



ENVIRONMENTAL
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State Wetland Protection

Status, Trends, & Model Approaches

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

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U.S. Environmental Protection Agency*

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Appendix: State Profiles

Minnesota

I. Overview

Minnesota retains approximately half of its historic wetland acreage, with approximately 10 million acres of wetlands¹ including peatlands and bogs, shallow and deep marshes, prairie potholes, shrub and wooded swamps, wet meadows, and seasonal flats.² Most of the wetlands that were lost were drained for agriculture, although significant acreage also has been filled for transportation, commercial, and residential development. Today, this loss is beginning to subside as people become more aware of the value of wetlands.³ This reduction in regulatory loss has been documented in periodic wetland reports published by the Minnesota Board of Water and Soil Resources (MNBWSR).⁴ The *Minnesota Wetland Report 2001-2003* identified a regulatory loss of 450 acres per year.⁵

Minnesota has extensive programs in place to protect wetlands. The state legislature passed the Wetlands Conservation Act (WCA) in 1991. This Act establishes a “no net loss” wetlands policy. The state, in partnership with the federal government, also developed the Minnesota Wetlands Conservation Plan (MWCP) and is in the process of developing a State Wetlands Restoration Plan. Various government agencies have regulatory programs in place as well.

II. Regulatory Programs

Wetland definitions and delineations

Minnesota’s Water Pollution Control Act defines “waters of the state” as “...all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigations systems, drainage systems, and all other bodies or accumulations of water, surface, or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.”⁶

Public water wetlands are defined as “all types 3, 4, and 5 wetlands, as defined in United States Fish and Wildlife Service [U.S. FWS] Circular N[umber] 39 (1971 edition), not included within the definition of public waters, that are ten or more acres in size in unincorporated areas or 2-1/2

¹ Based on a variety of sources, including the National Wetlands Inventory, the National Resources Inventory, and J. ANDERSON & W. CRAIG, *GROWING ENERGY CROPS ON MINNESOTA’S WETLANDS: THE LAND USE PERSPECTIVE* (1984).

² Minnesota Department of Natural Resources, *Types of Wetlands*, at <http://www.dnr.state.mn.us/wetlands/types.html> (last visited July 2, 2007).

³ Minnesota Department of Natural Resources, *Benefits of Wetlands*, at <http://www.dnr.state.mn.us/wetlands/benefits.html> (last visited July 2, 2007); Personal communication with Doug Norris, Minn. Dep’t of Natural Res. (Apr. 9, 2007).

⁴ MINNESOTA BOARD OF WATER AND SOIL RESOURCES, *MINNESOTA WETLANDS REPORT 2001-2003* (Aug. 2005), available at <http://www.bwsr.state.mn.us/wetlands/publications/wetlandreport.pdf>.

⁵ Personal communication with Dave Weirens, Minn. Board of Water and Soil Res. (Apr. 9, 2007).

⁶ MINN. STAT. § 115.01(22).

or more acres in incorporated areas.”⁷ Public water wetlands subject to regulation are identified on Public Water Inventory maps on a county basis.⁸

The WCA defines wetlands as:

(a) lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes: (1) have a predominance of hydric soils; (2) are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and (3) under normal circumstances support a prevalence of such vegetation.⁹

WCA rules also provide definitions for wetlands, such as isolated,¹⁰ tributary,¹¹ shoreland,¹² floodplain,¹³ and nondegraded wetlands.¹⁴

Minnesota’s water quality standards define wetlands similarly to the WCA:

[A]reas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state...¹⁵

The definition also includes a provision that wetlands must have two of the three attributes listed in the WCA definition.

Wetland delineations for purposes of the WCA are conducted in accordance with the criteria outlined in the U.S. Army Corps of Engineers’ 1987 *Wetlands Delineation Manual*.¹⁶ Wetland type determinations are made based on the U.S. Fish and Wildlife Service (FWS) 1971 Circular Number 39.¹⁷ Delineations usually are conducted by consultants or local governments. Public

⁷ MINN. STAT. § 103G.005(15a).

⁸ Personal communication with Bruce Gerbig, Minn. Dep’t of Natural Res. (Apr. 4, 2007).

⁹ For the purposes of regulation under this chapter, the term wetlands does not include public waters wetlands as defined in subdivision 15a. MINN. STAT. § 103G.005(19).

¹⁰ An isolated wetland is defined in Minnesota Board of Water and Soil Resources (MNBWSR) regulations as “wetland[s] without well defined inlets or outlets, including tile systems, ditches, or natural watercourses.” See MINN. R. 8420.0110(28).

¹¹ A tributary wetland is defined in MNBWSR regulations as “a wetland with a well defined outlet, including tile systems, ditches, or natural watercourses, but without a well defined inlet.” See Minn. R. 8420.0110(48).

¹² A shoreland wetland is defined in MNBWSR regulations as “a wetland located in the shoreland wetland protection zone.” See MINN. R. 8420.0110(44a).

¹³ A floodplain wetland is defined in MNBWSR regulations as “a wetland located in the floodplain of a watercourse, with no well defined inlets or outlets, including tile systems, ditches, or natural watercourses. This may include the floodplain itself when it exhibits wetland characteristics.” See MINN. R. 8420.0110(19).

¹⁴ A nondegraded wetland is defined in MNBWSR regulations as “a wetland that has not been degraded by human activities.” See MINN. R. 8420.0110(32).

¹⁵ MINN. R. 7050.0130(F).

¹⁶ U.S. ARMY CORPS OF ENG’RS, WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987), available at <http://www.mvn.usace.army.mil/ops/regulatory/wlman87.pdf>.

¹⁷ MINN. STAT. § 103G.2242(2a); MINN. R. 8420.0110(52D).

water wetlands are delineated based on the statutory boundary for public waters, which is the ordinary high water level mark.¹⁸ MNDNR area hydrologists make these determinations.¹⁹

Wetland-related statutes and regulations

In Minnesota, the primary tools for regulating wetlands are the Public Waters Permit Program (PWPP) and the WCA. In addition, state water quality regulations confer responsibility for assuring compliance with state water quality standards in wetlands through §401 certifications and issuance of National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) permits.

*Public Waters Permit Program.*²⁰ Minnesota's Public Waters Law gives the MNDNR statutory authority to regulate public waters in the state. MNDNR regulates these waters through public waters work permits. Related statutes also establish the Public Waters Inventory Program administered by the MNDNR,²¹ outline permitting guidelines, describe permitting activities, and designate enforcement authorities.

