

SECTION ONE – ENVIRONMENTAL REGULATIONS

CHAPTER 3: Wastewater

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Purpose and Applicability of Regulations

Many manufacturers generate wastewater that must be discharged or treated in accordance with local, state, and/or federal requirements. Chapter 3 discusses wastewater disposal options, permitting, and operator training requirements. This chapter also identifies wastewater regulatory agencies and common non-compliance issues.

Agencies and Their Laws and Rules

The Department of Environmental Quality (DEQ) has several roles related to wastewater discharges. The DEQ regulates discharges of wastewater, including stormwater for some communities, to surface waters of the state through the [National Pollutant Discharge Elimination System \(NPDES\)](#) permit program. The NPDES permit program was delegated to Michigan from the U. S. Environmental Protection Agency (U.S. EPA). The U.S. EPA has jurisdiction to enforce federal regulations under the Clean Water Act and has an oversight role for state delegated programs, including the NPDES permit program. State statutes that provide the basis for the NPDES program in Michigan: [Part 31](#) (Water Resources Protection) and [Part 41](#) (Sewerage Systems) of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Act 451), and the NPDES permitting discharge rules. Therefore, the DEQ is the primary contact for manufacturers, construction site owners/developers, and municipalities in relation to NPDES permits. Through NPDES permits, the DEQ regulates discharges from publicly owned treatment works (POTWs) into state waters, and reviews local ordinances for compliance with statewide industrial pretreatment standards. While wastewater discharges that are sent to POTWs are regulated by local agencies through local ordinances and permits, the DEQ has the authority to enforce the local industrial pretreatment standards.

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The DEQ also implements a state permit program regulating industrial and commercial wastewater discharges to [groundwater](#). These discharges to groundwater are regulated pursuant to Part 31 and Part 41 of Act 451 and their rules. Local entities may have additional requirements regulated and enforced by the POTW and/or building and zoning ordinances.

The DEQ's [Onsite Wastewater Program](#) oversees the discharge and permitting of sanitary wastewaters to on-site septic systems. This program is administered in coordination with local health departments who permit and inspect on-site sanitary wastewaters systems. On-site sanitary wastewater systems permitted under this program are only designed to handle sanitary wastewater from bathrooms, kitchens and laundry devices. Some communities may have local ordinance requirements in addition to the state regulations implemented by the local authorities. The DEQ's [Septage Program](#) also regulates the transportation and land application of domestic septage removed from on-site sanitary wastewaters systems under [Part 117](#) (Septage Waste Servicers) of Act 451.

The DEQ's Hazardous Waste Program oversees the management of waste, wastewaters, and sludges that must be accumulated, stored, transported, treated and disposed if they:

- are not permitted for discharge to the POTW.
- are permitted for discharge to the POTW and are managed (accumulated and handled) prior to disposal to the POTW.
- are not permitted for discharge to surface water or groundwater via a discharge permit issued by DEQ, WRD pursuant to Part 31.
- are not generated from an on-site wastewater system and subject to the [Part 117](#) handling requirements.

