



ENVIRONMENTAL
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State Wetland Protection

Status, Trends, & Model Approaches

*A 50-state study by the
Environmental Law Institute*

*With support from the
U.S. Environmental Protection Agency*

2008

Appendix: State Profiles

Michigan

I. Overview

Although an estimated 50 percent of the state's wetlands have been lost to agricultural, residential, and industrial development over the last two centuries, Michigan retains approximately 5.5 million acres of wetlands, or about fifteen percent of the state's area. In 1984, Michigan became the first state to assume authority to administer dredge and fill permits under §404 of the Clean Water Act.¹ The state's wetland permitting program is administered by the Michigan Department of Environmental Quality (MDEQ) pursuant to Part 303 of the of the state's Natural Resources and Environmental Protection Act.

In a 2003 informal review of the two-decades-old program by the U.S. Environmental Protection Agency (EPA), the agency found “both deficiencies and strengths in Michigan’s legal authorities establishing the approved §404 program and in the program’s administration by the MDEQ.”² While state regulations were found to be consistent with the Clean Water Act, areas of concern included the scope of regulatory jurisdiction, exemptions under state law, state permitting authority and decision-making, and administrative hearings. Overall, however, EPA determined that the state is “doing a good job” in its regulatory operations.^{3,4} Changes in both state and federal laws since 1984 have resulted in some inconsistencies, and the MDEQ has issued interim guidance to address these issues until EPA publishes its final review.⁵

II. Regulatory Programs

Wetland definitions and delineation

While wetlands are not explicitly included in the state's statutory definition of “waters of the state,”⁶ they have been included explicitly in the definition of “surface waters of the state” in the administrative rules on water quality standards.⁷

Part 303 of the Michigan Natural Resources and Environmental Protection Act (NREPA)—the law that establishes the state's wetlands permitting program—defines wetlands as “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

¹ New Jersey became the second state to assume regulatory authority under Section 404 of the Clean Water Act in 1994. See N.J. Dep't of Env'tl. Prot. and Energy Section 404 Permit Program Approval, 40 C.F.R. § 233.71.

² Preliminary Findings of Informal Review of State of Michigan's Approved Clean Water Act Section 404 Permit Program, 68 Fed. Reg. 7436-4 (Jan. 7, 2003).

³ *Id.*

⁴ Personal communication with Peg Bostwick, Mich. Dep't of Env'tl. Quality (Sept. 3, 2004).

⁵ Personal communication with Peg Bostwick, Mich. Dep't of Env'tl. Quality (Apr. 27, 2004).

⁶ NREPA Part 31 (Water Resources Protection) defines “waters of the state” as “groundwaters, lakes, rivers, and streams and all other watercourses and waters, including the Great Lakes, within the jurisdiction of this state.” MICH. COMP. LAWS § 324.3101.

⁷ MICH. ADMIN. CODE r. 323.1044.

referred to as a bog, swamp, or marsh...”⁸ Part 303 and its implementing regulations limit *regulated* wetlands to those that are any of the following:

- Connected to one of the Great Lakes or Lake St. Clair;
- Located within 1,000 feet of one of the Great Lakes or Lake St. Clair;
- Connected to an inland lake, pond greater than one acre in size, river, or stream;
- Located within 500 feet of an inland lake, pond greater than one acre in size, river, or stream;
- Not connected to one of the Great Lakes or Lake St. Clair, or an inland lake, pond, stream, or river, but are more than 5 acres in size;
- Not connected to one of the Great Lakes or Lake St. Clair, or an inland lake, pond, stream, or river, and less than 5 acres in size, but the DEQ has determined that these wetlands are essential to the preservation of the state’s natural resources and has notified the property owner.⁹

The state utilizes the 2001 *Michigan Department of Environmental Quality Wetland Identification Manual*¹⁰ for making delineation determinations. The manual satisfies the statutory requirement of NREPA Part 303, which states that a person “may request that the [MDEQ] assess whether the parcel of property or a portion of the parcel is wetland.”¹¹ The manual conforms to Michigan’s statutory definition of wetlands, which identifies two key parameters: wetland vegetation and wetland hydrology (as opposed to the federal method requiring independent evidence of three parameters: hydrophytic vegetation, wetland hydrology, and hydric soils). For the most part, however, the Michigan manual is consistent with the U.S. Army Corps of Engineers’ 1987 *Wetlands Delineation Manual*.^{12,13}

Wetland-related statutes and regulations

*Natural Resources and Environmental Protection Act (NREPA), Part 303.*¹⁴ In 1979, the Michigan legislature passed the Goemaere-Anderson Wetlands Protection Act, which was codified at Part 303 of the NREPA. The Michigan Department of Environmental Quality (MDEQ), formerly the Michigan Department of Natural Resources, assumed administration of the Clean Water Act (CWA) §404 wetlands program in 1984. MDEQ’s Land and Water Management Division administers the state’s wetland permitting program. To date, primary

⁸ MICH. COMP. LAWS § 324.30301.

⁹ *Id.* § 324.30301; MICH. ADMIN. CODE r. § 281.921.

¹⁰ MICH. DEP’T OF ENVTL. QUALITY [hereinafter MDEQ], MDEQ WETLAND IDENTIFICATION MANUAL: A TECHNICAL MANUAL FOR IDENTIFYING WETLANDS IN MICHIGAN (2001), *available at* www.deq.state.mi.us/documents/deq-water-wetlands-idmanualtitletoc.pdf.

¹¹ MICH. COMP. LAWS § 30321(3).

¹² ENVTL. LAB., WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (U.S. Army Corps of Engineers 1987), *available at* <http://www.mvn.usace.army.mil/ops/regulatory/wlman87.pdf>.