Public waters work permits are issued for projects that will impact public waters including public waters wetlands.²² Actions requiring this permit²³ include construction or removal of dams, reservoirs, or obstructions and any activity that may impact or reduce the "course, current, or cross section" of public waters such as fill or excavation.²⁴ Draining public water wetlands is prohibited unless wetlands are replaced by wetlands of equal or greater public value.²⁵ Filling to create upland areas and road construction in public water wetlands also is prohibited by the MNDNR except in limited instances.²⁶ Public waters work permits may be issued only if the project results in "a minimum encroachment, change, or damage to the environment, particularly the ecology of the waterway."²⁷ The MNDNR issues approximately 700 to 800 public water

¹⁸ Ordinary high water level is defined as "an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial." MINN. STAT. § 103G.005(14).

¹⁹ Personal Communication with Doug Norris, Minn. Dep't of Natural Res. (Feb. 13, 2007).

²⁰ MINN. STAT. §§ 103G *et seq.*

²¹ MINN. DEP'T OF NATURAL RES., HISTORY OF WATER PROTECTION, *available at* http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/history.html (last visited July 2, 2007).

²² In 2000 and 2001, the state legislature granted the Minnesota Department of Natural Resources (MNDNR) authority to waive public waters work permits for public water wetlands that are regulated under the Wetland Conservation Act (WCA) as well. MINN. STAT. § 103.G245(5b).

²³ Various activities are exempt from permit requirements, such as certain activities related to public drainage systems. MINN. STAT. § 103G.245(2); MINN. R. 6115.0210(4).

²⁴ MINN. STAT. §§ 103G.245(1)(1)-(2).

²⁵ MINN. STAT. § 103G.221. "The public values of wetlands must be determined based upon the functions of wetlands for: (1) water quality, including filtering of pollutants to surface and groundwater, utilization of nutrients that would otherwise pollute public waters, trapping of sediments, shoreline protection, and utilization of the wetland as a recharge area for groundwater; (2) floodwater and stormwater retention, including the potential for flooding in the watershed, the value of property subject to flooding, and the reduction in potential flooding by the wetland; (3) public recreation and education, including hunting and fishing areas, wildlife viewing areas, and nature areas; (4) commercial uses, including wild rice and cranberry growing and harvesting and aquaculture; (5) fish, wildlife, native plant habitats; (6) low-flow augmentation; and (7) other public uses." MINN. STAT. § 103B.3355(a).

²⁶ MINN. R. 6115.0190(3)(B), 6115.0190(3)(F).

²⁷ MINN. STAT. § 103G.245(7)(a); MINN. R. 6115.0190(1)(A), 6115.0200(1)(A), 6115.0270(4)(B).

permits²⁸ per year depending on the state's economic activity. Of these, about 10 percent are public water wetland permits. Because the MNDNR works with the applicant to ensure that resource concerns are addressed early in the application process, only three percent of permit applications are denied.²⁹

Public Waters Law also requires that the MNDNR develop and maintain a Public Water Inventory (maps and lists) of all the state's public waters, including public water wetlands.³⁰ The Public Waters Inventory Maps identify the waters and wetlands regulated under the PWPP for landowners, regulators, and other interested parties.³¹ However, exact permit jurisdiction boundaries are not shown on these maps, but are subject to a field determination of the ordinary high water level³² for purposes of regulatory limits.³³

*Wetlands Conservation Act.*³⁴ In 1991, the state legislature passed the WCA in recognition that wetlands not protected under a federal or state program were being lost throughout the state. To curb the destruction, the Act establishes a no net loss policy for all wetlands in the state³⁵ and calls for an increase in quality, quantity and biodiversity of wetlands.³⁶ The primary requirement of the WCA is that "[w]etlands must not be drained or filled, wholly or partially, unless replaced by restoring or creating wetland areas of at least equal public value under [an approved] replacement plan."³⁷ Local Government Units (LGU)³⁸ administer the WCA, the MNBWSR provides oversight and promulgates rules to implement the Act,³⁹ and the MNDNR has enforcement authority over all provisions of the WCA.⁴⁰

The WCA requires that LGUs issue a "determination" for any project that will result in fill, drainage, or excavation of wetlands.⁴¹ Although a determination is not a permit per se, a project applicant must apply to the appropriate LGU for the determination prior to commencing any

²⁸ This does not include the general permits the MNDNR has issued to seventy-five percent of the state's counties for building bridges and culverts that impact public waters. Personal communication with Bruce Gerbig, Minn. Dep't of Natural Res. (Feb. 15, 2007).

²⁹ *Id.*

³⁰ The state legislature recently revised statutes relating to this inventory requirement to allow the MNDNR to reclassify certain public water wetlands as public waters or wetlands as defined under the WCA. MINN. STAT. §§ 103G.201(a)-(d).

³¹ Personal communication with Doug Norris, Minn. Dep't of Natural Res. (Apr. 9, 2007).

³² MINN. STAT. § 103G.005(14).

³³ Gerbig, *supra* note 8.

³⁴ MINN. STAT. §§ 103G.222-.2372.

³⁵ The no net loss policy also has been adopted by the State of Minnesota via Executive Order, originally issued in 1991 by Governor Arne Carlson and reissued by every elected governor since. Norris, *supra* note 31.

³⁶ MINN. STAT. § 103A.201(2)(b).

³⁷ MINN. STAT. § 103G.222(1a).

³⁸ Local Government Units are defined in state statutes as "(1) outside of the seven-county metropolitan area, a city council, county board of commissioners, or a soil and water conservation district or their delegate; (2) in the seven-county metropolitan area, a city council, a town board under section 368.01, a watershed management organization under section 103B.211, or a soil and water conservation district or their delegate; and (3) on state land, the agency with administrative responsibility for the land." MINN. STAT. § 103G.005(10e).

³⁹ MINN. R. 8420.0102.

⁴⁰ MINN. STAT. § 103G.2372(1a).

⁴¹ MINN. R. 8240.0105.

work. Upon receipt of the applications, LGUs determine: the wetland boundaries and/or type(s) affected by the project;⁴² if the project will result in no loss of wetlands;⁴³ if the project is exempt from replacement requirements;⁴⁴ if replacement is required (and of so, whether the replacement plan adequate);⁴⁵ and if wetland banking is an acceptable form of replacement (compensatory mitigation).⁴⁶ The MNBWSR developed rules regarding replacement plan standards and requirements and the approval process that LGUs must follow in reviewing replacement plans.⁴⁷ The WCA and MNBWSR rules specify that a sequence of avoidance, minimization, and replacement must be followed.⁴⁸ LGUs may develop comprehensive wetland protection and management plans as an alternative to implementing MNBWSR rules.⁴⁹

Organization of state agencies

Multiple agencies regulate wetlands in the state. Primary mechanisms for wetland regulations are MNDNR public waters work permits and LGU determinations issued in accordance with the WCA and MNBWSR rules. In addition, the MPCA is responsible for making §401 determinations on projects required to obtain § 404 permits from the Corps.

