



MICHIGAN

Original Wetland Acreage	Remaining Wetland Acreage	Acreage Lost	% Lost
11,200,000	5,583,400	5,616,600	-50%

Michigan Wetlands: Wetlands in Michigan consist of lowland conifers, lowland hardwoods, Palustrine forested, shrub/scrub wetland, persistent and non-persistent emergent wetland, and unvegetated flats. Wooded and scrub/shrub wetlands are the most common types and Emergent wetlands make up a relatively small percentage of the State's total wetlands.

Summary	Individual Features	Regulation	Water Quality Standards	Mitigation	Monitoring and Assessment	Restoration	Public/Private Partnerships
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SUMMARY

Overall Program

This is a comprehensive program administered through a variety of statutes.

Innovative Features and New Programs/Initiatives

Michigan was the first state, and remains one of only two states, to have assumed administration of the Section 404 Program under the provisions of Section 404(g) of the Clean Water Act. The program is administered by the Michigan Department of Environmental Quality (DEQ) - formerly a part of the Department of Natural Resources (DNR).

Internet access to permit information. Since Michigan's wetland regulatory program was instituted 25 years ago, the State has sought ways to streamline the regulatory process while providing effective protection of wetland resources. Use of current technology helps us to meet these goals. The public is now provided access to an Internet version of the DEQ Land and Water Management Division's permit tracking system, CIWPIS (the Coastal and Inland Water Permit Information System) at <http://www.michigan.gov/deq>. Public notices are also available on-line, providing the opportunity for immediate statewide review of each notice as soon as it is issued. The site also provides for electronic submittal of comments on the public notice directly to the reviewer.

State Wetland Conservation Plan

Michigan's Wetland Conservation Strategy (the State Wetland Conservation Plan) was completed in October, 1997. It was prepared by the DEQ in cooperation with the Michigan Wetland Advisory Committee, a group of 12 individuals representing a wide range of stakeholder interests. While the Plan

is comprehensive, and covers a full range of wetland issues and concerns, the primary focus is on wetland restoration. The Advisory committee adopted specific restoration goals, as outlined in “No Net Loss/Net Gain Goal” below. A significant number of the recommendations included in the plan have been implemented.

At the current time, the Wetland Working Group, an informal interagency work group including various state, federal, and non-governmental organizations concerned with wetland restoration and management, provides a forum to continue the work initiated by the Michigan Wetland Advisory Committee during development of the State Wetland Conservation Plan. This group generally meets quarterly to share information and to coordinate program activities.

No Net Loss/Net Gain Goal

Michigan’s State Wetland Conservation Plan outlines both short- and long-term goals for the achievement of no net loss of wetlands. Short-term objectives include the restoration of fifty thousand acres of wetlands (one percent of historic losses) by 2010. Long-term objectives, with no specific time frame, include the restoration of 500,000 acres (ten percent of historic losses). Tracking of wetland gains under various restoration programs was limited in the initial years following completion of the Conservation Plan. However, recent summaries indicate that an estimated 19,100 acres of wetland have been restored in Michigan from 2000 - 2004 through a variety of voluntary state, federal, and private partnership programs.

In addition, Administrative rules for the Wetland Protection Part of the Natural Resources and Environmental Protection Act (NREPA) state that, "An applicant shall provide mitigation to assure that, upon completion, there will be no net loss of wetlands." (See R 281.925 (7)).

INDIVIDUAL FEATURES:

Regulation

Wetland Regulatory Statutes and Administrative Rules

Part 303 – Wetlands Protection - of the Natural Resources and Environmental Protection Act [prior to codification, the Goemaere-Anderson Wetland Protection Act, P.A. 203 of 1979]. Michigan’s wetland regulatory authority is based primarily on a statewide wetland permit program defined in the Wetlands Protection Part of the State’s environmental code. This law was originally passed in 1979 as the Goemaere-Anderson Wetland Protection Act, and was later codified in its current form. The Wetland Protection Part provides broad regulation of Michigan’s wetlands as described in the following sections of this summary, and was incorporated by reference and made part of the Section 404 Program for the State of Michigan at the time of program assumption. A number of other state laws (Parts of the NREPA) compliment the basic wetland permit program. These include programs which regulate dredge and fill activities in inland lakes and streams and the Great Lakes; the state’s floodplain regulatory authority; and water pollution control regulations including state water quality standards.

