



# Water Resources Division

Protecting Michigan's Environment, Ensuring Michigan's Future

Michigan Department of Environmental Quality

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY**  
CONSTITUTION HALL  
525 WEST ALLEGAN STREET  
LANSING MI 48933

**WATER RESOURCES DIVISION**  
CONSTITUTION HALL  
PO BOX 30458  
LANSING MI 48909-7958  
517-284-5567

**GROUNDWATER DISCHARGE PERMITS PROGRAM**

**SURFACE WATER QUALITY PROGRAM**

- AQUATIC INVASIVE SPECIES
- AQUATIC NUISANCE CONTROL
- BIOSOLIDS
- INDUSTRIAL PRETREATMENT
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
- NONPOINT SOURCE
- OPERATOR TRAINING AND CERTIFICATION
- STORM WATER
- SURFACE WATER AMBIENT MONITORING
- SURFACE WATER RESTORATION AND PROTECTION
- WASTEWATER FACILITY CONSTRUCTION PERMIT
- WATER WITHDRAWAL

**WATER RESOURCES PROGRAM**

- CRITICAL DUNE AREA
- DAM SAFETY
- FLOODPLAINS
- GREAT LAKES SUBMERGED LANDS
- HYDROLOGIC DATA COLLECTION AND ANALYSIS
- INLAND LAKES AND STREAMS
- NATIONAL FLOOD INSURANCE PROGRAM
- SHORELANDS PROTECTION AND MANAGEMENT
- WETLANDS

**WWW.MI.GOV/WRD**

**DEQ Internet Home Page**  
[www.mi.gov/deq](http://www.mi.gov/deq)

**Environmental Assistance Center**  
1-800-662-9278

**Pollution Emergencies**  
1-800-292-4706

**NOVEMBER 2015**

The Water Resources Division (WRD) administers three major programs (Groundwater Discharge Permits Program, Surface Water Quality Program, and Water Resources Program) that include a number of activities involving protection of the environment, groundwaters, and surface waters of the state for present and future generations. The mission of the WRD is to make Michigan's waters safe and clean for recreating, fishing, drinking, and healthy aquatic ecosystems. Five major goals provide definition to this mission: (1) Enhance Recreational Waters; (2) Ensure Consumable Fish; (3) Protect and Restore Aquatic Ecosystems; (4) Ensure Safe Drinking Water; and (5) Protect Public Safety. Our programs promote sound environmental stewardship of Michigan's land and water resources while recognizing the social and economic needs of the state.

The WRD has developed Measures of Success ([www.michigan.gov/documents/deq/wrd-measures-of-success\\_344213\\_7.pdf](http://www.michigan.gov/documents/deq/wrd-measures-of-success_344213_7.pdf)) to define the expected outcomes for many of the programs. We work hard on many activities that affect and/or measure the quality and quantity of the waters of our state, and use the Measures of Success to monitor our progress. It is important to achieve these outcomes such that Michigan has both clean and safe water resources and a robust economy.

## **GROUNDWATER DISCHARGE PERMITS PROGRAM**

[www.mi.gov/groundwaterdischarge](http://www.mi.gov/groundwaterdischarge)

This program is responsible for regulating the discharge of wastewater and other waste materials to the ground and groundwaters of the state, and ensures that groundwater discharges in the state are properly authorized to discharge and that those discharges are protective of groundwater resources, public health, and the environment.

## **SURFACE WATER QUALITY PROGRAM**

### **Aquatic Invasive Species (AIS)**

[www.mi.gov/aquaticinvasives](http://www.mi.gov/aquaticinvasives)

Coordinates the implementation of Michigan's AIS State Management Plan across multiple state agencies to: (1) prevent new introductions of AIS into Michigan waters; (2) limit the dispersal of established populations of AIS throughout Michigan waters; (3) develop a statewide interagency early detection and rapid response program to address new invasions of AIS; and (4) manage and control AIS to minimize the harmful ecological, economic, social, and public health impacts resulting from established populations. The comprehensive AIS State Management Plan identifies strategic actions in categories including legislative and policy, regulation, information and education, and research and monitoring. The full range of Michigan's surface waters are covered by these activities as well as all types of aquatic invasive organisms, from plants to animals and diseases. Additional activities include the coordination of Michigan's AIS Advisory Council.

### **Aquatic Nuisance Control (ANC)**

[www.mi.gov/anc](http://www.mi.gov/anc)

Oversees the use of pesticides to control aquatic nuisance species, and focuses on ensuring that chemical applications for aquatic nuisances are effective in controlling the target nuisance species without causing harm to public health, recreation, or the natural resources of the state.