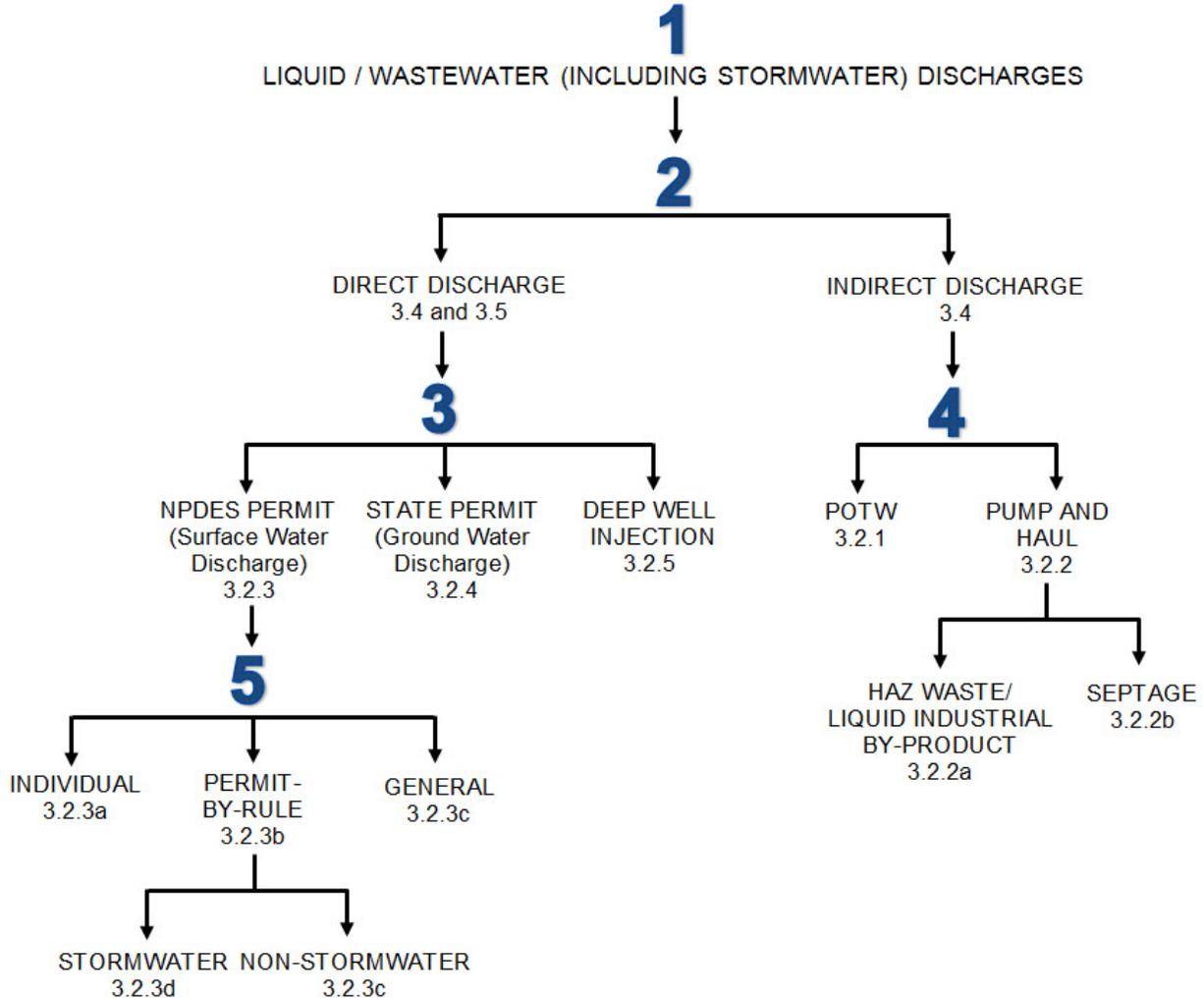
All non-households must evaluate the character, composition and, in some cases, the amount of the waste before they can determine the management standards that apply to their handling and disposal. Most wastes are subject to [Part 121](#) (Liquid Industrial By-products) of Act 451, [Part 111](#) (Hazardous Waste Management) of Act 451 and the [Part 111 rules](#), or [Part 115](#) (Solid Waste Management) and the [Part 115 rules](#). Some wastes have additional requirements like [medical waste](#), [radioactive waste](#), and polychlorinated biphenyl ([PCB wastes](#)). Transportation of hazardous waste and liquid industrial by-products by public roadway is also regulated by the DEQ under the Hazardous Materials Transportation Act, Public [Act 138](#) of 1998, as amended, which is discussed in greater detail in Chapter 4.

Learn more about waste regulations and whether your wastewater is subject to waste management requirements as a hazardous waste or liquid industrial by-product, see [Chapters 2 and 4](#) of this guide.

3.1 Key to Chapter

The following key is to help identify which portions of Chapter 3 may apply to your facility. Questions in the key coincide with numbers in the flow chart. Start at Number 1 and work your way through the key and corresponding numbered questions. Your path through the key identifies the Sections of Chapter 3 that apply to your wastewater discharges.

CHAPTER KEY



1. Do you discharge any liquids or wastewater from your facility?

“Wastewater” is liquid waste that results from industrial and commercial processes and municipal operations, including liquid or water-carried process waste, cooling and condensing waters, and sanitary sewage. “Waste” means any waste, wastewater, waste effluent, or pollutant, including any of the following: dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal, and agricultural waste. Wastewater includes storm water that comes into contact with industrial activities or materials, or which runs off an urbanized area or a construction site that disturbs an acre or more.