Minnesota Department of Natural Resources. The MNDNR Division of Waters' hydrologists are responsible for issuing public waters work permits and are the primary points of contact for any public waters-related issues such as water appropriation and flood plain management. They work in field offices throughout the state, which is administratively divided into four regions: Northwest, Northwest, Central, and Southern.⁵⁰ The Division of Waters is also responsible for administering the Public Waters Inventory Program and Project WET, an educational program on water-related issues. Approximately 30 hydrologists work for the Division. They spend roughly one-third of their time on public waters permits of which approximately 10 percent deal with public waters wetlands.⁵¹ The Division's budget is approximately \$10 million per biennium and is derived primarily from state general funds. Of its budget, 28 percent goes to the Public Waters Permit Program.⁵²

⁴² MINN. STAT. § 103G.2242(2a).

⁴³ MINN. R. 8240.0220.

⁴⁴ MINN. STAT. §§ 103G.2241 *et seq.* Exemptions from the replacement plan requirement include certain activities relating to: agriculture, drainage, incidental wetlands; wetland restoration, utilities/ public works, forestry, approved development and wildlife habitat. Additionally, activities requiring certain federal approvals are exempt. The WCA also includes de minimis exemptions for activities impacting 400, 2,000, 5,000, or 10,000 square feet or less of wetlands, depending on the wetland type and location.

⁴⁵ MINN. STAT. §103G.2242(1a).

⁴⁶ MINN. R. 8240.0200(1).

⁴⁷ The WCA requires that MNBWSR rules “address the criteria, procedure, timing, and location of acceptable replacement of wetland values; may address the state establishment and administration of a wetland banking program for public and private projects, which may include provisions allowing monetary payment to the wetland banking program for alteration of wetlands on agricultural land; the administrative, monitoring, and enforcement procedures to be used; and a procedure for the review and appeal of decisions under this section.” MINN. STAT. §103G.2242-1a. Rules are found in MINN. R. 8240.0510, 8240.0630.

⁴⁸ MINN. STAT. § 103G.222-1b; MINN. R. 8240.0520 *et seq.*

⁴⁹ MINN. STAT. § 103G.2243-1a.

⁵⁰ Minnesota Department of Natural Resources, *Administrative Organization*, at <http://www.dnr.state.mn.us/waters/orgchart.html> (last visited July 2,, 2007).

⁵¹ Gerbig, *supra* note 29.

⁵² Personal communication with Bruce Gerbig, Minn. Dep't of Natural Res. (Apr. 11, 2007).

The MNDNR Division of Ecological Services, Wetlands Program is responsible for coordinating review of replacement plans required under the WCA for the MNDNR, provides technical assistance on wetlands mitigation to landowners and local agencies, and supplies scientific recommendations on wetland policy and program decisions.⁵³ The Wetlands Program also oversees the development and revision of the MWCP and portions of the Minnesota Wetland Monitoring Project. There are two full-time equivalents (FTE) dedicated to the Wetlands Program, and its budget is approximately \$400,000, which is derived from state general funds.⁵⁴

The MNDNR, Division of Enforcement is responsible for enforcing natural resource laws including those pertaining to wetlands. The Division has five full-time wetland enforcement officers, and other conservation officers also spend a time on wetlands and water-related violations.⁵⁵

Minnesota Board of Water and Soil Resources. The MNBWSR is responsible for protecting the state's soil and water resources by working with LGUs to implement state soil and water laws, policies, and management plans.⁵⁶ The board administers the WCA by promulgating rules and works with LGUs to interpret these rules, to issue determinations, and to process replacement plan requests. MNBWSR employees also oversee a monitoring and tracking program for wetlands regulated under the WCA; administer the state's wetlands banking program; work with local governments, engineers, contractors, and landowners to replace wetlands impacted by local road projects;⁵⁷ and coordinate wetland-related activities among the different state agencies and the Corps.⁵⁸

Staff members work in nine offices throughout the state: St. Paul (headquarters office), Rochester, Marshall, New Ulm, Mankato, Brainerd, Bemidji, Fergus Falls, and Duluth. Two managers oversee MNBWSR's Wetlands Program, and 28 staff are engaged in all aspects of implementing the WCA, including working with LGUs to implement the WCA, wetland banking, local government road mitigation, and administer the monitoring program. The board's overall budget is \$25 million, of which approximately 80 percent funds conservation and program administration by local governments. In addition to staff time, \$2.1 million is dedicated annually to assist LGUs in implementing the WCA.⁵⁹ The Local Roads Program is appropriated approximately \$4.5 million every two years (\$4.2 million was appropriated for fiscal years 2006/2007 and 2007/2008). Most funding for these programs is derived from state general funds; however, funding for some administrative and general tasks may come from state bond

⁵³ Minnesota Department of Natural Resources, *Wetlands Review and Conservation Program*, at http://www.dnr.state.mn.us/ecological_services/wetlands/index.html (last visited July 2, 2007)

⁵⁴ Norris, *supra* note 31.

⁵⁵ Norris, *supra* note 19.

⁵⁶ Minnesota Board of Water and Soil Resources, *About the Board of Water and Soil Resources*, at <http://www.bwsr.state.mn.us/aboutbwsr/whatbwsr.html> (last visited July 2, 2007).

⁵⁷ The legislature provides funding to MNBWSR to replace wetland impacts that result from city, county, and township road improvements, rehabilitation, construction, or replacement. Minnesota Board of Water and Soil Resources, *Road Replacement Question and Answer*, at <http://www.bwsr.state.mn.us/wetlands/wca/roadreplacement.html> (last visited July 2, 2007).

⁵⁸ Personal Communication with Dave Weirens, Minn. Board of Water and Soil Res. (Feb. 27, 2007).

⁵⁹ Weirens, *supra* note 5.

money, particularly for the Local Roads Program. The wetland banking programs use fees to cover a portion of administrative costs.⁶⁰

Minnesota Pollution Control Agency. The MPCA administers the state's §401 water quality certification program, develops water quality standards (WQS) and the state's antidegradation policy, and monitors and assesses water quality including ambient wetland quality. Between 2001 and 2006, 0.1 full-time equivalents (FTE) were dedicated to the §401 program; however, in late 2006, a wetlands coordinator position assumed responsibility for the §401 program. Three FTEs administer the MPCA's monitoring and assessment program for wetlands. Various other MPCA programs relate to wetlands, such as basin planning, impaired waters, and water quality remediation programs, making it difficult to estimate the total amount of time staff spends on wetland-specific activities. The §401 certification program has no dedicated funding, and the monitoring program's budget is approximately \$150,000, which is supported in part through federal wetland program development grants and state general funds.⁶¹