¹³ MDEQ, *supra* note 10.

¹⁴ MICH. COMP. LAWS §§ 324.30301-324.30323; MICH. ADMIN. CODE r. §§ 281.921-281.925.

oversight responsibility for the program remains with the state. The EPA has waived review of all applications except for “major discharges,” which include discharges that are greater than 10,000 cubic yards of fill, discharges that contain toxic materials, and discharges into areas determined to be unique, or where a waterway’s commercial value could be significantly reduced.¹⁵

While Michigan has been delegated the authority to administer CWA §404, the agency also shares jurisdiction with the U.S. Army Corps of Engineers (“Corps”) in some areas. The Corps has retained CWA §404 jurisdiction over traditionally navigable waters, including the Great Lakes, connecting channels, and other waters connected to the Great Lakes where navigational conditions are maintained (essentially, those waters covered by §10 of the Rivers and Harbors Act). The Corps also retains jurisdiction in wetlands directly adjacent to these waters. In these areas, both a Corps and a MDEQ permit are required for activities in wetlands.¹⁶ A joint permit application is available, minimizing time and effort for applicants.¹⁷

NREPA Part 303 requires a permit from the state for activities in wetlands that: deposit or allow the placing of fill material; dredge, remove, or allow the removal of soil or minerals; construct, operate, or maintain any use or development; or drain surface water.¹⁸ Permitted activities cannot impose an “unacceptable” disruption to aquatic resource and must be in the public interest, otherwise lawful, necessary to realize the benefits from the activity, and wetland-dependent or without a feasible alternative.¹⁹ Exempt activities include various recreational activities, vegetation cutting (with the exception of cutting activities that constitute a use of a wetland and the cutting of vegetation in wetlands below the ordinary high water mark of the Great Lakes, which are regulated), and nearly all agricultural activities associated with ongoing farming operations.²⁰

As described above, regulations under NREPA apply to contiguous wetlands, or those wetlands found in close proximity to a waterbody and/or having a direct hydrological relationship with the waterbody. Generally, wetlands with any permanent or intermittent surface water connection; within 500 feet of an inland lake, stream, or pond greater than one acre in size; or within 1,000 feet of a Great Lake are considered contiguous.²¹ Activities in contiguous wetlands are regulated without regard to the size of the wetland. Noncontiguous wetlands that are “isolated” from lakes and streams hydrologically are regulated only if they are greater than five acres in size.²² The

¹⁵ WILFRED CWIKIEL, LIVING WITH MICHIGAN WETLANDS: A LANDOWNER’S GUIDE (Tip of the Mitt Watershed Council 1998) (1996), *available at* http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10502--,00.html; Michigan Department of Environmental Quality, *Michigan’s Administration of Section 404*, at <http://www.deq.state.mi.us/documents/deq-lwm-wetlands-404admin.pdf> (last visited April 12, 2007).

¹⁶ *Id.*

¹⁷ MICH. DEP’T OF ENVTL. QUALITY, STATE, FEDERAL AND LOCAL WETLAND REGULATIONS, *available at* http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10801--,00.html (last visited July 25, 2007).

¹⁸ MICH. COMP. LAWS § 324.30304.

¹⁹ MDEQ, *supra* note 17.

²⁰ MICH. COMP. LAWS § 324.30305.

²¹ *Id.* § 324.30301.

²² Governor Jennifer Granholm issued Executive Directive No. 2004-4 on April 21, 2004, Earth Day, to the Michigan Department of Environmental Quality. The directive orders the MDEQ to develop a process “to bring Michigan’s critical non-contiguous wetlands located on public land within the jurisdiction of Part 303.” *See* Office of the Michigan Governor, *Executive Directive No. 2004-4*, at

MDEQ can regulate noncontiguous wetlands of any size, anywhere in the state, if the wetland is determined to be essential to the preservation of natural resources of the state and the landowner is notified of this determination.²³

Local governments may also elect to regulate such wetlands themselves. NREPA authorizes local units of government to adopt and administer their own wetland regulations, provided they are at least as restrictive as the state regulations.²⁴ Regulation of isolated wetlands of less than five acres is generally reserved for local governments. If a local government receives a permit application for a wetland less than two acres in size, the local government must approve the permit unless it determines that the wetland is essential to the preservation of the community's natural resources by providing one or more broadly-defined wetland functions.²⁵ Forty-three communities had assumed regulating authority as of October 2005. Local governments can go beyond NREPA by implementing wetland protection measures through the state's numerous planning and zoning acts.²⁶ The state offers some guidance on tools that local municipalities may utilize to increase wetlands protection and stewardship.²⁷

*Shorelands Protection and Management, NREPA Part 323.*²⁸ Some coastal wetlands receive further protection under the Shorelands Protection and Management provisions of NREPA.²⁹ These provisions protect parts of the Great Lakes shoreline that are specifically designated by the Natural Resources Commission as high risk erosion, flood risk, and environmental areas. To be designated, environmental areas (EAs) must be deemed "necessary for the preservation and maintenance of fish and wildlife," and be "within 1,000 feet landward of the ordinary high water mark of lands adjacent to waters affected by levels of the Great Lakes."³⁰ EAs are designed to protect the natural condition of the area and limit or prohibit human presence. The following activities within EAs require a permit from the MDEQ:

- Dredging, filling, grading, or other alterations of the soil;
- Alteration of natural drainage;
- Alteration of vegetation utilized by fish or wildlife; and

21975_22515-91329--,00.html (last visited July 25, 2007). In response, MDEQ developed a process that would subject critical noncontiguous wetlands located on public land to the same permitting criteria and procedures as other wetlands within the jurisdiction of NREPA Part 303. As of April 2007, MDEQ was in the process of using the procedure to designate noncontiguous wetlands. Bostwick, *supra* note 5.