Part 31 – Water Resources Protection – of the Natural Resources and Environmental Protection Act [prior to codification, the Water Resources Commission Act, P.A. 245 of 1929]. The Water Resource Protection Part defines “waters of the state”, and includes the State’s basic authority to establish water quality standards and to regulate pollution. Michigan’s floodplain authority is also contained in this Part and associated administrative rules. This Part was also incorporated by reference as a component of the Section 404 Program for the State of Michigan at the time of program assumption.

Links to all statutes and administrative rules are posted on the DEQ website at www.michigan.gov/deq.

Wetland Definition and/or Delineation; Comparability With Federal Definition

Section 30301 of the Wetlands Protection Part defines wetland as follows:

"Wetland" means land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh."

Michigan's definition has been found by the U.S. Environmental Protection Agency (EPA) to be consistent with the Section 404 definition of wetlands.

The scope of jurisdiction under Michigan's law is generally comparable with federal law; however, as with most state statutes, the underlying authority differs from federal law, being based on land management authorities rather than the commerce clause. Under Part 303, the Michigan DEQ regulates:

- All wetlands that are connected to an inland lake or pond, river or stream, or one of the Great Lakes, regardless of size. The connection may be any permanent or intermittent surface water connection.
- All wetlands that are within 500 feet of an inland lake, pond, river or stream, or within 1000 feet of the Great Lakes, regardless of size. These wetlands are assumed to have a groundwater connection with the associated waterbodies.
- Wetlands greater than 5 acres in size that are not connected to other waterbodies by surface or groundwater (although until county wetland inventories are completed, these wetlands are regulated only in counties having a population greater than 100,000).
- Any wetland that is not otherwise regulated, if the DEQ has determined that the wetland is "essential to the preservation of the natural resources of the state" and has so notified the property owner.

DEQ staff use the *MDEQ Wetland Identification Manual: A Technical Manual for Identifying Wetlands in Michigan*, (March, 2001). This manual describes a delineation process that is sufficient for most projects in Michigan, producing a delineation that is consistent with federal methods. Wetland boundaries that are more difficult to identify, including boundaries on disturbed sites, may require additional evaluation and documentation, in which case procedures outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* are applied. The more complex 1987 U.S. Army Corps of Engineers (Corps) methods may also be used by the applicant as a primary method of determining wetland boundaries if desired.

Evaluation Methodology

The DNR developed a "Manual for Wetland Evaluation Techniques" shortly after passage of the Goemaere-Anderson Wetland Protection Act in 1979. The rapid on-site methods outlined in this manual will be replaced by an updated Rapid Assessment Method (RAM) currently under development. The RAM will be informed in part by information collected during the development of indices of biological integrity (IBI's) for Great Lakes coastal wetlands, inland forested depressional wetlands, and inland herbaceous depressional wetlands. Work on IBI's has been conducted primarily by research staff at Michigan State University and Grand Valley State University.

Michigan staff may also make use of the *Floristic Quality Assessment for the State of Michigan (2nd Edition)*, developed by the DNR and revised in 2001.

Regulated and Exempted Activities

Regulated activities include placement of fill; dredging or removal of soil or minerals; construction, operating, or maintaining any use or development in a wetland; and draining surface water from a wetland.

Exemptions include recreational activities, specified agricultural activities (see “Special Provision for Agriculture and Forestry” below), construction of temporary forestry and mining roads; maintenance or improvement of public roads within the right of way; maintenance, repair, or operation of oil or gas pipelines and power lines; operation or maintenance of dikes and levees; and construction of iron and copper mining tailing basins and water storage areas.