§401 certification

In 2001, the MPCA §401 water quality certification program was scaled back, due to budget constraints, and between 2001 and 2006, most federal applications needing §401 certification were waived. The MPCA receives an annual average of 60 to 70 applications for projects requiring individual §404 certification, and so roughly 300 applications for §401 certification were received during this five-year period. Only one application was denied. The MPCA no longer intends to waive all §401 certifications and, in allocating resources to the wetlands coordinator position, plans to review individual Corps' §404 permit applications, and make §401 determinations accordingly, for projects within areas that: (a) are hydrologically connected and directly drain to Impaired Waters/Total Maximum Daily Load (TMDL) areas, Outstanding Resource Value Waters (ORVWs), and trout waters; (b) affect more than three acres of private project and five acres of public road wetlands within a half mile of listed Impaired Waters; (c) have the potential to inundate or deepen by excavation greater than two acres of wetland or otherwise not regulated by the WCA; and (d) result in typically large wetland fills or drainage (e.g., linear projects, mining activities, etc.).⁶²

Nationwide permits

In 2000, the Corps' St. Paul District replaced the Nationwide Permits (NWP) in Minnesota with a combination of regional general permits (GP) and letter of permission (LOP) evaluation procedures (GP/LOP-98-MN).⁶³ The GP/LOP-98-MN expired in July 2006, and in August 2006, the Corps issued two "separate and distinct" GP and LOP procedure documents (RGP-003-MN and LOP-05-MN).⁶⁴ Most applications eligible for authorization under a GP or LOP

⁶⁰ Weirens, *supra* note 58.

⁶¹ Personal communication with Kevin Molloy, Minn. Pollution Control Agency (Feb. 21, 2007); Personal communication with Mark Gernes, Minn. Pollution Control Agency (Apr. 24, 2007).

⁶² Personal communication with Kevin Molloy, Minn. Pollution Control Agency (Feb. 21, 2007).

⁶³ U.S. Army Corps of Engineers St. Paul District, *Overview of Corps Permit Program*, at <http://www.mvp.usace.army.mil/regulatory/default.asp?pageid=799> (last visited July 2, 2007).

⁶⁴ U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT, PUBLIC NOTICE: ISSUANCE OF REGIONAL GENERAL PERMIT RGP-03-MN IN THE STATE OF MINNESOTA EXCEPT WITHIN THE EXTERIOR BOUNDARIES OF INDIAN RESERVATIONS (Aug. 1, 2006), available at <http://www.mvp.usace.army.mil/docs/regulatory/special%20notices/2005006862rgp-003-mn.pdf>; U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT, PUBLIC NOTICE: ISSUANCE OF LETTER OF

are posted on the Corps' website, affording state and federal agencies and the public ten to thirty days to comment.⁶⁵

Statewide programmatic general permit

The St. Paul District also has issued a statewide programmatic general permit (GP-01-MN) for certain MNDNR-regulated activities that also require a Clean Water Act (CWA) §404 permit or a Rivers and Harbors Act §10 authorization from the Corps. Activities that impact more than three acres of water or wetlands (including those not under the Corps' jurisdiction) cannot be permitted under the GP-01-MN. Proposed projects must be coordinated with various agencies including the MPCA and the U.S. Fish and Wildlife Service. The GP-01-MN has been in effect since 1985 and is reissued approximately every five years.⁶⁶

Mitigation

MNDNR public waters regulations and WCA and MPCA rules require permit and certification applicants to demonstrate compliance with sequencing: avoid, minimize, and mitigate.⁶⁷ In addition, the MNDNR public waters regulations requires applicants to demonstrate that the project will avoid and minimize all harmful direct or indirect actions to public waters and provide for restoration or repair of public waters if there are impacts.⁶⁸ The MNDNR requires mitigation when permits are issued that authorize a major change in the resource. The mitigation must include provisions to compensate for the detrimental aspects of the change.⁶⁹

The WCA wetland mitigation rules outline replacement plan requirements and standards.⁷⁰ Replacement plans must include the type, location, and size of wetlands to be replaced.⁷¹ Mitigation ratios under the WCA range from 1:1 to 2.5:1, depending on the relative location and type of the impact and replacement wetlands.⁷² Wetland banking is authorized under the WCA, and credits are purchased from the MNBWSR-operated state bank.⁷³ WCA rules outline guidelines for deposits and withdrawals,⁷⁴ auditing and monitoring,⁷⁵ and enforcement and corrective action provisions.⁷⁶ LGUs are responsible for reviewing and approving wetland banking plans, and the MNBWSR provides technical support and guidance.

PERMISSION PROCEDURES, LOP-05-MN, APPLICABLE WITHIN THE STATE OF MINNESOTA EXCEPT WITHIN THE EXTERIOR BOUNDARIES OF INDIAN RESERVATIONS (Jul. 31, 2006), *available at* <http://www.mvp.usace.army.mil/docs/regulatory/special%20notices/2005000825LOP05mn.pdf>.

⁶⁵ Norris, *supra* note 19; Personal communication with Kevin Molloy, Minn. Pollution Control Agency (Apr. 5, 2007).

⁶⁶ U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT, PUBLIC NOTICE: EXTENSION OF GP-01-MN (May 12, 2006), *available at* <http://www.mvp.usace.army.mil/docs/regulatory/special%20notices/ext-gp-01-mn.pdf>.

⁶⁷ MINN. R. 6115.0240(3C)(5), 8420.0540(1), 7050.0186(2).

⁶⁸ MINN. R. 6115.0240(3C)(5).

⁶⁹ MINN. STAT. § 103G.245(7)(b).

⁷⁰ MINN. STAT. §§ 103G.222(1)(b)(1)-(2).

⁷¹ MINN. R. 8420.0530.

⁷² MINN. R. 8420.0546.

⁷³ MINN. STAT. § 103G.2242(1).

⁷⁴ MINN. R. 8420.0740 *et seq.* All wetlands must be restored or created based on a wetlands banking plan that is approved by an LGU before being deposited into the bank. *See* MINN. R. §8420.0740(1)(F).