If your answer is yes, then go to #2 and continue the key for each discharge.

If your answer is no, this chapter does not apply to you.

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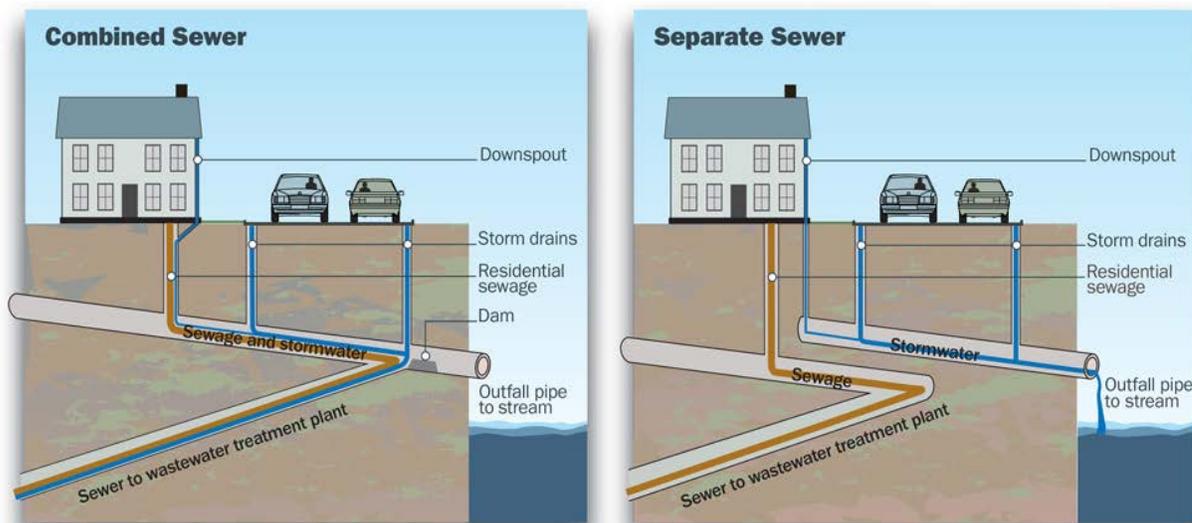
2. Is the discharge direct or indirect to waters of the state?

For the purposes of this key, an “indirect” discharge is wastewater that is treated by a publicly owned treatment works (POTW) before it is discharged to waters of the state. Whereas, a “direct” discharge goes directly into waters of the state (groundwater, streams, lakes, rivers, etc.) without treatment from a POTW via a storm sewer system (picture below), a ditch, or other conveyance.

When a sewer system is called “combined” it means that the sewers were designed to carry both storm water and non-storm water (i.e. sanitary and non-domestic source wastewater) to the POTW for treatment. If you are unsure whether your storm sewer system is combined, contact the municipality that owns and operates your system (usually a city or township).

You may have both a direct and an indirect discharge. If you have a direct discharge, go to #3. If you have an indirect discharge, go to #4.

If you own and operate your own wastewater treatment system that discharges to the environment, go to #3; if you own and operate a wastewater treatment system that discharges to a POTW, go to #4.



3. Does your wastewater discharge into surface waters, groundwaters or injected deep into the ground?

All direct dischargers (to surface water, to groundwater including deep injection wells) are required to have an operator certified by the State. See Chapter 3.5 “Wastewater Treatment Operator Training and Certifications.”

“Surface waters of the state” means all of the following: the Great Lakes and connecting waters, all inland lakes, rivers, streams, impoundments, open drains, and other surface bodies of water within the confines of the state, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control. Regulated discharges include wastewater discharges from discernible, confined, and discrete conveyances, including from a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation, or vessel or other floating craft.

If you have a surface water discharge, such as through a storm sewer system, go to #5.

If you discharge on to land and the water goes into the ground, see Chapter 3.2.4 "Groundwater Permit."

If you inject wastewater (e.g. reverse osmosis reject, brine or greywater) to a deep injection well, see Chapter 3.2.5 "Deep Injection Wells."

4. Do you send your wastewater for treatment to a POTW, either through a sewer system or collecting and hauling it (pump and haul)?

Any discharge to a publicly owned treatment works other than or in addition to sanitary sewage (water-carried wastes from toilet, kitchen, laundry, bathing, or other facilities that are used for household purposes) is nondomestic wastewater. If you discharge to a POTW, see Chapter 3.2.1 "Publicly Owned Treatment Works" and 3.2.1.a "Industrial Pretreatment Program (IPP)."