Exemptions are not unlimited; the landowner is generally required to minimize impacts, and in some instances to comply with best management practices. Exemption under one Part of the NREPA does not exempt an activity from requirements of other Parts. For example, construction of a tailings basin for iron or copper mining is exempt under Part 303 (Wetlands Protection), but not Part 301 (Inland Lakes and Streams) or 315 (Dam Safety), and a permit may be required under those Parts.

Special Provisions for Agriculture and Forestry

Exemptions for specified farming and forestry activities. Part 303 exempts certain activities associated with farming, horticulture, silviculture, lumbering, and ranching from permit requirements. These exemptions in general parallel Section 404, and are typically associated with the ongoing use of a wetland area for planting, cultivation, and harvesting of various crops. Part 303 also provides exemptions for certain related activities, such as construction and maintenance of farm or stock ponds, drain maintenance necessary for agricultural production, and construction and maintenance of farm and forest roads. These exemptions are very specific. Other related activities such as land clearing and leveling, construction of dikes or cranberry beds, or construction of barns, greenhouses, warehouses, or other structures, are **not** exempt activities under the Wetlands Protection Part.

Penalties and Enforcement

DEQ Land and Water Management Division staff have primary responsibility for enforcement under Michigan’s state administered Section 404 Program. However, this does not preclude the federal agencies from initiating enforcement actions under Section 404 at their discretion.

The Inland Lakes and Streams Part authorizes civil fines up to \$5,000.00 per day, and criminal penalties of up to \$10,000.00. Under a civil action, the court may enforce compliance with the Part, restrain violations of the Part, and order restoration. In 1993, the Inland Lakes and Streams Part was amended to provide for the issuance of appearance tickets for minor offenses which do not require restoration. A person who commits a minor offense is guilty of a misdemeanor, punishable by a fine of not more than \$500.00.

Enforcement provisions of the Wetland Protection Part are similar, except that a civil penalty of up to \$10,000.00 per day is authorized. In addition, criminal penalties for a knowing violation include fines of up to \$25,000.00 per day, imprisonment of not more than 1 year, or both. A repeat violation is a felony, and is punishable by a fine of not more than \$50,000.00 per day, or imprisonment of not more than 2 years, or both.

Permit Tracking

Tracking permit actions: DEQ Land and Water Management Division permit applications are entered into a computerized tracking system, the Coastal and Inland Waters Permit Information System (CIWPIS). CIWPIS includes database files for resources of special interest (e.g. known locations of threatened or endangered species, conservation easements, sites of past violations, hazardous waste sites, and similar

categories) by town, range and section. These special interests are identified at the time of permit logging.

All subsequent permit actions are tracked in the CIWPIS system. An on-line version of this tracking system allows the permit applicant, or any member of the general public, to search for permits or permit applications by geographic area, or to check on the status of a pending application. Public notices are also posted on-line, and comments may be transmitted electronically directly to the permit reviewer.

CIWPIS is linked to additional databases supporting detailed records for mitigation sites, and for wetland areas held under permanent conservation easements.

Tracking compliance and enforcement actions. The DEQ Land and Water Management Division maintains a separate system for tracking compliance and enforcement actions. All complaints received by the DEQ (including violations reported by staff) are entered into this system, and tracked until resolved. This system assists field staff in monitoring the status of enforcement actions, which may proceed over a period of months. It also supports coordination among the Land and Water Management Division and law enforcement staff in the DEQ Office of Criminal Investigations and the Law Enforcement Division of DNR.

State General Permit (PGP or SPGP) for 404

None.

Assumption of Section 404 Powers

The State of Michigan's 404 Program was approved by the Regional Administrator of EPA in accordance with the requirements of Section 404(h) of the Clean Water Act in August of 1984. With this approval, Michigan became the first state to assume administration of the Section 404 Program. During the ensuing twenty years, the state-federal partnership which developed has allowed Michigan to operate a highly effective and efficient permit program.

Michigan's Section 404 Program is administered by the Michigan DEQ (formerly part of the Michigan DNR). The state processes approximately 5,000 – 6,000 permit applications per year through this program, funded in part by permit fees but primarily by state general funds. DEQ staff also have primary responsibility for compliance and enforcement under the state 404 Program.