⁷⁵ MINN. STAT. §§ 8420.0750 *et seq.*

⁷⁶ MINN. STAT. §§ 8420.0760 *et seq.*

MPCA water quality standards⁷⁷ require wetland compensatory mitigation to replace the designated uses (wetland functions) for any approved/certified unavoidable impacts to wetlands caused by filling, draining, excavation or inundation. The MPCA will typically coordinate with the Corps and LGUs to develop a compatible determination of an adequate compensatory wetland mitigation plan. In instances where the MPCA finds these other wetland regulatory determinations do not adequately mitigate the wetland impacts, the MPCA has historically issued a §401 certification condition or NPDES/SDS permit condition that will satisfy water quality requirements for replacement. The MPCA policy is to require a minimum of a 1:1 wetland replacement ratio for wetland compensatory mitigation.⁷⁸

Since 1991, each Minnesota Governor has issued and reissued a State Governor's Executive Order directing state departments to operate to the fullest extent of their authority under the strict concept of "No-Net Loss" of wetlands in regards to projects under their jurisdiction. The current (2007) executive order is numbered 03-04 (directing reissuing of 00-02).⁷⁹

A Mitigation Banking Review Team (MBRT) operates in the state, usually in combination with the Technical Evaluation Panel (TEP) required under the WCA.⁸⁰ The TEP advises LGUs regarding determinations, wetland replacement plans, and wetlands banking plans.⁸¹ Although a TEP is comparable to a MBRT, it goes through a more in depth review process for banks.⁸²

Compliance and enforcement

The MNDNR Enforcement Division is the primary enforcement authority for all water law in Minnesota including public water wetlands and WCA-regulated wetlands. However, LGU licensed peace officers are authorized to enforce WCA provisions; approximately 15 percent of all enforcement actions are initiated by local law enforcement.⁸³ Usually when there is any type of violation, a MDNR conservation officer⁸⁴ will first issue a cease and desist order.⁸⁵ For violations that go through the administrative appeals process and remain a violation, a restoration or replacement order is issued. Although the MNDNR may impose civil⁸⁶ or criminal⁸⁷ penalties for wetland-related violations, typically only restoration and replacement is required.⁸⁸

⁷⁷ Minn. R. 7050.0186 *et seq.*

⁷⁸ Personal communication with Lawrence Zdon, Minn. Pollution Control Agency (Apr. 24, 2007).

⁷⁹ *Id.*

⁸⁰ A Technical Evaluation Panel is "composed of a technical professional employee of the board, a technical professional employee of the local soil and water conservation district or districts, a technical professional with expertise in water resources management appointed by the local government unit, and a technical professional employee of the Department of Natural Resources for projects affecting public waters or wetlands adjacent to public waters." See MINN. STAT. § 103G.2242(2)(a).

⁸¹ *Id.*

⁸² Weirens, *supra* note 58.

⁸³ *Id.*

⁸⁴ Five conservation officers are dedicated entirely to wetland-related violations; however, many other officers may spend time on wetland-related violations as well. Norris, *supra* note 19.

⁸⁵ MINN. STAT. § 103G.2372(1)(a).

⁸⁶ MINN. STAT. § 103G.2372(3).

⁸⁷ MINN. STAT. § 103G.2372(2).

⁸⁸ Norris, *supra* note 19.

From 2001 to 2003, approximately 314 cease and desist orders were issued and 41 appeals were filed.⁸⁹

Tracking systems

The MNDNR tracks all permits issued under its state water program, including public waters work permits for wetlands. Information tracked includes: (1) permit issuance or denial, (2) date of permit issuance, (3) who received a permit, and (4) location of the permitted project.⁹⁰ Mitigation is rarely required for MNDNR permits due to its avoidance and minimization requirements and its prohibition on fill for private development; thus, there is little mitigation to track.⁹¹ The department maps and inventories all public waters through its Public Water Inventory Program.

LGUs have a system for tracking determinations and replacement plans; however, the systems vary by LGU. The MNBWSR requires all LGUs report their WCA-related activities on a yearly basis. Information tracked includes number of replacement plans, acres impacted, and acres replaced, among other program activity information.⁹² Using this information, the MNBWSR determines whether the no net loss of wetlands policy is being achieved.⁹³ The MNBWSR also is working on developing a system where LGUs can enter data into a centralized system when issuing determinations.⁹⁴ The MNBWSR also tracks deposits and debits from the state mitigation bank.⁹⁵

III. Water Quality Standards

MPCA rules outline designated uses provided by state waters including wetlands. Specifically, wetlands provide uses under class 2D Aquatic Life/Recreation, class 3D Industrial Consumption, and 4C Agricultural and Wildlife Needs.^{96,97} Additionally, class 5 Aesthetic Enjoyment and Navigation, class 6 Other Uses, and class 7 Limited Use Waters can relate to wetlands.⁹⁸ Minnesota's WQS define wetlands; outline a mitigation sequence of avoid, minimize, and mitigate to address nondegradation; and establish narrative standards specific to wetlands. Chemical-based numeric WQS were primarily developed for application to lakes and streams though limited chemical parameters apply to wetlands, including dissolved oxygen, temperature, and chloride concentration levels. For these few parameters, rather than specific numeric limits, background conditions or concentration are used as target criteria.⁹⁹ MPCA rules also address

⁸⁹ MINNESOTA BOARD OF WATER AND SOIL RESOURCES, MINNESOTA WETLAND REPORT 2001-2003, *supra* note 4.

⁹⁰ Gerbig, *supra* note 29; Norris, *supra* note 19.

⁹¹ *Id.*

⁹² Weirens, *supra* note 58.

⁹³ Association of State Wetland Managers, *State Wetland Programs: Minnesota*, at <http://aswm.org/swp/minnesota9.htm> (last updated May 14, 2004).

⁹⁴ Weirens, *supra* note 58.

⁹⁵ Association of State Wetland Managers, *supra* note 93.

⁹⁶ MINNESOTA POLLUTION CONTROL AGENCY, MINNESOTA WETLANDS WATER QUALITY STANDARDS, WATER QUALITY/SURFACE WATER FACT SHEET #6.02 (Mar. 2005), *available at* <http://www.pca.state.mn.us/publications/wq-s6-02.pdf>.

⁹⁷ Personal communication with Greg Gross, Minn. Pollution Control Agency (Mar. 5, 2007).

⁹⁸ Association of State Wetland Managers, *supra* note 93.

⁹⁹ Personal communication with Mike Gernes, Minn. Pollution Control Agency, (Apr. 24, 2007).

nondegradation for all waters, including physical alteration of wetlands and require that project applicants follow the mitigation sequencing if the project has the potential for an adverse impact to a wetland designated use.¹⁰⁰

IV. Monitoring and Assessment

Minnesota has developed a Comprehensive Wetlands Assessment, Monitoring, and Mapping Strategy (CWAMMS) for the state,¹⁰¹ as well as various wetland assessment methodologies.

Wetland assessment

The WCA requires that drained or filled wetlands be replaced by wetlands of at least equal public value.¹⁰² To assess wetland functions and values to be replaced, the Minnesota Routine Assessment Method for Evaluating Wetland Functions (MNRAM) was developed and has been revised several times by an interagency group (state, federal, local and tribal). The most recently published version is Version 3.0, released in 2004 (Version 3.1 will be available in the spring of 2007).¹⁰³ The MNRAM was designed based on the Wisconsin Rapid Wetland Assessment Methodology. A Recommended Wetland Classification System has been developed to accompany MNRAM. This classification system is used by local governments to classify wetlands as a part of their local wetland conservation plans.