If your wastewater is not discharged to a POTW through a sewer system but rather collected and transported to a POTW, see Chapter 3.2.2 "Hazardous Waste and Liquid Industrial By-Product Transportation."

5. If your facility discharges wastewater to surface waters of the state, you are required to obtain a NPDES permit from the DEQ.

There are three categories of NPDES permit coverage; an individual permit, a "permit by rule" and a Certificate of Coverage (COC) issued under a general permit. The industrial stormwater permit is an example of a general permit; it is not facility specific. In order to obtain coverage under the general permit, facilities must obtain a facility specific COC. See Chapter 3.2.3 "Surface Water Discharge."

Storm water (rain and snow-melt runoff and drainage) is regulated when associated with certain industrial, municipal, and construction activities. NPDES industrial storm water permit coverage is probably required if you discharge into a separate (non-combined) storm sewer system or directly into surface water (see Chapter 3.2.3.d). Also, construction activities that disturb more than one acre and discharge storm water to surface waters of the state are required to comply with the NPDES storm water permit by rule. The term construction includes clearing, grading, and excavating activities. It does not include the practices of clearing, plowing, tilling soil, and harvesting for the purpose of crop production.

Some common discharge violations and frequently asked questions can be found in Chapter 3.3, namely:

- Air Compressor Condensate
- Cleaning Equipment and Floors
- Cooling Water
- Floor Drains
- Restrooms and Breakrooms
- Pit or Trench Drain Sludge

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- Power Washing
- Water Treatment Additives
- Programs that Help Fund the Upgrade of Wastewater Treatment Systems
- Transferring ownership for an NPDES or Groundwater wastewater discharge permit

3.1.1 Permit Applications, Requests and Reports under *MiWaters*

The DEQ's Water Resources Division (WRD) launched a permit application and information system called [MiWaters](#). MiWaters is a Web-based permitting and compliance database. The system consolidates over 25 water-related applications and databases into a single online tool where permittees and permit applicants submit and retrieve all of their information. MiWaters is fully operational and permit applications related to water programs under this chapter and Chapter 8 are submitted electronically through that system.

In addition to an electronic permitting process, MiWaters is the interface for federal electronic reporting, and it expands online access to public information. The focus of MiWaters is permitting and compliance, including NPDES, storm water, groundwater discharge, aquatic nuisance control, Part 41 (sanitary sewer) construction, and land and water interface permits such as wetlands, lakes, streams, floodplains, Great Lakes, dunes, and more. It will also include electronic reporting of untreated or partially treated sanitary wastewater.



To learn about how to file permit applications, reports, and requests in MiWaters, go to the online guidance at www.michigan.gov/miwaters. You may also enter the MiWaters system directly at and sign up as a user at miwaters.deq.state.mi.us.

Below is a list of some of the functions and features that MiWaters provides:

- Electronic submittal of permit applications.
- The Electronic Environmental Discharge Monitoring Reporting (e-DMR) system is replaced with a more sophisticated system that will provide additional validation and feedback to permittees and help detect and prevent errors prior to submittal.
- Electronic submittal of all permit-required reports and materials.
- Those with a MiWaters account can manage permissions, deciding who can view, edit, and submit applications or submittals.
- POTWs can manage biosolids application sites online. Requests may be submitted through MiWaters with notification sent upon approval.
- Near real-time notifications, to the permittee, of any violations determined by the system or by staff, providing permittees with an early "heads up" and opportunity to correct problems.
- Anyone can search the system for over 600,000 sites in Michigan with DEQ permits and permit applications – active and inactive.

3.2 Disposal Options

Your disposal options depend on the type of wastewater your business generates and the location of your company. These options include:

- Publicly owned treatment works (POTWs), also known as municipal wastewater treatment plants.
- Permitted and registered hazardous waste or liquid industrial by-product transporters (for wastewaters without permitted onsite POTW, NPDES, or groundwater discharge options).
- Surface water discharge (includes direct discharges to a river, stream, drain, storm sewer, or ditch).
- Groundwater discharge (includes seepage lagoons, septic tank/tile field systems, irrigation systems, and application of oil field brine for ice or dust control).