Joint Permitting

The Clean Water Act limits state assumption of Section 404 authority in "traditionally navigable waters." The Detroit District Corps retains Section 404 jurisdiction in these waters, which are listed in a 1983 Memorandum of Agreement between the DEQ and the Corps. Corps jurisdiction includes the Great Lakes, connecting channels (such as the Detroit River), and rivermouth areas upstream to the limits of the traditional navigational channel or the Great Lakes ordinary high water mark. Under the 1983 MOA, the DEQ and the Corps may issue a Joint Public Notice for projects over which the Corps retains Section 404 jurisdiction; however separate state and federal permits are required. Joint Public Notices are prepared by the Corps. Due to the time constraints associated with state statutes, the DEQ frequently proceeds with issuance of a separate public notice to assure compliance with state statutory review periods.

Special Area Management Plans and Advanced Identification Plans

The DEQ has not sponsored any projects specifically designed to meet the requirements of 40 CFR §230.80 regarding the Advanced Identification of Disposal Areas. However, the DEQ fully recognizes the value of including wetland resources in watershed planning, and is actively encouraging the development of watershed based plans for wetland management at the local level.

Role of Local Governments

The Wetland Protection Part (see “Regulatory Statutes and Administrative Rules” above) specifically authorizes local wetland ordinances (permit programs) and provides for coordination between state and local permit programs. Such regulations must generally be consistent with state law, except that smaller wetlands may be regulated under local ordinances. At least 37 communities have passed specific wetland protection ordinances. In addition, an unknown number of local units of governments provide zoning protection for wetlands at the county, township, or municipal level.

Staffing

The DEQ Geological and Land Management Division houses approximately 155 staff in professional and clerical/technical positions. Of these, 80 are considered to have responsibilities related to the 404 Program. These include field staff responsible for permit evaluation and enforcement; technical support staff in the Lansing office, including biologists/ecologists and engineers; computer support staff; clerical technical support staff; and administrative staff.

Field staff are located in 10 offices across the state. Approximately 35 FTE’s are committed specifically to wetland permitting and enforcement at the field level; additional field staff may provide technical support in some cases (e.g. hydrologic engineers in the floodplain program). Wetland permit applications are processed through a consolidated permit program, which combines review of all impacts of a given construction project on wetlands, lakes and streams, the Great Lakes, and floodplains under various statutory authorities.

Water Quality Standards

Wetlands and Water Quality Standards

The Water Resources Protection Part of the NREPA defines “waters of the state” as follows:

“Waters of the state” means groundwaters, lakes, rivers and streams and all other watercourses and waters with the jurisdiction of the state and also the Great Lakes bordering the state.”
§324.3101(b)

While this definition does not explicitly list “wetlands”, wetland resources are clearly included.

Likewise, current state surface water quality standards do not specifically list wetlands, but consider wetlands to be included in the general category of “other surface bodies of water.” The agency has recently proposed revision of Michigan’s Surface Water Quality Standards to explicitly define wetlands as waters of the state, and to address certain other wetland issues. National Pollutant Discharge Elimination System (NPDES) discharges to wetlands are regulated under the existing standards.

Section 401 certification. Permits issued by the DEQ under Michigan’s 404 Program are state, not federal, permits and as such Section 401 certification is not required. However, a project which would result in a violation of Michigan’s water quality standards would not meet the permit criteria under state statutes. Under the Wetland Protection Part, a project which violated water quality standards would not be considered otherwise lawful, and therefore not in the public interest. In addition, the Section 404 (b)(1) Guidelines prohibit issuance of a permit which would result in a violation of state water quality standards (40 CFR §230.10), and the DEQ is prohibited from issuing a Section 404 permit not in compliance with the 404(b)(1) Guidelines.