²³ MICH. COMP. LAWS § 324.30301.

²⁴ *Id.* § 324.30308.

²⁵ *Id.* § 324.30309.

²⁶ MDEQ, *supra* note 17.

²⁷ See, e.g., TIP OF THE MITT WATERSHED COUNCIL, PRESERVING MICHIGAN'S WETLANDS: OPTIONS FOR LOCAL GOVERNMENTS (1997), available at http://www.michigan.gov/deq/1,1607,7-135-3313_3687-10466--,00.html; KATHERINE ARDIZONE & MARK WYCKOFF, FILLING THE GAPS: ENVIRONMENTAL PROTECTION OPTIONS FOR LOCAL GOVERNMENTS (2003), available at http://www.michigan.gov/deq/0,1607,7-135-3313_3677_3696-73358--,00.html.

²⁸ MICH. COMP. LAWS §§ 324.32301 - 324.32315; MICH. ADMIN. CODE r. §§ 281.21-281.24.

²⁹ *Id.*

³⁰ MICH. COMP. LAWS § 324.32301.

- The placement of permanent structures.³¹

Exempt activities, also listed in Part 303, relate to: recreation; agriculture and timber operations; maintenance or operation of serviceable structures in existence prior to October 1980; road maintenance; gas or oil pipeline construction, maintenance, and operation; electric transmission and distribution power line construction, maintenance, and operation; construction of iron and copper mining tailings basins and water storage areas; and certain beach maintenance activities.³²

Organization of state agencies

Most wetland-related activities at the state level are operated by the MDEQ's Land and Water Management Division (LWMD). The LWMD houses the §404 program, including permitting, outreach and technical support, enforcement, research, and restoration activities related to wetlands.³³ To a limited extent, other state agencies are involved in various research or restoration initiatives. For example, the Michigan Department of Natural Resources (MDNR) often coordinates endangered species considerations by reviewing MDEQ permits for impacts to wildlife or fisheries. The agency also promotes wetlands restoration to the state's landowners with various educational materials. The Michigan Department of Agriculture (MDA) is involved in the U.S. Department of Agriculture Conservation Reserve Enhancement Program, of which wetland restoration is a major component.³⁴

Michigan Department of Environmental Quality. Many wetland-related activities are performed in the LWMD's ten field offices.³⁵ Thirty-five regional full-time equivalents (FTEs) work on wetlands permitting, enforcement, and compliance. Seven headquarter FTEs generally provide guidance and technical assistance to district staff, as well as some comment on larger cases. One headquarter staff position is devoted to restoration activities.³⁶ However, approximately 80 FTEs working throughout the LWMD have responsibilities related in some way to the §404 program. These activities include permit evaluation and enforcement, technical support, computer support, clerical technical support, and administrative duties. The §404 program's annual budget is approximately \$7 million.³⁷ There is currently no dedicated source of funding to support Michigan's state-assumed §404 program, which is supported primarily by state general funds, permit fees, and federal grants from the National Oceanic and Atmospheric Administration (NOAA) and EPA, among other agencies.³⁸

§401 certification program

³¹ MICH. ADMIN. CODE r. § 281.23(6).

³² MICH. COMP. LAWS § 324.30305.

³³ Personal communication with Todd Losee, Mich. Dep't of Env'tl. Quality (Mar. 1, 2004).

³⁴ Personal communication with Rob Zbiciak, Mich. Dep't of Env'tl. Quality (Mar. 11, 2004).

³⁵ The LWMD's ten field offices are: the Cadillac District Office, the Gaylord Field Office, the Grand Rapids District Office, the Jackson District Office, the Kalamazoo District Office, the Lansing District Office, the Saginaw-Bay District Office, the Southeast Michigan District Office, the Upper Peninsula District Office, and the Crystal Falls Field Office. See Michigan Department of Environmental Quality, *Land and Water Management Division*, at http://www.michigan.gov/deq/0,1607,7-135-3306_32341---,00.html (last visited July 25, 2007).

³⁶ Losee, *supra* note 33.

³⁷ Michigan Department of Environmental Quality, Program Description (Aug. 16, 2002) (on file with author).

³⁸ Losee, *supra* note 33; Bostwick, *supra* note 4.

Because Michigan is a delegated state under §404 of the CWA, §401 water quality certification is not used to regulate wetland-related activities. In 2006, MDEQ revised Michigan's surface water quality standards to explicitly recognize wetlands as waters of the state and to address other related wetland issues.^{39,40}

Nationwide permits

The MDEQ does review and comment on nationwide permits (NWP). Because the Corps retains jurisdiction of traditionally navigable waters, NWPs do apply in some areas of the state, such as the Great Lakes and their adjacent wetlands. The review process involves an informal comment period prior to issuing conditions, approvals, or denials of NWPs. The U.S. Army Corps of Engineers' Detroit District sets regional conditions that facilitate the MDEQ's review process.⁴¹ MDEQ approved, conditionally approved, and denied consistency for the 2002 NWPs.^{42,43} MDEQ's action on the 2007 NWPs could not be reviewed within the reporting period for this publication.

General permits

As a delegated state, Michigan has issued its own set of "General Permit Categories for Minor Activities in Wetlands in the State of Michigan."⁴⁴ The NREPA states that "[t]he department ...

³⁹ Losee, *supra* note 33.

⁴⁰ Bostwick, *supra* note 5.

⁴¹ Personal communication with Peg Bostwick, Mich. Dep't of Env'tl. Quality (Apr. 16, 2004).