3.2.1 Publicly Owned Treatment Works

Wastewater discharges to a Part 31 permitted POTW are regulated by the local municipality or sewer authority. The discharge from a POTW is regulated by the DEQ. There are variations in the design and operation of POTWs that determine the capabilities of the plant to accept and treat certain wastes. Contact your local sewer authority for a copy of the local sewer use and pretreatment ordinances to determine if your waste can be accepted by its facility. Also, review with your local sewer authority any requirements for discharge such as monitoring, record keeping, sampling, and whether industrial pretreatment regulations apply.

Most POTWs require businesses to be connected to their system for sanitary wastewater treatment and disposal. If you are constructing a new building, you will need to obtain a local permit to hook up to the POTW. Sanitary wastewater discharged directly to the POTW does not generally require pretreatment.

Many POTWs will accept some types and quantities of wastewater from non-domestic sources, including commercial, industrial and contaminated storm water, with prior approval. Discharges of some wastes to the POTW are prohibited in any amount. In general, a POTW (under the local sewer authority) will require an application be completed to request permission to discharge. POTW staff will review the application and notify you if the waste can or cannot be discharged. In some cases, wastewater must be pretreated before it can be discharged to the sewer. A POTW accepting nondomestic wastewater may be required to develop an industrial pretreatment program (IPP) in order to accept your waste if they do not already have one. The IPP is discussed in more detail in Chapter 3.2.1.a.

If the POTW cannot accept your wastewater, then investigate disposal options through the Liquid Industrial By-product or Hazardous Waste transporter programs (see Chapters 3.2.2, 2.3 and 2.4). You may also want to explore pollution prevention approaches (see Chapter 12).

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3.2.1a Industrial Pretreatment Program (IPP)

A permit or authorization from the local sewer authority may need to be obtained to discharge nondomestic wastewater to a POTW. The POTW may also determine pretreatment requirements tailored specifically to each wastewater discharge.

The purpose of the pretreatment regulations is to prevent discharge of pollutants to the POTW that would:

- Interfere with the operation of the treatment plant.
- Pass through the plant untreated.
- Create problems with disposal of sludge from the treatment plant.
- Cause health and safety problems for treatment plant workers.
- Damage or cause blockage to the sewer system.



Foam at a treatment plant because of industrial discharge.

Pretreatment standards fall into the following three categories:

1. Categorical standards are the requirements that apply to specific categories of industry. The U.S. EPA has developed these standards.
2. Individual requirements based on specific industrial or commercial activities. They are affected by the treatment capabilities and capacity of the POTW. The local sewer authority will specify these requirements.
3. General requirements apply to all facilities discharging to a POTW. This includes complying with the POTWs' pretreatment requirements. It also includes prohibitions against discharging certain pollutants to the POTW, along with reporting and record keeping requirements.

General Prohibitions:

You cannot discharge any of the following into a POTW:

- Pollutants that cause pass-through or interfere with the POTW.
- Pollutants that create a fire or explosion hazard in the POTW.
- Pollutants that corrode sewer conveyance or the POTW (specifically any wastewater with a pH less than 5).
- Solid or viscous pollutants that could interfere with wastewater flow.
- Pollutants that result in toxic gases, vapors, or fumes within the POTW at levels that may cause worker safety or health problems.
- Any trucked or hauled pollutants except POTW approved wastes at discharge points designated by the local sewer authority.

Reporting and Record Keeping:

The local sewer authority must know what is being discharged to its treatment system by every industrial or commercial user on the system. The sewer authority also needs to know about any spills or other problems flowing toward the treatment plant via the sewer. You must notify the POTW immediately of any discharge or release, including “slug loading,” that could cause problems at the plant. A slug loading is defined as 1) any relatively large release of a pollutant that you might ordinarily release in smaller quantities, or 2) a release of a chemical you aren’t permitted to discharge. You must notify the sewer authority in advance of any substantial change in the amount or type of pollutants in your discharge.



If you are required to sample your wastewater, you must report results and keep records on all the sampling information. Records for all samples must include:

- The date, exact place, method, time of, and name(s) of person(s) taking the samples.
- The dates analyses were performed.
- The laboratory that performed the analyses.
- The analytical techniques or methods used including detection limit.
- The results of the analyses.

Results of required sampling must be reported to the sewer authority. The report must include a certification statement and authorized signature of a company representative.