For applications under the jurisdiction of Detroit District Corps for purposes of Section 10/Section 404, issuance of a state permit is generally taken to represent Section 401 certification. When the DEQ denies a permit in Section 10 waters, the Corps typically stops processing the application. The review of

projects potentially involving the release or discharge of toxic materials or the disposal of contaminated dredge spoil or similar material is coordinated with other environmental programs with the DEQ, and a separate 401 Certification may be issued.

Authority for 401 Certification of other federally licensed projects such as hydropower dams rests with the DEQ Water Bureau.

Wetland Definition

See "Wetlands and Water Quality Standards" above. Currently proposed revisions of Michigan's surface water quality standards would define "Wetland" as follows:

"Wetland" means land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh."

Designated Uses

At a minimum, all surface waters of the state (including wetlands) are designated for the following uses: agriculture; navigation; industrial water supply; public water supply at the point of water intake; warmwater fishery; other indigenous aquatic life and wildlife; and partial body contact recreation. Typically, when the concern is one of protection of water quality in wetlands, protection for fisheries, indigenous aquatic life and wildlife are likely to be the most applicable of these designated uses.

Narrative and/or Numeric Criteria

Michigan has not yet formally adopted a biological assessment method. However, the DEQ has begun development of methods based on indices of biological integrity (IBI's) in cooperation with Michigan State University, Grand Valley State University, and the Michigan Natural Features Inventory. A Rapid Assessment Method informed by this research is under development.

The *Floristic Quality Assessment with Wetland Categories for the State of Michigan*, developed by the DNR, has also been used since 1996 in the assessment of wetland sites for various regulatory and non-regulatory purposes.

Antidegradation Policy

See Rule 98 of the Surface Water Quality Standards (R 323.1098). The antidegradation policy that applies to other surface waters also applies to wetlands. The basic provision of this standard is that,

"For all waters, the level of water quality necessary to protect existing uses shall be maintained and protected. Where designated uses of the water body are not attained, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the nonattainment. Where, for individual pollutants, the quality of the waters is better than the water quality standards prescribed by these rules, that water shall be considered high quality and that quality shall be maintained and protected unless allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. For high quality waters, no action result in the lowering of water quality shall occur unless the provisions of this rule have been complied with."

Other

Provision is made in the water quality standards for construction activities authorized under state and federal law (Section 404).

Staffing

No surface water quality staff are specifically dedicated to the wetland program. However, water quality staff evaluate NPDES discharges to wetlands, and may evaluate biological communities in wetlands as a part of routine stream monitoring programs.

Mitigation

Mitigation Policy

Mitigation requirements are detailed in the Administrative Rules for the Wetland Protection Part; see R.281.925 – Mitigation. (Links to the statute and rules are located on the DEQ wetland web page at <http://www.michigan.gov/deq>.)

Mitigation may be considered only after the applicant has demonstrated avoidance and minimization of impacts, and it has been determined that a project is otherwise permissible. A mitigation proposal shall assure that, "upon completion, there will be no net loss of wetlands." Mitigation requirements and ratios are established by rule, and identified by staff as a part of the permit decision. Mitigation is generally required for all impacts to wetlands but may be waived for projects impacting less than 1/3 acre if no reasonable opportunity for mitigation exists, or for projects having a basic purpose of creating or restoring wetlands. Financial assurances are required to ensure completion of any mitigation project that is not completed in advance of associated impacts. Mitigation sites must be permanently protected through a conservation easements or deed restriction.

Mitigation may also be required under the Inland Lakes and Streams Part (see Rule 3) to improve existing resources, or to create a new resource to offset resource losses resulting from the proposed project.

Mitigation Banks

Administrative rules defining the establishment and use of mitigation banks were promulgated in 1997; see R 281.951, Wetland Mitigation Banking. A link to these rules, the Wetland Mitigation Bank Registry, and detailed information regarding wetland mitigation banking requirements are posted on the DEQ wetland web page at www.michigan.gov/deqwetlands. Mitigation banks must be established and operated under a mitigation banking agreement. The service area for a bank is limited to the watershed in which the bank is located, and, for replacement of habitat that is not dependent upon watershed boundaries only, the ecoregion (mapped sub-subsection) in which the bank is located. Michigan's banking rules do not generally provide for use of credit in advance of initial construction of the bank and establishment of hydrology. At that point, credits are released based on a schedule of attainment of performance standards.