The St. Paul District of the Corps is preparing to develop hydrogeomorphic (HGM) wetland assessment methodology guidebooks for Minnesota wetlands, in cooperation with the Minnesota state agencies.¹⁰⁴

The MPCA has developed an Index of Biological Integrity (IBI) for assessing and monitoring wetland water quality across the state. IBIs for both plants and macroinvertebrates have been developed for depressional wetlands in all applicable Minnesota ecoregions.¹⁰⁵ The MPCA also has developed a preliminary IBI for plants in riparian wetlands located in the St. Croix Basin in east-central Minnesota. Data from the IBIs can be used for monitoring wetland status and trends

¹⁰⁰ MINN. R. 7050.0185(9).

¹⁰¹ MINNESOTA POLLUTION CONTROL AGENCY, A COMPREHENSIVE WETLAND ASSESSMENT, MONITORING, AND MAPPING STRATEGY FOR MINNESOTA (Jul. 2006), *available at* http://files.dnr.state.mn.us/ecological_services/wetlands/wetland_monitoring.pdf.

¹⁰² Under the WCA, the public value of wetlands is based on their functions for preventing floods, protecting water quality, recreation, commercial uses, habitat, low flow augmentation and other functions. *See* MINN. R. 8420.0103.

¹⁰³ The MNBWSR lists five assessment methodologies that may be used to assess wetlands under the WCA: Minnesota Wetland Evaluation Methodology, hydrogeomorphic, Oregon Freshwater Wetland Assessment Method, New Hampshire Method for Evaluation of Nontidal Wetlands, and Minnesota Routine Assessment Method. *See* Minnesota Board of Water and Soil Resources, *Wetland Assessment*, at <http://www.bwsr.state.mn.us/wetlands/mnram/index.html> (last visited July 2, 2007). Of these, the MNRAM is the primary assessment methodology used. Norris, *supra* note 19.

¹⁰⁴ Norris, *supra* note 19.

¹⁰⁵ Minnesota Pollution Control Agency, *Biological Monitoring Wetlands: Monitoring Plants*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-wetlands-plants.html> (last updated Oct. 18, 2006); Minnesota Pollution Control Agency, *Biological Monitoring Wetlands: Monitoring Aquatic Invertebrates*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-wetlands-invert.html> (last updated Oct. 18, 2006); Gernes, *supra* note 99.

and wetland mitigation effectiveness. Data also is beginning to be used for setting selected wetland TMDLs and listing and delisting impaired wetland waters.¹⁰⁶

The MPCA also uses IBIs to monitor and assess water quality in the state's 92,000 miles of streams.¹⁰⁷ IBIs for fish have been developed for streams in various river basins including the Minnesota, Red, St. Croix, and Upper Mississippi.¹⁰⁸ Aquatic invertebrate IBIs also are used.¹⁰⁹ The MPCA is still in the process of refining an algal IBI, but metrics for measuring algae include "[d]ominant phylum, [i]ndicator taxa, and [n]umber of genera' and the metrics for diatoms include "[d]iversity index, [p]ollution index, [s]iltation index and [s]imilarity index."¹¹⁰ Data from fish and aquatic invertebrate IBIs can be used for long-term condition monitoring, issuing NPDES permits and their five-year review process, and effectiveness monitoring.¹¹¹ Fish IBI data also is used for developing TMDL 303(d) lists and 305(b) reports.¹¹²

Wetland monitoring

The CWAMMS was completed in 2006 through a collaborative effort of the MPCA, MNBWSR, MNDNR, Minnesota Department of Agriculture, and the U.S. Fish and Wildlife Service.¹¹³ An EPA State Wetland Program Development Grant (104b) was used to develop the plan. An EPA Wetland Demonstration Pilot Grant was awarded to the MPCA. This grant will provide \$300,000 per year to fund implementation of the plan through September 2008, and the MPCA will provide \$100,000 in-kind match. The Michigan legislature has appropriated \$250,000 per year in funding to be administered by the MNDNR Ecological Services Division. These funds also are used as match for the EPA grant¹¹⁴

Portions of the Strategy are currently being implemented, including a random sampling program for assessing wetland status and trends. Under this program, nearly 5,000 one-square mile plots have been established randomly throughout the state. Aerial photographs are acquired for each of the plots on a three-year sampling cycle. The photos are then interpreted and digitized to assess the amount of wetlands lost and gained.¹¹⁵ The MPCA plans to begin a systematic evaluation of wetland quality in the spring of 2007.

The MPCA also cooperates in administration of a citizen wetland monitoring program. The program began as a pilot project in 1996 when the MPCA and the Minnesota Audubon Society received a grant from the U.S. Environmental Protection Agency (EPA) to develop biological community sampling and analysis techniques and training materials for citizens. The program

¹⁰⁶ *Id.*

¹⁰⁷ Minnesota Pollution Control Agency, *Biological Monitoring Streams*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-streams.html> (last updated Jun. 13, 2006).

¹⁰⁸ Minnesota Pollution Control Agency, *Biological Monitoring Streams: Fish Monitoring*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-streams-fish.html> (last updated Apr. 12, 2007).

¹⁰⁹ Minnesota Pollution Control Agency, *Biological Monitoring Streams: Aquatic Invertebrate Monitoring*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-streams-invert.html> (last updated Jun. 13, 2006).

¹¹⁰ Minnesota Pollution Control Agency, *Biological Monitoring Streams: Algae Monitoring*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-streams-algae.html> (last updated Jun. 13, 2006).

¹¹¹ Minnesota Pollution Control Agency, *supra* note 108; Minnesota Pollution Control Agency, *supra* note 109.

¹¹² Minnesota Pollution Control Agency, *supra* note 107.

¹¹³ MINNESOTA POLLUTION CONTROL AGENCY, *supra* note 101.

¹¹⁴ *Id.*

¹¹⁵ Norris, *supra* note 19.

has grown into the Wetland Health and Evaluation Program (WHEP). Seventeen communities or local organizations in two metropolitan counties participate in the program with support from state and local agency efforts. The MPCA trains the volunteers and provides technical oversight. Cities provide funding for team leaders, equipment, and professional quality control, and counties coordinate and administer the local program. Due to sound techniques and training, data collected through this program is used by local governments to make water quality planning decisions.¹¹⁶

The MNBWSR is initiating a field monitoring program to evaluate wetland replacement sites so that the board will be able to assess the long-term maintenance and quality of the sites. Over the long-term, LGUs will be included in implementing this monitoring effort. Under the current WCA rule local governments are responsible for monitoring replacement sites for their first five years, and BWSR thereafter.¹¹⁷

V. Restoration and Partnerships

Restoration in Minnesota is guided by the state's policy to increase the quantity, quality and biological diversity of the wetlands in the state. In addition, the Minnesota Wetland Conservation Plan (MWCP) (1997) contains the following goal (in part): "The goal for wetland conservation in Minnesota is to maintain and restore the quality and diversity and increase the overall quantity of wetlands in the state . . ."¹¹⁸