Records of any additional monitoring must also be kept when you use test methods found in Title 40, Part 136 of the Code of Federal Regulations (40 CFR 136), even if the local sewer authority does not require it. All of these records must be kept for a minimum of three years.

Hazardous Waste Notification:

The U.S. EPA added a provision to the pretreatment standards in 1990 to assure that businesses are not avoiding hazardous waste regulation by discharging hazardous waste directly to the sanitary sewer ([40 CFR 403.12](#)). Prior authorization from the local sewer authority must be received to discharge any substance that would be classified as hazardous waste under the federal Resource Conservation and Recovery Act (RCRA) and Part 111 (Hazardous Waste Management) of Act 451. In addition, the U.S. EPA and the DEQ must be notified within 180 days of any discharge of hazardous waste to the POTW.

This includes any waste:

- On the acutely hazardous waste list and any amount that is discharged; or
- Any other type of listed hazardous waste if more than 15 kilograms are discharged in a calendar month.

Refer to Chapter 2 for an explanation of listed and acutely hazardous waste.

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If a new substance is added to the RCRA list and your business discharges that substance, the sewer authority, the DEQ, and the U.S. EPA Region 5, should be notified within 90 days of the new listing. Some sewer authorities have written notification forms. If not, then you can submit the required information in a letter. For the DEQ and U.S. EPA the submission goes to:

DEQ
Management & Tracking Unit
P.O. Box 30038
Lansing, MI 48909

U.S. EPA Region 5
Waste Management Division
77 West Jackson Boulevard
Chicago, IL 60604

The notification must include:

- Company name, address, and U.S. EPA identification number (if one has been issued).
- The name of the hazardous waste as listed in 40 CFR 261.
- The U.S. EPA hazardous waste code number.
- The type of discharge (continuous, batch, other).

If you discharge more than 100 kilograms of hazardous waste per month to the POTW, you must also include the following in the notification:

- The hazardous waste constituents contained in the waste.
- An estimate of the quantity (mass and concentration) of hazardous constituents discharged during that month.
- An estimate of quantity of discharge for the next 12 months.

This notification only has to be submitted once, unless the discharge changes. If notification of hazardous waste discharge is required, you must also certify that a program has been developed to reduce the amount and toxicity of the hazardous waste generated to the degree that you are economically able. Discuss these requirements with the local sewer authority.

3.2.2 Hazardous Waste, Liquid Industrial By-products, and Septage Transportation – Pump and Haul

Most wastewater, when pumped and hauled for disposal (e.g. not direct piped to a receiving facility nor authorized for on-site disposal via Part 31 discharge permit or permit by rule), are generally subject to hazardous waste, liquid industrial by-product or septage waste regulation. Only if a material is specifically excluded from regulations is it excluded. The following details the transporter permitting, registration and licensing that applies to materials that must be pumped and hauled for recycling or disposal. For additional details, see Chapters 2 and 4.

3.2.2a Hazardous Waste and Liquid Industrial By-products Transportation

Wastewater, excluding septage waste, which is not discharged to a POTW nor permitted to be discharged to surface or groundwater, must be transported to a recycling or disposal facility authorized to accept the wastewater. Wastewater subject to hazardous waste regulation must be documented on a [Uniform Hazardous Waste Manifest](#) and transported by an [Act 138](#) permitted and registered hazardous waste transporter. If the wastewater is not subject to

hazardous waste regulation or septage regulation, a company may haul its own wastewater without a permit and registration from the DEQ under Act 138 if it was generated on or by equipment in which the generator held an ownership interest. A company may also hire an Act 138 permitted and registered liquid industrial by-products transporter. The shipment of liquid industrial by-products can be documented on a Uniform Hazardous Waste Manifest or other shipping record that meets the Part 121 liquid industrial by-products regulations. See Chapters 2.4.4 and 2.4.5 for details on the specific documentation requirements. See Chapter 4 for the transporter permitting and registration, or the DEQ Hazardous Materials Transportation Program web page at www.michigan.gov/deqwaste and selecting the “Transporters” tab on the left.