⁴² The MDEQ granted §401 water quality certification and Coastal Zone Management Act consistency for the following 2002 NWPs: NWP#1 - Aids to Navigation; NWP#4 - Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities; NWP#5 - Scientific Measurement Devices; NWP#6 - Survey Activities; NWP#9 - Structures in Fleeting and Anchorage Areas; NWP#16 - Return Water From Upland Contained Disposal Areas; NWP#20 - Oil Spill Cleanup; NWP#21 - Surface Coal Mining Activities; NWP#22 - Removal of Vessels; NWP#24 - State Administered §404 Program; NWP#30 - Moist Soil Management; NWP#31 - Maintenance of Existing Flood Control Facilities; NWP#37 - Emergency Watershed Protection and Rehabilitation; and NWP#40 (part c) - Agricultural Activities. The following NWPs were approved, with conditions: NWP#2 - Structures in Artificial Canals; NWP#3 - Maintenance; NWP#7 - Outfall Structures and Maintenance; NWP#10 - Mooring Buoys; NWP#11 - Temporary Recreational Structures; NWP#12 - Utility Activities; NWP#13 - Bank Stabilization; NWP#14 - Linear Transportation Projects; NWP#18 - Minor Discharges; NWP#19 - Minor Dredging; NWP#27 - Stream and Wetland Restoration Activities; NWP#29 - Single-Family Housing; NWP#32 - Completed Enforcement Actions; NWP#35 - Maintenance Dredging of Existing Basins; NWP#36 - Boat Ramps; NWP#38 - Cleanup of Hazardous and Toxic Wastes; NWP#41 - Reshaping Existing Drainage Ditches; NWP#42 - Recreational Facilities; and NWP#43 - Stormwater Management Facilities. The following NWPs were denied: NWP#15 - U.S. Coast Guard Approved Bridges; NWP#17 - Hydropower Projects; NWP#23 - Approved Categorical Exclusions; NWP#25 - Structural Discharges; NWP#28 - Modification of Existing Marinas; NWP#33 - Temporary Construction, Access, and Dewatering; NWP#34 - Cranberry Production Activities; NWP#39 - Residential, Commercial, and Institutional Developments; NWP#40 (parts a, b, and d) - Agricultural Activities; and NWA#44 - Mining Activities. The MDEQ also added general conditions which affect most NWPs. Note that NWP#24 (State Administered §404 Program) states that "[a]ny activity permitted by a state administering its own Section 404 permit program pursuant to 33 U.S.C. 1344(g)-(l) is permitted pursuant to Section 10 of the Rivers and Harbors Act of 1899." The MDEQ granted certification for this NWP. MDEQ's action on the 2007 NWPs could not be reviewed within the reporting period for this publication.

⁴³ Public Notice, U.S. Army Corps of Engineers, File No. 01-200-007-0, Reissuance of Nationwide Permits and Final Regional Conditions in Michigan - (June 14, 2002), *available at* http://www.lre.usace.army.mil/functions/rf/html/pnMI_final.pdf.

⁴⁴ General Permit categories include: Small ponds and shallow water development for wildlife; Simple elevated or floating structures; Walkways; Driveways; Utilities; Oil, gas, and mineral well access roads; Stormwater outfalls; Culverts; Emergency drain maintenance; Septic system replacement; Repairs to serviceable structures; Completed

may issue general permits ... for a category of activities if the department determines that the activities are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects of the environment."⁴⁵ The general permits allow MDEQ to evaluate applications on an expedited basis without having to go through a public notice process.⁴⁶ For the most part, general permit categories are similar to many of the Corps' NWP's. Site inspections are routinely conducted for many projects considered within general permit categories, and project-specific conditions may be attached if a permit is issued.⁴⁷

Mitigation

The state has extensive guidelines, policies, and regulations that guide wetland mitigation. The state's regulations provide that mitigation should be considered only after steps have been taken to avoid and minimize impacts from a proposed activity.⁴⁸ Mitigation requirements may be waived if the impacted area is less than one-third of an acre and no reasonable mitigation opportunity exists, or if the basic purpose of the proposed activity is the creation or restoration of wetlands.⁴⁹ Compensatory mitigation requirements can be satisfied through restoration of degraded wetlands (preferred), creation of wetland, acquisition of banking credits, and preservation (under certain permitted circumstances). Mitigation regulations specify that a net-loss of wetlands should be achieved and provide a set of ratios⁵⁰ and requirements⁵¹ to meet this objective. The regulations also outline applicant procedures, opportunities to comment, and submission requirements.⁵²

The wetland regulations also establish a mitigation banking program for the state.⁵³ Administrative rules governing banking took effect in December 1997 and allow for the use of credits from established mitigation banks to fulfill wetland permit requirements. The MDEQ has developed a program that strives to meet several state goals, including: reducing permit processing time and costs due to increased certainty regarding the availability of adequate mitigation sites; providing for the establishment of new wetlands in advance of losses; consolidating mitigation projects into better designed and managed sites; and encouraging the integration of watershed and mitigation planning.⁵⁴ The MDEQ has also developed a mitigation

enforcement actions; Emergency spill cleanup; Cleanup of hazardous substances or hazardous and toxic waste; Maintenance dredging of man-made stormwater and wastewater treatment ponds and lagoons; Public road projects; Minor fills; and Restoration of altered wetland areas. See MICH. DEP'T OF ENVTL. QUALITY, GENERAL PERMIT CATEGORIES FOR MINOR ACTIVITIES IN WETLANDS IN THE STATE OF MICHIGAN (June 14, 2002), *available at* www.deq.state.mi.us/documents/deq-lwm-wetlands-gp2.pdf.

⁴⁵ MICH. COMP. LAWS § 324.30312(1).

⁴⁶ MICH. ADMIN. CODE r. § 281.923(1).

⁴⁷ Bostwick, *supra* note 41.