**Biosolids**

[www.mi.gov/biosolids](http://www.mi.gov/biosolids)

The use of biosolids (also known as sewage sludge) enhances agricultural and silvicultural production in Michigan. Almost all biosolids that are land applied in Michigan are used to grow crops on sites at agronomic application rates approved by the DEQ. Biosolids are also used to provide nutrients and soil conditioning in mine reclamation programs, tree farms, and forest lands.

**Industrial Pretreatment**

[www.mi.gov/ipp](http://www.mi.gov/ipp)

Pollutants in industrial wastewater may compromise municipal treatment plant processes or contaminate waters of the state. To protect municipal treatment plants and the environment, the Industrial Pretreatment program requires industrial dischargers to use treatment techniques and management practices to reduce or eliminate the discharge of harmful pollutants to sanitary sewers.

**National Pollutant Discharge Elimination System (NPDES)**

[www.mi.gov/deqnpdes](http://www.mi.gov/deqnpdes)

Issuance of wastewater discharge permits for point source facilities that discharge to the surface waters of the state. These permits authorize and regulate the point source discharges as required by federal and state law. There are three types of NPDES permits: individual permits, general permits, and “permit-by-rule.”

An individual NPDES permit is site-specific. The limitations and requirements in an individual permit are based on the permittee’s discharge type, the amount of discharge, facility operations, and receiving water characteristics. Examples of individual permits include municipal wastewater treatment plants and various manufacturing facilities.

A general permit is designed to cover permittees with similar operations and/or type of discharge. General permits contain effluent requirements protective of most surface waters statewide. Locations where more stringent requirements are necessary require an individual permit. Eligible facilities receive a Certificate of Coverage. Examples include noncontact cooling water, wastewater stabilization lagoons, industrial storm water, hydrostatic pressure test water, and certain concentrated animal feeding operations.

“Permit-by-rule” denotes that permit requirements are stated in a formally promulgated administrative rule. A facility requiring coverage under a “permit-by-rule” must abide by the provisions written in the rule. Instead of applying for an NPDES permit, the facility submits a form called a Notice of Coverage. This coverage is used for discharges of storm water from construction activities.

**Nonpoint Source (NPS)**

[www.mi.gov/nps](http://www.mi.gov/nps)

Restore waters that are not meeting designated uses due to NPS pollution and protect waters that are meeting designated uses from impairments caused by NPS pollution. The NPS control activities help eliminate or reduce wet weather pollution. NPS runoff carries pollutants to surface waters including sediments, chemical, and biological contaminants. Sediments destroy habitat and are particularly harmful to fisheries resources. Chemical contaminants from roads, parking lots, and fertilizer applications may be toxic to wildlife, aquatic life, and humans. Nutrients such as phosphorus and nitrogen increase the eutrophication rate of lakes and lower the dissolved oxygen levels needed for fish; algal blooms also reduce the recreational use of water resources. Bacterial contamination from human or animal wastes is a health risk to humans. Also, NPS runoff results in temperature changes and flow fluctuations that impact aquatic life.

**Operator Training and Certification**

[www.mi.gov/deqoperatortraining](http://www.mi.gov/deqoperatortraining)

Provides rules and regulations, technical assistance, and training and certification for drinking water and wastewater system operators.

**Storm Water**

[www.mi.gov/deqstormwater](http://www.mi.gov/deqstormwater)

Storm water activities are a subset of the NPDES activities and regulate discharges of storm water from Municipal Separate Storm Sewer Systems (MS4) in federally-defined urbanized areas, from industrial sites, and from construction sites that disturb one or more acres.

---

**Surface Water Ambient Monitoring**

[www.mi.gov/waterquality](http://www.mi.gov/waterquality)

Supports water quality decision-making at all levels of government by providing resource managers with relevant, comprehensive, and scientifically sound chemical, biological, toxicological, and physical data for the full range of Michigan surface waters. Assesses the current status and condition of individual waters of the state and determine whether standards are being met; measures water quality trends; provides data to support water quality protection programs and evaluates their effectiveness; and detects new and emerging water quality problems.

**Surface Water Restoration and Protection**

[www.mi.gov/waterquality](http://www.mi.gov/waterquality)

Develop and implement approaches to reduce or remove substances of concern in the surface waters of the state to meet specified goals, to regulate the addition of substances of concern to the surface waters of the state, and to report biennially on the quality of the state's surface water resources.

**Wastewater Facility Construction Permit**

[www.mi.gov/part41](http://www.mi.gov/part41)

Drive improvements in the quality of the waters of the state by assuring that the construction or expansion of public wastewater collection or treatment facilities are properly engineered to protect Michigan's surface water resources. Planning documents and engineering plans and specifications for wastewater projects are reviewed and approved to assure that the design is adequate, acceptable materials have been specified, and adequate installation and testing procedures have been specified.