Three mitigation banks are currently listed in Michigan's Wetland Mitigation Bank Registry. A number of other mitigation bank sites are currently under consideration or development.

In Lieu Fee Program

None.

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Ad Hoc Arrangements

None.

Mitigation Database

Permitted wetland impacts and mitigation requirements are recorded in the DEQ Land and Water Management Division permit tracking system, CIPWIS (the Coastal and Water Permit Information System). This system provides for simple accounting of acreage gains and losses. In addition, this system is linked to a more detailed database established to record and track detailed information during the long term development of specific mitigation sites, as well as to a separate database designed to record and track conservation easements associated with mitigation sites.

Staffing

DEQ Land and Water Management Division field staff who are responsible for permit review are also responsible for review and approval of mitigation plans, and oversight of mitigation areas. One staff specialist in the Lansing office handles most mitigation banking issues, assisted on occasion by other technical staff.

Monitoring and Assessment

Mapping/Inventory

Statewide National Wetland Inventory (NWI) coverage is available, based on photography flown between 1977 and 1983. The U.S. Fish and Wildlife Service recently attempted an updating of some portions of the state based on photography from 1992 – 2000. Given the different mapping procedures followed during the recent procedure, an evaluation of trends between these two time periods proved impossible.

Statewide mapping of wetland areas based on 1978 aerial photography is also available through the Michigan Resource Information System (MIRIS). However, these maps were developed as part of a statewide land cover/use inventory carried out for planning purposes, and the mapped land use categories are not totally consistent with the definition of wetland areas; e.g. a “lowland hardwood forest” category may include non-wetland portions of a floodplain.

The DEQ is producing more detailed preliminary county wetland inventory maps in a GIS format by synthesizing available data, including NWI maps, USDA soil surveys, and MIRIS. Preliminary maps for 26 counties are now available on the DEQ wetland webpage at www.michigan.gov/deqwetlands. Completion of county inventories for the remainder of Michigan is anticipated by the end of 2006.

The Great Lakes Coastal Wetlands Consortium (headed by the Great Lakes Commission in Ann Arbor) is currently completing a GIS based inventory of Great Lakes coastal wetlands in cooperation with the Great Lakes states and provinces. This inventory will be available through the Commission website at www.glc.org/wetlands.

Wetland Classification and Assessment

Wetlands are not classified for regulatory purposes by the DEQ. The Cowardin system is used for descriptive purposes.

The Michigan Natural Features Inventory (MNFI) includes wetlands in its classification of natural community types. A description of each ecological community type, and its state and global rank based on relative rarity, are provided on the MNFI web page at www.msue.msu.edu/mnfi.

The Great Lakes Coastal Wetlands Consortium has also developed a specific classification system for its basin-wide inventory and tracking system. This inventory is expected to be available on-line in the near future at www.glc.org/wetlands.

The DEQ is currently developing a comprehensive state wetland monitoring and assessment strategy, to be completed by March 31, 2005. This strategy will coordinate monitoring and assessment efforts at various scales and by various program areas within DEQ. Currently, DEQ Land and Water Management staff evaluate wetlands under regulatory program authorities, and also provide technical assistance in watershed level evaluations of wetland resources during the development of nonpoint source management plans. Water Bureau staff include the evaluation of biological communities in wetlands in some routine stream survey work.

Overall Wetland Gain and Loss Tracking System

Permitted wetland impacts and mitigation requirements are recorded in the DEQ Land and Water Management Division permit tracking system, CIPWIS (the Coastal and Water Permit Information System). In accordance with EPA's Section 404 State Program Regulations, Michigan reports annually to EPA on actions taken under its 404 Program. This report includes an assessment of wetland impacts on a statewide scale, including the number and nature of individual and general permits issued, modified, and denied; the number of violations identified and enforcement actions taken; and the cumulative impact of the state's permit program on the integrity of state regulated waters. Although not specifically required by Federal regulations, Michigan also provides an annual summary of wetland acreage impacted through the state 404 program and mitigation undertaken to offset these losses.