As a part of the WCA, the state established the Permanent Wetland Preservation Program, which is administered by MNBWSR. Through this program, landowners may enroll certain types of at-risk wetlands¹¹⁹ into a permanent easement. MNBWSR provides funding to landowners to acquire the lands. LGUs (primarily soil and water conservation districts) administer the program at a local level and receive funding from MNBWSR for technical and administrative activities. The program began enrolling wetlands into easements in 1992, and today, 11,459 acres of wetlands are protected by 294 easements.¹²⁰

The Reinvest in Minnesota Program (RIM) was established in 1986 to protect water quality and fish and wildlife.¹²¹ MNDNR administers the RIM Critical Habitat Match Program to acquire or enhance critical habitat, which can include wetlands,¹²² although the priority is purchasing lands

¹¹⁶ Minnesota Pollution Control Agency, *Biological Monitoring, Citizen Monitoring*, at <http://www.pca.state.mn.us/water/biomonitoring/bio-citizenmonitoring.html> (last updated Jun. 13, 2007); Personal communication with Mike Gernes, *supra* note 99.. See Wetland Health Evaluation Program, at <http://www.mnwhep.org/> (last visited Apr. 25, 2007).

¹¹⁷ Personal communication with Daniel Girolamo, Minn. Bd. of Water and Soil Res. (Feb. 27, 2007).

¹¹⁸ MINNESOTA DEPARTMENT OF NATURAL RESOURCES, MINNESOTA WETLANDS CONSERVATION PLAN, VERSION 1.0 (Jan. 1997), available at http://files.dnr.state.mn.us/ecological_services/wetlands/wetland.pdf.

¹¹⁹ Eligible wetlands include "wetland types one, two, three, and six, as defined by the United States Fish and Wildlife Service *Circular 39* publication." Minnesota Board of Water and Soil Resources, *Permanent Wetlands Preserves Program Fact Sheet*, at <http://www.bwsr.state.mn.us/easements/pwp> (last visited July 2, 2007).

¹²⁰ Weirens, *supra* note 5.

¹²¹ MINN. STAT. §§ 103F.501-.531.

¹²² Minnesota Department of Natural Resources, *Reinvest in Minnesota Critical Habitat Match Program*, at <http://www.dnr.state.mn.us/grants/land/rim.html> (last visited July 2, 2007).

for wildlife management.¹²³ MNBWSR administers the RIM Reserve Conservation Easement Program, which focuses on agricultural lands and drained wetlands.¹²⁴ The program is administered similarly to the Permanent Wetland Preservation Program (LGUs administer the program locally); however, MNBWSR provides cost-share dollars and technical assistance to landowners to help them establish and maintain conservation practices and the required conservation plan.¹²⁵ LGUs use a prioritization process for assessing applications. Annual inspections of easement sites are carried out by MNBWSR for the first five years of the easement. After five years, local soil and conservation districts inspect the sites on a three-year cycle.¹²⁶ The state legislature has appropriated \$179 million to the RIM Reserve Program since its establishment.¹²⁷

MNBWSR also has partnered with the U.S. Department of Agriculture's (USDA) Farm Services Agency (FSA) to combine its RIM program with its Conservation Reserve Program to form the federal/state Conservation Reserve Enhancement Program (CREP). Through this program, the state works to protect "environmentally sensitive crop lands."¹²⁸ Farmers are provided with funding from MNBWSR to put their environmentally sensitive lands, which can include wetlands, into conservation easements and to develop conservation practices.¹²⁹ The FSA provides 15 years of payments on the property. The first CREP in the Minnesota River Watershed resulted in protection of 100,000 acres. The state currently has a memorandum of understanding (MOU) with the FSA for another CREP.¹³⁰ MNBWSR also partners with the NRCS on its Wetland Reserve Program (WRP).¹³¹ Since 1998, MNBWSR has been able to leverage \$200 million from the USDA through the CREP I and II and the WRP.¹³²

The Minnesota Department of Transportation (MNDOT) has developed guidelines for restoring and managing native wetland vegetation.¹³³ The guidelines are used by MNBWSR.¹³⁴ MNDOT and MNBWSR also have entered into a wetland replacement cooperative that unifies their efforts to identify and develop wetland replacement sites for public road projects. The effort involves the pooling of existing wetland bank sites and funding for future sites.¹³⁵

The state also operates a wetlands taxation exemption program. Wetlands that are exempt include public waters wetlands, wetlands in their natural condition that are of little value except

¹²³ Norris, *supra* note 19.

¹²⁴ Personal Communication with Kevin Lines, Minn. Bd. of Water and Soil Res. (Feb. 16, 2007).

¹²⁵ Minnesota Board of Water and Soil Resources, *Reinvest in Minnesota Fact Sheet*, at <http://www.BWSR.state.mn.us/easements/rim/factsheet.html> (last visited Apr. 10, 2007); *Id.*

¹²⁶ Lines, *supra* note 124.

¹²⁷ Minnesota Board of Water and Soil Resources, *Wetland Assessment*, at <http://www.bwsr.state.mn.us/wetlands/mnram/index.html> (last visited July 2, 2007).

¹²⁸ Minnesota Board of Water and Soil Resources, *Conservation Reserve Enhancement Program Fact Sheet*, at <http://www.BWSR.state.mn.us/easements/crep/factsheet.html> (last visited July 2, 2007).

¹²⁹ Soil and Water Conservation Districts administer the program at the local level. *Id.*

¹³⁰ Minnesota Board of Water and Soil Resources, *supra* note 128.

¹³¹ Lines, *supra* note 124.

¹³² *Id.*

¹³³ ROBERT L. JACOBSON, RESTORING AND MANAGING NATIVE WETLAND AND UPLAND VEGETATION (Jan. 2006), available at <http://www.BWSR.state.mn.us/wetlands/publications/nativewetveg.pdf>.

¹³⁴ Personal communication with Sarma Staumanis, Minn. Dep't of Transp. (Feb. 16, 2007).