3.2.2b Septage Transportation

Septage waste must be hauled by licensed septage waste transporters authorized under Part 117. Septage waste haulers seeking to commingle septage waste with liquid industrial by-product generally require dual licensing under both Part 117 and Act 138 and they are prohibited from land application of materials. However, Part 117 includes an allowance for the blending of grease trap waste with domestic septage to be managed as septage and allowed to be land applied. For more information about septag Wastewater, excluding septage waste, which is not discharged to a POTW nor permitted to be discharged to surface or groundwater, must be transported to a recycling or disposal facility authorized to accept the wastewater. Wastewater subject to hazardous waste regulation must be documented on a [Uniform Hazardous Waste Manifest](#) and transported by an [Act 138](#) permitted and registered hazardous waste transporter. If the wastewater is not subject to hazardous waste regulation or septage regulation, a company may haul its own wastewater without a permit and registration from the DEQ under Act 138 if it was generated on or from property or equipment in which he or she owns an interest. A company may also hire an Act 138 permitted and registered liquid industrial by-products transporter. The shipment of liquid industrial by-products can be documented on a Uniform Hazardous Waste Manifest or other shipping record that meets the Part 121 liquid industrial by-products regulations. See Chapters 2.4.4 and 2.4.5 for details on the specific documentation requirements, Chapter 4 for the transporter permitting and registration, or the DEQ, WMRPD, Hazardous Materials Transportation Program Web page by going to www.michigan.gov/deqwaste and selecting the “Transporters” tab on the left.

3.2.2b Septage Transportation

Septage waste must be hauled by licensed septage waste transporters authorized under Part 117. Septage waste haulers seeking to commingle septage waste with liquid industrial by-product generally require dual licensing under both Part 117 and Act 138 and they are prohibited from land application of materials. However, Part 117 includes an allowance for the blending of grease trap waste with domestic septage to be managed as septage and allowed to be land applied. For more information about septage or dual licensing, see the [Septage Program Web page](#) at www.michigan.gov/deqseptage, select the [Staff Contacts List](#) and contact the Septage Program Coordinator.

3.2.3 Surface Water Discharge

Applications for discharge permits are completed and submitted online through the [MiWaters](#) system (Chapter 3.1.1). Guidance for the system is available at www.michigan.gov/miwaters.

3.2.3a Individual Permits

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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 (if applicable), and receiving stream characteristics.

3.2.3b Permit-by-Rule: Construction Stormwater Runoff

Construction sites of one acre or greater of earth disturbance are covered by a "permit-by-rule." "Permit-by-rule" (Rule) means that permit requirements are stated in an administrative rule formally promulgated by the Water Resource Division. A facility requiring coverage under the Rule must abide by the provisions written in the Rule.

Owners or recorded easement holders of earth change (construction) sites of five acres or more must go through MiWaters (Chap 3.1.1) to submit a form called a *Notice of Coverage* (NOC) to apply for their NPDES permit coverage to discharge stormwater runoff. In order to submit an NOC, the applicant must first obtain permit coverage under a local Soil Erosion and Sedimentation Control (SESC) Program (see Part 91 in Chapter 8). Authorization to discharge stormwater runoff under the Rule is automatically granted upon submittal of a complete NOC and an application fee.

Earth change sites that disturb one to five acres are provided automatic coverage so long as the site has coverage under the local SESC Program. Even though there is no application requirement or permit fee for one- to five-acre sites, construction site owners must comply with the Rule requirements. A site disturbing less than one acre must also follow the Rule if the site is part of a larger common plan of development that exceeds one acre of disturbance, or if it has the potential for adverse impacts on water quality.

The Rule requires an owner of a construction site to provide for weekly inspections of the soil erosion and sedimentation control practices identified in their SESC Permit. In addition, the site shall be inspected after any rain event that causes a discharge from the site. These inspections shall be conducted by a Storm Water Certified Operator and recorded by the Operator in an inspection log. The certification materials and testing to become a Storm Water Certified Operator are available in each of the DEQ District Offices (see Appendix C).



Construction site inspection by a Certified Storm Water Operator

For more information on Permit-by-Rule, including application materials, certified operator exam training materials and exam schedules, or storm water program contact information, contact any DEQ District Office or go to www.michigan.gov/soilerosion.

3.2.3.c General Permits

A general permit may be available to permittees with certain similar operations and/or types of discharge. Coverage under a general permit will only be granted when the general permit conditions provide the needed level of protection for the receiving water. Wastewater discharges at some locations may require an individual permit based upon site-specific concerns. Facilities determined to be eligible for coverage under a general permit receive a *Certificate of Coverage* (COC) from the NPDES Permit Program usually within four to six weeks of submitting a

complete application. Some general permits include: Storm Water from Industrial Activities (discussed below), Wastewater from Cleanup of Water Contaminated by Gasoline and Related Petroleum Products, NonContact Cooling Water, and Hydrostatic Pressure Test Water.