Staffing

Currently, two to four technical staff in the DEQ Land and Water Management Division Lansing office spend significant time on mapping and assessment tasks, and other technical staff may work on associated issues. DEQ Water Bureau staff may monitor biological communities in wetlands.

Restoration

Program Description

The DEQ, DNR, and Agriculture have been active partners with federal agencies and non-governmental organizations in wetland restoration/incentive programs. Through 2004, the State of Michigan has contributed approximately \$10 million in **state** funding to wetland protection through the Conservation Reserve Enhancement Program (CREP), and the state's Clean Michigan Initiative. These funds have been used to support voluntary wetland conservation practices by private landowners – primarily wetland restoration and enhancement - and to obtain permanent conservation easements over wetlands restored under state/federal conservation programs. In addition, the state has contributed staff time through all three agencies to provide technical assistance for landowners interested in wetland restoration programs.

Restoration Program Goals

Michigan's State Wetland Conservation Plan outlines both short- and long-term goals for the achievement of no net loss of wetlands. Short-term objectives include the restoration of fifty thousand acres of wetlands (one percent of historic losses) by 2010. Long-term objectives, with no specific time frame, include the restoration of 500,000 acres (ten percent of historic losses).

Eligibility Criteria

Program specific. The DEQ participates on state technical committees to help define priorities for certain federally funded programs.

Restoration Database

An interagency wetland work group attempted for a number of years to develop a common tracking system for wetland restoration projects. The group initially agreed to compile basic information regarding the acreage and type of wetlands being restored (or enhanced, etc.), location, partners involved in the effort, etc. This effort has been unsuccessful, however, since not all participating federal agencies are willing to contribute primary data. At this point, only statewide acreage summaries have been submitted for use by all agencies. Recent summaries indicate that an estimated 19,100 acres of wetland have been restored in Michigan from 2000 - 2004 through a variety of voluntary state, federal, and private partnership programs.

Staffing

One staff position in the DEQ Land and Water Management Division is devoted to wetland restoration and watershed management projects.

Public/Private Partnerships

Acquisition Program

The Michigan Natural Resources Trust Fund is supported by annual revenues from development of state-owned mineral resources (largely oil and gas) and provides funds for purchase of lands for outdoor recreation or protection of natural resources and open space by the state or by local units of government. In 2003, \$19 million was available from the fund for land acquisition. The current list of approved acquisitions includes numerous wetland parcels, including Great Lakes coastal wetlands, inland wetlands, and restorable wetlands. This program is administered by the Michigan Department of Natural Resources.

Public Outreach/Education

The DEQ has produced various materials aimed at promoting stewardship among local governments and landowners. These publications, produced in partnership with federal agencies, local organizations, and private groups, include *Preserving Michigan's Wetlands: Options for Local Governments*, *Living with Michigan Wetlands: A Landowner's Guide*, and *Filling the Gaps: Environmental Protection Options for Local Governments*. The agency also provides several publications for K-12 wetland education, along with information for the general public, on their web page.

Materials specific to Great Lakes coastal wetlands and targeted at landowners impacted by low Great Lakes water levels have been produced in cooperation with Tip of the Mitt Watershed Council and Michigan Sea Grant, with funding from various sources. Pamphlets and brochures have been provided to property owners through direct mailings. In addition, Sea Grant has developed a train the trainer program for Sea Grant agents to provide better information regarding coastal wetland ecology and stewardship to local government officials and private property owners.

Tax Incentives

Some landowners may obtain local and federal tax benefits by enrolling wetland acreage in the Farmland and Open Space Preservation Program, administered by the Michigan Department of Agriculture (MDA). Information is available on the MDA web page under farmland preservation at www.michigan.gov/mda.