⁴⁸ See MICH. ADMIN. CODE r. § 281.925.

⁴⁹ *Id.*

⁵⁰ Restoration/creation ratios are: 5:1 for rare or imperiled wetlands; 2:1 for forested wetlands and some coastal wetlands; and 1.5:1 for all other wetlands. For preservation of wetlands as a mitigation option, the ratio of preserved wetlands to impacted wetlands should be 10:1.

⁵¹ Mitigation should be on-site and in-kind where possible and practical. MDEQ permitting staff may adjust ratios if mitigation is to be out-of-kind or for other specific circumstances.

⁵² MICH. ADMIN. CODE r. § 281.925.

⁵³ *Id.*, §§ 281.951-281.961.

⁵⁴ Michigan Department of Environmental Quality, *Wetland Mitigation Banking*, at http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10426--,00.html (last visited on July 25, 2007).

banking handbook that guides the establishment of mitigation banks and agreements, provides planning and management considerations, outlines the applicability of banking credits, and establishes a procedure for determining priority wetland restoration areas within the state.⁵⁵ To date, seven mitigation banks have been established throughout the state.⁵⁶

In 2001, MDEQ released a comprehensive study to examine and evaluate the quality and success of wetland mitigation projects in Michigan.⁵⁷ The study examined wetland permits issued by MDEQ between 1987 and 1998, and included selected projects in all geographic regions of the state. Findings revealed that “the sophistication of the MDEQ wetland permits varies greatly throughout the state,” and that “MDEQ’s wetland mitigation program has not been successful in producing adequate replacement wetlands.” Factors identified as contributing to the low success rate included: a lack of accurate record keeping; inadequate selection of sites due to the on-site mitigation preference; permit issuance prior to completion of mitigation projects; and high workloads for permitting staff and issuance of incomplete permits. The MDEQ has taken several steps to improve mitigation since 1997. The agency adopted new rules for conducting mitigation banking, developed a mitigation handbook, and adopted the current administrative rules for mitigation, including the call for on-site mitigation only when practical and beneficial to the resource, as well as the requirement of a mitigation plan with a permit application. The rules also require posting of financial assurance unless mitigation is completed in advance of a permitted project and placement of a permanent conservation easement over all mitigation sites. In addition, the agency has created a computerized mitigation tracking system for permitting staff. The study also included additional recommendations for improving the program.⁵⁸

Compliance and enforcement

The NREPA includes a variety of compliance and enforcement measures. EPA’s informal review of the Michigan’s regulatory programs in 2003 found that the state has maintained a “satisfactory enforcement program.”⁵⁹ According to state law,⁶⁰ permit holders are required to submit compliance information to the MDEQ upon request. Furthermore, MDEQ staff may enter the premises of an implicated activity if they have a warrant or some reasonable cause to do so. If a violation is found, the MDEQ may issue a compliance order. Alternatively, MDEQ staff may request the state’s attorney general to commence a civil action for appropriate relief, including injunctive relief. In addition, civil fines of up to \$10,000 for each day of the violation may be imposed. Offenders found guilty of a misdemeanor are subject to a fine of up to \$2,500; however, a person who “willfully or recklessly violates a condition or limitation in a permit..., or

⁵⁵ MICH. DEP’T OF ENVTL. QUALITY, MDEQ WETLAND MITIGATION BANKING HANDBOOK (2001), *available at* <http://www.deq.state.mi.us/documents/deq-water-wetlands-webhandbook.pdf>.

⁵⁶ Personal communication with Peg Bostwick, Mich. Dep’t of Env’tl. Quality (May 1, 2007).

⁵⁷ MICH. DEP’T OF ENVTL. QUALITY, MICHIGAN WETLAND MITIGATION AND PERMIT COMPLIANCE STUDY - FINAL REPORT (Feb. 2001), *available at* <http://www.deq.state.mi.us/documents/deq-lwm-wetlands-MITIGATIONREPORTFINAL09-14-01.pdf>.

⁵⁸ The study made the following recommendations for improvements to the 404 program: an update of MDEQ’s standard mitigation permit conditions; withholding of permit until all mitigation is completed; inspections of mitigation projects with reports of violations; prioritization of mitigation violations; prioritization of mitigation sites; requirement of a water control structure for mitigation projects; and encouragement of mitigation banking as a mitigation option.

⁵⁹ Preliminary Findings of Informal Review of State of Michigan’s Approved Clean Water Act Section 404 Permit Program, 68 Fed. Reg. 7436-4 (Jan. 7, 2003).

⁶⁰ MICH. COMP. LAWS §§ 324.30313-324.30317.

a corporate officer who has knowledge or is responsible for a violation, is guilty of a misdemeanor.” Such offenses are punishable by a fine of \$2,500 to \$25,000 per day of violation and imprisonment of up to one year. A subsequent violation is considered a felony and is punishable by a fine of up to \$50,000 and imprisonment of up to two years. The court may also order offenders to restore the wetlands in question. Collected fines go into the state’s general funds. Any collected fees are to be deposited into a “land and water management permit fee fund” to support technical assistance and guidance to landowners and other permit applicants, as well as other permitting, compliance, and enforcement activities by the state.⁶¹

Enforcement is handled by MDEQ’s field staff in cooperation with a new dedicated enforcement unit, a pilot program funded by an EPA grant.⁶² Complaints are logged into a Complaint Tracking System.⁶³ Typical enforcement cases involve individuals who have not obtained a permit for their activities. If the activity in question is permissible, an after-the-fact permit may be issued with doubled permit application fees. If the activity is not permissible, MDEQ staff will not accept an application and will request the violator to restore the wetlands. Some violators comply voluntarily. If a violation is more serious, MDEQ may negotiate a consent agreement with fines and penalties. Wetland-related enforcement cases may sometimes involve legal action.⁶⁴ In the limited cases when voluntary compliance cannot be achieved, MDEQ staff will work with the county prosecutors, the state’s attorney general, and/or the EPA to prosecute offenders.^{65,66}