**Water Withdrawal**

[www.mi.gov/wateruse](http://www.mi.gov/wateruse)

Developed to minimize impacts in Michigan surface waters due to water withdrawals. The state developed an assessment tool to estimate the impacts on surface waters from new and increased water withdrawals in the state.

**WATER RESOURCES PROGRAM****Critical Dune Area**

[www.mi.gov/criticaldunes](http://www.mi.gov/criticaldunes)

Protects certain sand dune areas from damage and destruction as a result of developmental, recreational, and forest management activities.

**Dam Safety**

[www.mi.gov/damsafety](http://www.mi.gov/damsafety)

Ensures the safety of Michigan's approximately 1,050 state regulated dams. Two state laws cover those dams. The first law covers dams that are greater than six feet high and impound greater than five acres of water. The second law covers dams that form lakes for which a court has ordered that a specific water level be maintained. Dams not meeting these criteria are not regulated under this activity.

**Floodplains**

[www.mi.gov/floodplainmanagement](http://www.mi.gov/floodplainmanagement)

Involves reviewing proposals to occupy, fill, or grade lands within the state's floodplains. These activities are regulated by a permit system with the purpose of ensuring that the channels and floodways are kept clear and uninhabited and that structures placed outside the floodway are properly protected from flood damage. Floodplain plans are approved for subdivision and condominium developments.

---

### **Great Lakes Submerged Lands**

[www.mi.gov/deqgreatlakes](http://www.mi.gov/deqgreatlakes)

Responsible for regulating construction activities along 3,288 miles of Great Lakes shoreline and over 38,000 square miles of Great Lakes bottomlands. The State of Michigan acts as trustee of these public trust bottomlands of the Great Lakes to maintain and manage the resources for its citizens. The public trust bottomland resources include fisheries and wildlife habitat, shipwrecks and submerged logs from the logging era. Permits are required from DEQ and DNR to recover artifacts from shipwrecks, and from the DEQ to recover submerged logs.

### **Hydrologic Data Collection and Analysis**

[www.mi.gov/hydrology](http://www.mi.gov/hydrology)

Collects, evaluates, and analyzes hydrologic data to provide technical hydrologic engineering support to the Department of Environmental Quality (DEQ), federal, and other state regulatory programs. Several state statutes require the DEQ to provide flood discharge estimates to permit applicants for their use in the design of proposed structures being submitted for permit. This technical assistance includes flood discharge estimates, stream gauging, and evaluation of water use impacts on our natural resources through several regulatory programs.

### **Inland Lakes and Streams**

[www.mi.gov/deqinlandlakes](http://www.mi.gov/deqinlandlakes)

Protection of the natural resources and the public trust waters of the inland lakes and streams of the state.

### **National Flood Insurance Program**

[www.mi.gov/floodplainmanagement](http://www.mi.gov/floodplainmanagement)

Coordinates the Federal Emergency Management Agency's National Flood Insurance Program.

### **Shorelands Protection and Management**

[www.mi.gov/shorelands](http://www.mi.gov/shorelands)

These activities are composed of three primary areas: High Risk Erosion Areas (HREA), the Flood Risk Areas (FRA), and Environmental Areas (EA). Each of these establishes regulations affecting development proposed within designated coastal areas.

The HREA area is a hazard mitigation activity, responsible for identifying Great Lakes shoreland areas that are experiencing rapid erosion and, within those areas, establishing setback requirements that regulate placement of new construction. The Great Lakes Shorelands Administrative Rules define HREAs as those shorelands eroding at an annual rate of at least 1 foot per year over a minimum period of 15 years. Within these hazard areas, setback distances based on research results are established for new construction and state permits are required for most construction activities. Shoreland areas eroding less than one-foot per year over the study period are not regulated under this activity.

The FRA is also a hazard mitigation activity responsible for identifying Great Lakes shoreland communities where the coastal flood hazard is severe. Within areas prone to flooding in these communities, elevation standards and permit requirements are established for new construction.

The EA activity is responsible for identifying and designating coastal areas that have been determined to be necessary for the preservation and maintenance of fish and wildlife. Within these areas, regulations are established for most development, including terrain and vegetation.

### **Wetlands**

[www.mi.gov/wetlands](http://www.mi.gov/wetlands)

Protection of Michigan's wetland resources through implementation of an efficient and effective regulatory program that is administered fairly and consistently. Monitoring and assessment of wetland resources, promoting wetland restoration, integration of wetlands with other water activities, and building public support for the protection and management of wetland resources are also undertaken.