Technical Assistance

The Wetland Protection Part includes specific provisions for assistance to landowners under what is known as the "Wetland Assessment Program." Under this fee-based program, property owners may request wetland information for a specific parcel available through existing GIS map layers; may obtain an on-site determination of the location of wetland resources; or may obtain DEQ confirmation of a private wetland delineation.

Other Nonregulatory Incentives for Private Landowners

DEQ staff are currently working with interested legislators to develop possible tax incentives to encourage the voluntary preservation of other high quality wetlands under a permanent conservation easement. Amendment of Part 303 is required to fully realize the benefits of a program of this nature.

Wetland Training and Education

During 2004, DEQ increased its focus on outreach activities during the 25th Anniversary of Michigan's Wetland Protection Act. Earth Day activities and a statewide wetland conference for Michigan citizens were included in the year's events. Additional training for local government officials, and a national wetland conference focused on Great Lakes coastal wetlands are planned in the near future.

The DEQ encourages additional outreach activities through the Michigan Wetlands Action Coalition, a network of non-governmental organizations concerned with wetland issues.

Watershed Planning

The DEQ and its interagency wetland restoration partners have encouraged active consideration of wetland resources during watershed land use planning and implementation projects funded under various nonpoint sources programs, offering technical assistance, GIS based wetland data, and other information. Overall, the state has contributed approximately \$10 million in state funds toward wetland restoration efforts, primarily in priority watersheds with approved watershed plans. The DEQ's Coastal Management Program also supports watershed planning activities in the coastal zone, with a primary focus on land use and habitat management, as a component of the state's Coastal Wetland and Nonpoint Source Strategy. Advanced planning for the protection of wetland resources has also been carried out in a number of watersheds across the state using federal demonstration grant funds.

Special Problems

The greatest challenge to a comprehensive program for the management of wetlands in Michigan may be the sheer scope of wetland resources in the state. There are an estimated 5.5 million acres of wetlands in Michigan, covering roughly 16 percent of the land area of the state, with a high percentage in private ownership. The diversity of wetland resources in Michigan is considerable, ranging from relatively pristine conifer swamps and peatlands in the Upper Peninsula, to Great Lakes coastal marshes that have national/international significance for waterfowl production and fish habitat, to rare remnants of lakeplain wet prairie in the southern corners of the state -- to name only a few examples.

The challenge of evaluating, monitoring, and protecting this vast collection of aquatic resources from a range of impacts including water quality degradation, use for agriculture and forestry, and potential outright loss due to impacts proposed under Section 404 is, simply put, enormous. Well integrated partnerships among a range of agencies and organizations with interests in the protection of wetland resources are necessary to address this challenge.

Coordination

State/Federal coordination regarding regulatory issues is formalized in Memoranda of Agreement between the DEQ and EPA, the DEQ and Detroit District Corps, and a special agreement regarding determination of jurisdiction on agricultural lands signed by the EPA, Corps, DEQ, and USDA Natural Resources Conservation Service. Michigan's Coastal Management Unit is housed in part within DEQ and Land and Water Management Division, providing for routine and in-depth coordination with the Coastal Zone Program. One full time staff position in the DEQ is designated as the Section 404 Program Coordinator. The State has also entered into formal agreements with various sister agencies at the state level, including the Departments of Natural Resources and Transportation. Coordination with local units of government that administers wetland ordinances is required and defined by the Wetland Protection Part.

On a more informal basis, an interagency "Wetland Working Group", including federal, state, local, and non-governmental organizations actively involved in wetland restoration and stewardship programs, meets regularly to share information and coordinate non-regulatory wetland programs.

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Contact Points

www.michigan.gov
www.michigan.gov/deq
www.michigan.gov/deqwetlands

Guidebooks, Brochures, Websites, Other Educational Materials

Many materials are available on the DEQ Wetland web page at www.michigan.gov/deqwetlands.

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Dennis A. Albert, 2003. *Between Land and Lake: Michigan's Great Lakes Coastal Wetlands*. Michigan State University Extension – Michigan Natural Features Inventory, East Lansing MI