Tracking systems

The Coastal and Inland Waters Permit Information System (CIWPIS) is an online database that provides information on all Land/Water Joint Permit applications, including permits for activities regulated under NREPA Part 303, dating back to 1980. The database includes information on new applications, individual files, applications in a specified municipality, applications for activities in a certain waterbody, and active public notices and hearings. Records include applicant information, current review status of the file, date received at MDEQ, proposed location and activity, regulatory authority, and important processing dates.⁶⁷ The system also tracks the amount and type of wetlands being permitted and mitigated, as well as monitoring reports, staff inspections, and other information. Mitigation construction and performance are evaluated based on state performance standards and staff inspections.⁶⁸

The Michigan Natural Features Inventory (MNFI) tracks biological and ecological information on the state’s species and habitats. Formerly part of the MDNR, MNFI is now housed within the Michigan State University Extension. MNFI information is used for a variety of purposes,

⁶¹ *Id.*

⁶² Personal communication with Peg Bostwick, Mich. Dep’t of Env’tl. Quality (May 16, 2007).

⁶³ MDEQ, *supra* note 37.

⁶⁴ Bostwick, *supra* note 41.

⁶⁵ Monetary settlements of wetland violations can be significant. A recent widely publicized violation resulted in a restoration order, payment of \$140,000 in fines and penalties, and placement of 68 acres of undisturbed and restored wetlands and upland buffer under a permanent conservation easement. Bostwick, *supra* note 4.

⁶⁶ MDEQ, *supra* note 37.

⁶⁷ Michigan Department of Environmental Quality, *CIWPIS on line*, at <http://www.deq.state.mi.us/ciwpis> (last visited July 25, 2007).

⁶⁸ Losee, *supra* note 33.

including informing regulatory agencies of the status and trends of populations, habitats, and ecosystems throughout the state.⁶⁹

III. Water Quality Standards

The State of Michigan updated its water quality standards in 2006 to address wetlands. The standards now include wetlands in the regulatory definition of “surface waters of the state”⁷⁰ and contain designated use criteria for wetlands.⁷¹ Water quality standards as they relate to wetlands are used both for the purposes of §401 water quality certification and National Pollutant Discharge Elimination System (NPDES) permitting.⁷²

IV. Monitoring and Assessment

Monitoring and assessment for wetlands

MDEQ has a wetland assessment program, but the program’s purpose is to identify and delineate⁷³ wetlands for regulatory purposes. The MDEQ has not yet adopted an assessment methodology for the purposes of wetland monitoring; however, the agency is close to finishing its development of the Michigan Rapid Assessment Methodology (MiRAM), a rapid function and value assessment methodology. MDEQ will conduct field tests and calibrations of the methodology in the summer of 2007 and MiRAM assessment of wetlands will begin in summer 2008. The methodology will be used to evaluate permit applications⁷⁴ and for the state’s routine water basin monitoring program.⁷⁵

MDEQ, in collaboration with Michigan State University, Grand Valley State University, and MNFI, has also begun developing a bioassessment methodology based on indices of biological integrity (IBI). As of April 2007, the group had published five IBI methods for different wetland types and was working on field manuals to support the use of those methods.⁷⁶ The effort began as a U.S. Geological Survey-funded initiative to develop evaluation methods for coastal restoration projects. MDEQ has obtained EPA funding to train its staff to use these methodologies, which may be required for projects that warrant more in-depth analysis than MiRAM can provide. Coastal IBIs will be used for long-term monitoring and restoration work.⁷⁷

⁶⁹ Michigan State University Extension, *Michigan Natural Features Inventory*, at <http://web4.msue.msu.edu/mnfi/> (last visited on July 25, 2007).

⁷⁰ MICH. ADMIN. CODE r. 323.1044.

⁷¹ MICH. ADMIN. CODE r. 323.1100.

⁷² Bostwick, *supra* note 41.

⁷³ The program relies on the MDEQ Wetland Identification Manual: A Technical Manual for Identifying Wetlands in Michigan (2001).

⁷⁴ Bostwick, *supra* note 41.

⁷⁵ Bostwick, *supra* note 5.

⁷⁶ The group completed IBI’s for Great Lakes coastal wetlands (invertebrates), Great Lakes coastal wetlands (fish), drowned rivermouth wetlands, inland forest wetlands, and inland herbaceous wetlands. Bostwick, *supra* note 5.

⁷⁷ *Id.*

While there is no formal state wetland monitoring program in place currently, elements of such a program are under development. The MDEQ has developed a comprehensive monitoring and assessment strategy and as of April 2007 was working to integrate it into the state surface water program.⁷⁸ Implementation of the strategy will occur as funding allows.

