Develop ecological classifications for inland waters and the Great Lakes, based on geographic information systems, to serve as a framework for inventories and reporting.
- Provide regular analysis and reporting on status and trends of fishery resources.

### **Fisheries Division River Assessments**

[http://www.michigan.gov/dnr/0,4570,7-153-10364\\_52259\\_10951\\_19056-46270--,00.htm](http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_10951_19056-46270--,00.htm)

Information contained in these assessments is a compilation of not only river related problems but opportunities as well. Each river assessment serves as a tool which can be used to assist the management decision process and increase public understanding and foster their involvement in management decisions.

At present, sixteen River Assessments have been prepared by Fisheries Division and cover major watersheds throughout the state. Each of these assessments documents the importance and need for habitat protection and rehabilitation through partnerships,

land use planning, zoning, conservation easements, Natural Rivers Designation, and direct acquisition of lands for aquatic habitat protection. Below is a common management option listed in river assessments:

- Protect remaining stream margin habitats, including floodplains and wetlands, by encouraging setbacks and vegetative buffer strips in zoning regulations, controlling development in the stream corridor, and acquiring additional greenbelts through agricultural set aside programs, conservation easements, or direct purchase from conservation organizations or government agencies.

### **Conservation Guidelines for Michigan Lakes and Associated Natural Resources**

<http://www.michigandnr.com/PUBLICATIONS/PDFS/ifr/ifrlibra/special/reports/SR38.pdf>

The Michigan Department of Natural Resources, Fisheries and Wildlife divisions, have developed guidelines for protecting and restoring the natural resources of Michigan lakes. These guidelines follow the department's ecosystem-based approach to natural resource management that combines ecological, social, and economic considerations toward achieving the goal of conserving and sustaining natural resources. The guidelines were developed to support department staff in managing public trust lake resources, and also as reference information for other organizations and individuals interested in Michigan lakes. Background material provided includes descriptions of basic ecological features and processes of lakes, important natural resources including habitat requirements, and lists of aquatic plants, mollusks, crayfish, amphibians, reptiles, birds, and mammals that reside in Michigan lakes. Descriptions of stresses and threats to lake ecology include the cumulative effects of small modifications to habitats, artificial drainage, water quality and pollutants, dams and lake-level control, non-indigenous species, shoreline development, dredging and filling bottomlands, vegetation alteration, swimmer's itch control, and boating and shipping activities. The guidelines recommend a watershed approach for protection and management of ecosystem integrity and natural resources of lakes, with development of comprehensive resource assessments and management plans.

The animal and plant resources associated with Michigan lakes are vast and provide significant recreational benefits, commercial benefits, and ecological services for the citizens of the state. In 2001, there were an estimated 16.6 and 0.6 million days of fishing and migratory bird hunting at lakes, with associated economic values of \$712.3 million and \$39.1 million (U.S. Department of the Interior 2002). An estimated 1.1 million people participated in wildlife viewing away from home (non-residential) and associated with a waterbody; this wildlife viewing had an estimated value of \$276.4 million. These values do not include the many other recreational and commercial uses of lakes.

The general ecosystem integrity of lakes is dependent on preserving natural habitat components and the processes that sustain them. These include water quality, aquatic vegetation, submerged deadwood, and naturally sloped and vegetated shorelines.

Natural systems vary in productivity and diversity and maximum natural diversity should be maintained in individual lakes. It is the goal of the state to encourage the lasting conservation of biological diversity (Michigan Natural Resources and Environmental Code, P. A. 451, 1994, Part 355). Suitable natural and diverse habitat allows existence of productive and diverse animal communities.