¹³⁵ Personal communication with Sarma Straumanis, Minn. Dep't of Transp. (Apr. 4, 2007).

for wildlife or water conservation, and wetlands in the MNBWSR Wetlands Preservation Program.¹³⁶ Counties are responsible for assessing the value of the wetlands, and landowners with wetlands in wetlands preserve areas must submit an application for tax exemption.¹³⁷

Finally, five Minnesota state agencies—MNBWSR, MNDNR, MPCA, MNDOT, and Department of Agriculture—launched an initiative to develop a comprehensive wetland restoration strategy with a sharper focus on action and effectiveness. The project seeks to define restoration priorities and objectives for wetland types, diversity, and complexes; regional distinctions; and timeframes. One of the intended results of the program is to provide more quality habitat for permanent and seasonal fish and wildlife and for endangered species. A variety of key stakeholders will be asked to participate in developing the strategy. MNBWSR is providing GIS support and funding. MNDNR is providing the coordinator’s office space and other indirect costs. All co-sponsoring state agencies are providing staff hours and leadership to the project.¹³⁸

VI. Education and Outreach

The WCA requires public education and outreach, and one of the main components of the state’s wetlands conservation plan specifically addresses education and outreach goals, tasks, and partners. Recognizing the importance of providing “information that is complete and acknowledges different perspectives,” the plan targets its actions to different audiences from local governments to landowners to decision-makers.

The MNDNR occasionally holds Wonders of Wetlands (WOW)¹³⁹ workshops; however, they are only given upon request. MNDNR sponsors Project WET, a national water education program for K-12 teachers and students. Although the program does not focus specifically on wetlands, teacher workshops include wetlands information if applicable or upon request. The program involves setting up and facilitating workshops for formal and non-formal K-12 educators where participants receive and learn how to implement Project WET’s Curriculum and Activity Guides with their students. Trained volunteers assist with this program as facilitators. In 2006, there were 86 trained volunteer facilitators statewide. Primary funding for this program comes through the workshop registration fees.¹⁴⁰

MNBWSR provides formal WCA training to LGUs twice a year and more often through informal training sessions.¹⁴¹ The MNDNR and local soil and water conservation districts

¹³⁶ MINN. STAT. § 272.02(11).

¹³⁷ Minnesota Department of Natural Resources, *Wetland Taxation*, at <http://www.dnr.state.mn.us/wetlands/taxation.html> (last visited July 2, 2007).

¹³⁸ Minnesota Department of Natural Resources, *Creating a comprehensive strategy for Wetland Restoration in Minnesota*, at <http://www.dnr.state.mn.us/nrplanning/wrs/index.html> (last visited Sept. 14, 2007).

¹³⁹ The Wonders of Wetlands is a teacher’s guidebook/ curriculum on wetlands education in the classroom. Environmental Concern, Inc., *WOW!: The Wonders of Wetlands*, at <http://www.wetland.org/wowteacher.html> (last visited July 2, 2007).

¹⁴⁰ Personal communication with April Rust, Minn. Dep’t of Natural Res. (Feb. 22, 2007).

¹⁴¹ Weirens, *supra* note 58.

provide landowners with information on the state's wetland permits and technical assistance.¹⁴² The MNBWSR also led the development of a voluntary wetland delineator certification program. The purpose of this initiative is to ensure that individuals engaged in wetland work have appropriate skills. This program is currently administered by the University of Minnesota and MNBWSR and provides annual training and testing.¹⁴³

VII. Coordination with State and Federal Agencies

Federal, state, and local agencies; professionals; and the public partnered to develop the Minnesota Wetlands Conservation Plan (MWCP). The plan calls for partnership between these entities on various issues including restoration, education and outreach, and monitoring. The MWCP also includes strategies for regional management, statewide management, and streamlining regulatory processes.¹⁴⁴ The state and federal agencies (MNDNR, MNBWSR, MPCA, MNDOT, EPA, Corps, and FWS) that developed the plan also signed an MOA to approve, implement, monitor, and update the MWCP.¹⁴⁵ To implement the plan, the Interagency Wetlands Group¹⁴⁶ developed an Action Planning Workbook¹⁴⁷ that sets out specific tasks, responsible parties, and a timeline for carrying out tasks.¹⁴⁸ The state also is beginning to develop a wetland restoration plan that will be considered a part of the MWCP.¹⁴⁹

The state also has multiple memoranda of understanding (MOU) with federal and state agencies. For example, the state currently has an MOU with the Corps on wetlands mitigation banking standards.¹⁵⁰ Additionally, the state is working on another MOU with the Corps to consolidate wetland mitigation requirements.¹⁵¹

The Minnesota Interagency Wetlands Group, comprising state, federal, local and tribal agencies involved in wetlands regulation and management meets monthly to share information and coordinate on wetlands issues.¹⁵²

VIII. Acronyms and Abbreviations

¹⁴² Minnesota Department of Natural Resources, *Permits and Technical Assistance*, at <http://www.dnr.state.mn.us/excavatedponds/techassistance.html> (last visited July 2, 2007).

¹⁴³ Weirens, *supra* note 5.

¹⁴⁴ MINNESOTA DEPARTMENT OF NATURAL RESOURCES, *supra* note 118.

¹⁴⁵ MEMORANDUM OF AGREEMENT FOR IMPLEMENTATION OF THE MINNESOTA WETLANDS CONSERVATION PLAN, (Aug. 1, 1998), available at http://files.dnr.state.mn.us/ecological_services/wetlands/memoagreement.pdf.

¹⁴⁶ The Interagency Wetlands Group is "a collaborative network of staff from state and federal agencies who work on interagency coordination and cooperation issues relating to wetlands." MINNESOTA DEPARTMENT OF NATURAL RESOURCES, MINNESOTA WETLANDS CONSERVATION PLAN: ACTION PLANNING WORKBOOK (1998). Can request copy at http://www.dnr.state.mn.us/ecological_services/pubsrequest.html (last visited July 2, 2007).

¹⁴⁷ *Id.*

¹⁴⁸ Norris, *supra* note 19.

¹⁴⁹ *Id.*

¹⁵⁰ Weirens, *supra* note 58.

¹⁵¹ Norris, *supra* note 19.

¹⁵² Weirens, *supra* note 5.

Corps – U.S. Army Corps of Engineers
CREP – Conservation Reserve Enhancement Program
CWA – Clean Water Act
CWAMMS – Comprehensive Wetlands Assessment, Monitoring, and Mapping Strategy
LGU – Local Government Unit
EPA – U.S. Environmental Protection Agency
FSA – Farm Services Agency
FTE – Full-time Equivalent
FWS – U.S. Fish and Wildlife Service
GP – General Permit
HGM – Hydrogeomorphic
IBI – Index of Biological Integrity
LOP – Letter of Permission
MNBWSR – Minnesota Board of Water and Soil Resources
MNDNR – Minnesota Department of Natural Resources
MNRAM – Minnesota Routine Assessment Methodology
MOA – Memorandum of Agreement
MOU – Memorandum of Understanding
MPCA – Minnesota Pollution Control Agency
MWCP – Minnesota Wetlands Conservation Plan
NRCS – Natural Resources Conservation Service
NWP – Nationwide Permit
RIM – Reinvest in Minnesota
TMDL – Total Maximum Daily Load
WCA – Wetlands Conservation Act
WHEP – Wetland Health and Evaluation Program
WRP – Wetlands Reserve Program