The MDEQ also participates in the Great Lakes Coastal Wetlands Consortium, a collaborative effort with the Great Lakes Commission and other federal agencies and nongovernmental organizations to develop a protocol for long-term monitoring of Great Lakes coastal wetlands.⁷⁹ This multi-state effort is scheduled to be completed by the summer of 2007.⁸⁰ A state wetland inventory was completed in December of 2006.⁸¹

Monitoring and assessment for streams

The MDEQ's Surface Water Assessment Section (SWAS) monitors water, sediments, and aquatic life to ensure that water quality standards are being met and that surface waters meet designated uses. The monitoring and assessment program primarily uses the five-year rotating basin approach consistent with the NPDES permitting program.⁸² Sampling is typically conducted two years prior to NPDES permit renewal for a particular basin.⁸³

Assessment methods, used in developing 303(d) lists and 305(b) reports, include biological surveys, habitat assessments, water and sediment sampling, and/or contaminant levels in fish to evaluate each sampling site. Methods are similar to those developed by EPA for biological assessments of water quality. The MDEQ uses "the principle of independent applicability" in assessing whether or not the sampled site attains state water quality standards. In other words, if the water body fails to meet water quality standards for any parameter (e.g. biological, water, fish tissue), the site is determined to not be in attainment.⁸⁴

Citizen monitoring groups. SWAS works closely with citizen monitoring groups throughout the state. In September 2003, an Executive Order by Governor Jennifer M. Granholm established the Michigan Clean Water Corps (MiCorps) to formalize MDEQ's partnership with citizen volunteers. MDEQ established a contract with the Great Lakes Commission in 2004 to administer the MiCorps program. Volunteer data on inland lakes has been utilized by the agency for approximately 30 years. The Great Lakes Commission, in conjunction with the Michigan Lakes and Streams Association (MLSA) and SWAS, provides training for inland lake volunteer monitoring organizations on various sampling methods, as well as recording and submitting data. Volunteer data is utilized by the SWAS for assessment and reporting purposes and verified regularly for quality control. If data quality concerns arise, the Great Lakes Commission and MLSA may provide more training to volunteers.⁸⁵

⁷⁸ *Id.*

⁷⁹ Bostwick, *supra* note 41.

⁸⁰ Bostwick, *supra* note 5.

⁸¹ *Id.*

⁸² Michigan Department of Environmental Quality, *Assessment of Michigan Waters*, at http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728---,00.html (last visited on July 25, 2007).

⁸³ Personal communication with Gary Kohlhepp, Mich. Dep't of Env'tl. Quality (Aug. 13, 2004).

⁸⁴ *Id.*

⁸⁵ Personal communication with Gary Kohlhepp, Mich. Dep't of Env'tl. Quality (June 4, 2007).

Since 1998, SWAS has worked with stream and river monitoring groups. The Great Lakes Commission, in conjunction with the Huron River Watershed Council, provides training on standard sampling techniques, as well as protocols for data submission.⁸⁶ Data must be verified before the SWAS will utilize any volunteer-collected information for assessment purposes.⁸⁷

In order to receive MDEQ funding, stream monitoring groups are required to receive training and use the agency's procedures and forms for data submission. Approximately \$50,000 is allocated by the SWAS annually for volunteer monitoring grants for streams.⁸⁸

V. Restoration and Partnerships

The Michigan State Wetland Conservation Plan outlines both short- and long-term goals for the restoration of wetlands. The short-term goal is the restoration of 50,000 acres of wetlands (one percent of historic losses) by 2010, while the long-term goal (with no specific time frame) is the restoration of 500,000 acres of wetlands (ten percent of historic losses).⁸⁹ The State Wetland Conservation Plan, completed in the mid-1990s, lost some momentum when the MDNR was split into two separate agencies, MDNR and MDEQ. While the MDEQ has been working towards the goals informally, efforts to provide detailed tracking of restored acreage in the state have faltered.⁹⁰ However, recent estimates indicate that approximately 4,000 acres of wetland have been restored per year in Michigan since 1998 through a combination of voluntary, state, federal, and private partnership programs. At this rate, MDEQ projects that the state will reach the short term goal of restoring 50,000 acres by 2010 or 2011.⁹¹

The MDEQ currently has one FTE in its Land and Water Management Division devoted to conducting wetland restoration activities, liaising with the U.S. Department of Agriculture and other federal agencies and organizations, coordinating restoration and watershed planning projects, and providing technical assistance, education, and outreach. Because many restoration projects require a permit in the State of Michigan, many of these activities have a regulatory focus. Grants from EPA have provided the agency with funding for these activities in the past. The agency also provides some restoration program guides for private landowners.⁹²

MDEQ's Land and Water Division also evaluates CWA § 319 grant applications from state watershed planning groups. Through this process, the division identifies watershed groups with which they might collaborate on restoration efforts. One recent Land and Water Division initiative has been the development of wetland resource maps for watersheds in the state. The division has partnered with numerous watershed planning groups to generate watershed-based GIS maps. These maps show existing wetlands, pre-settlement inventories, hydric soils, and current areas of development and assist in the identification of restoration opportunity areas.⁹³

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ See Michigan State Wetland Conservation Plan (on file at the Michigan Department of Environmental Quality).

⁹⁰ Zbiciak, *supra* note 34.

⁹¹ Bostwick, *supra* note 62.

⁹² *Id.*

⁹³ Personal Communication with Rob Zbiciak, Mich. Dep't of Env'tl. Quality (June 4, 2007).

The MDEQ also has organized and participates on the Wetland Working Group (WWG), a consortium of state and federal agencies and nongovernmental organizations,⁹⁴ all of which are involved in wetland restoration in the state. The WWG, created in 2001, meets several times a year with the purpose of coordinating wetland restoration efforts in order to prevent duplication of efforts and violations to state and federal regulations. In 2006, most of the members of the WWG signed memorandum of agreement (MOA) to promote cooperation on wetland restoration activities. The WWG is a voluntary organization and has no formal funding.⁹⁵

To a limited extent, the state also collaborates with corporations on restoration initiatives. The North American Waterfowl Management Plan Steering Committee for the state includes a few private representatives. Among other activities, the Steering Committee has obtained North American Wetland Conservation Act (NAWCA) grants for wetland restoration and acquisition.⁹⁶

VI. Education and Outreach

The MDEQ 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*,⁹⁷ *Living with Michigan Wetlands: A Landowner's Guide*,⁹⁸ and *Filling the Gaps: Environmental Protection Options for Local Governments*.⁹⁹ The agency also provides several publications for K-12 wetland education, as well as information for the general public, on their website.¹⁰⁰

In 2004, MDEQ increased its focus on outreach activities. The 25th Anniversary of Michigan's Wetland Protection Act was highlighted in various events throughout the year. For example, a wetland display was exhibited at MDEQ's April Earth Day event. In addition, MDEQ sponsored a statewide wetland conference in Traverse City, Michigan, attracting more than 350 participants from a wide range of interest groups. A national wetland conference focusing on Great Lakes wetlands, cosponsored by MDEQ and the Association for State Wetland Managers, was held in August 2006.¹⁰¹ The Department has also encouraged additional outreach activities through the

⁹⁴ Members of the WWG include the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture's Natural Resources Conservation Service and Farm Service Agency, the MDEQ, the Michigan Department of Agriculture, the Michigan Department of Natural Resources, and Ducks Unlimited, among other organizations.

⁹⁵ Bostwick, *supra* note 5; Zbiciak, *supra* note 34.

⁹⁶ Personal communication with Rob Zbiciak, Mich. Dep't of Env'tl. Quality (Mar. 24, 2004).

⁹⁷ TIP OF THE MITT WATERSHED COUNCIL, PRESERVING MICHIGAN'S WETLANDS: OPTIONS FOR LOCAL GOVERNMENTS (1997), *available at* http://www.michigan.gov/deq/1,1607,7-135-3313_3687-10466--,00.html

⁹⁸ WILFRED CWIKIEL, LIVING WITH MICHIGAN WETLANDS (Tip of the Mitt Watershed Council 1998) (1996), *available at* http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10502--,00.html.

⁹⁹ KATHERINE ARDIZONE & MARK WYCKOFF, FILLING THE GAPS: ENVIRONMENTAL PROTECTION OPTIONS FOR LOCAL GOVERNMENTS (2003), *available at* http://www.michigan.gov/deq/0,1607,7-135-3313_3677_3696-73358--,00.html.

¹⁰⁰ Michigan Department of Environmental Quality, *Education and Stewardship*, at http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10507--,00.html (last visited on July 25, 2007).

¹⁰¹ Bostwick, *supra* note 4.

Michigan Wetlands Action Coalition, a network of nongovernmental organizations concerned with wetland issues.¹⁰²

VII. Coordination with State and Federal Agencies

The MDEQ coordinates with other state agencies, most notably, MDNR. Once part of the same agency, MDEQ and MDNR maintain a relationship, which has been formalized in a memorandum of understanding pertaining to technical guidance for permit review.

The state also coordinates regularly with federal agencies on a variety of wetland-related issues. MDEQ coordinates with the Corps on joint jurisdictional issues, EPA on permit reviews, U.S. Fish and Wildlife Service (FWS) on their Partners for Wildlife Program, and U.S. Department of Agriculture (USDA) on Farm Bill programs.¹⁰³

EPA Region V holds primary responsibility for oversight of Michigan's state administered §404 Program. An MOA between the State of Michigan and EPA defines the terms of this cooperative state/federal program. The agency also has an MOA with the Corps' Detroit District regarding the §404 Program. EPA, Corps, and FWS all review copies of public notices for major discharges under the state's §404 Program. Special coordination with FWS is necessary when a project has the potential to impact federally listed threatened or endangered species.¹⁰⁴

MDEQ also holds an MOA with the USDA Natural Resources Conservation Service (NRCS), EPA, Corps, and U.S. Fish and Wildlife Service regarding wetland delineations on agricultural land in Michigan. Under this agreement, MDEQ retains responsibility for wetland delineations in all areas of the state where it has §404 jurisdiction. NRCS is responsible for identification of wetlands for purposes of the Food Security Act, while the Corps is responsible for delineation of wetlands in areas where it retains §404 jurisdiction. NRCS staff have assisted in training of LWMD staff in wetland delineation, while LWMD staff have participated in the development of NRCS wetland mapping conventions and on wetland subcommittees of the NRCS State Technical Committee.¹⁰⁵

Finally, MDEQ works closely with NOAA through the Michigan Coastal Management Program. The program is responsible for consistency reviews under the Coastal Zone Management Act, and also supports a variety of project to protect, restore, and manage coastal wetland resources.

VIII. Acronyms and Abbreviations

¹⁰² *Id.*

¹⁰³ Losee, *supra* note 33.

¹⁰⁴ Bostwick, *supra* note 4.

¹⁰⁵ MDEQ, *supra* note 37.

CIWPIS – Coastal and Inland Waters Permit Information System
Corps – U.S. Army Corps of Engineers
CWA – Clean Water Act
EAs – Environmental Areas
EPA – U.S. Environmental Protection Agency
FTE – Full-time Equivalent
FWS – U.S. Fish and Wildlife Service
IBI – Indices of Biological Integrity
LWMD – Land and Water Management Division
MAC – Michigan Administrative Code
MCL – Michigan Compiled Laws
MDA – Michigan Department of Agriculture
MDEQ – Michigan Department of Environmental Quality
MDNR – Michigan Department of Natural Resources
MNFI – Michigan Natural Features Inventory
MOA – Memorandum of Agreement
NAWCA – North American Wetland Conservation Act
NAWMP – North American Waterfowl Management Plan
NOAA – National Oceanic and Atmospheric Administration
NPDES – National Pollutant Discharge Elimination System
NRCS – Natural Resources Conservation Service
NREPA – Natural Resources and Environmental Protection Act
NWPs – Nationwide Permits
SWAS – Surface Water Assessment Section
USDA – U.S. Department of Agriculture
USGS – U.S. Geological Survey
WWG – Wetland Working Group