For a full list of general permits, and permit copies, go to www.michigan.gov/deqnpdes (“General NPDES Permits”).

3.2.3.d Storm Water from Industrial Activities General Permit

There are two types of general storm water permits available in Michigan: a baseline general permit and a general permit for storm water discharges associated with special-use areas. Facilities may also receive coverage for industrial storm water discharges through a site-specific individual permit.

If your facility’s storm water discharges directly to surface waters of the state or to a separate storm sewer system (to help with this determination see Question 2 in this Chapter’s Key, Page 3-3), two steps are required to determine if storm water permit coverage is necessary.

Step one is to determine if the industry is identified in the federal storm water regulations. Standard Industrial Classification (SIC) codes prepared by the federal Office of Management and Budget, or narrative descriptions, are used to identify regulated facilities. SIC codes describe the primary nature of business in which a facility is engaged. In general, the following industrial categories are regulated:

- Manufacturing (SIC 20— through 39—)
- Public Warehousing (SIC 422-)
- Transportation (SIC 40— through 45—)
- Mining (SIC 10— through 14—)
- Open Landfills
- Steam Electric Power Plants
- Recycling Facilities
- Waste Water Treatment
- Hazardous Waste Storage and Treatment

You can find your four digit SIC code in your corporate tax return under Schedule K listed as either “Business Activity Code” or “Manufacturers Identity Code.” You may also call Michigan’s Unemployment Insurance Agency at 800-638-3994 and provide your federal identification number to get your official SIC code. A more complete listing of [SIC codes](#) can be found on the industrial storm water program Web site.



The second step is to determine whether storm water could come into contact with industrial materials or activities at the site. Basically, if you store or transport ANYTHING related to your industrial activity outside without permanent covering (exempting final products manufactured for use outside such as a completed automobile), it can come into contact with storm water and the quality of the storm water runoff could be affected. The term “exposure” is used in the storm

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water program to indicate the potential for contact between storm water and your industrial materials. This includes outside storage of scrap dumpsters and any raw materials associated with your industrial activity.

If your facility's industrial activity is regulated and storm water from the property discharges to surface waters of the state, then you must either certify that you have no exposure or obtain permit coverage. The action you take will be dependent upon exposure at the site. Guidance as to whether you have exposure can be found on the [Industrial Storm Water Program Web Site](#). Documents to review include: "[Determining if a Facility is Required to Obtain Permit Coverage](#)" and "[No Exposure Certification \(NEC\) Compliance Assistance](#)"

If after reviewing the no exposure assistance document, you find that you do not have exposure at the site, you can submit a "No Exposure Certification" form in the MiWaters system (See Chapter 3.1.1) instead of obtaining coverage under the general permit. If you chose to operate your facility without exposure, you may still want to have storm water certified operators among your housekeeping team to help recognize practice changes that could cause you to need coverage (such as moving equipment outside).

In summary, if you answer "yes" to all the following questions, you need an industrial storm water permit:

1. Do I have a storm water discharge to surface waters of the state?
2. Is my company regulated by the storm water program?
3. Do I store or transport industrial materials outside that could come in contact with storm water?

To apply for coverage, submit a "*Notice of Intent (NOI)*" through the MiWaters system (See Chapter 3.1.1). If coverage under the Storm Water from Industrial Activities General Permit is appropriate, a Certificate of Coverage (COC) will be issued once a complete NOI has been received by the department. There is an annual storm water permit fee of \$260. Before obtaining a COC, you must:

- Have a storm water certified operator who has control over the storm water structures at the facility and has the authority to change operations to minimize or eliminate impacts to storm water (see Chapter 3.5).
- Eliminated any unauthorized non-storm water discharges to the storm sewer system and waters of the state.
- Have a Storm Water Pollution Prevention Plan (SWPPP) developed and implemented for existing facilities or have a SWPPP developed and ready for implementation at new facilities (see Chapter 6.2.4).

3.2.4 Groundwater Discharge

The Part 22 rules of Part 31 (Water Resources Protection) of Act 451 govern authorization to discharge to the groundwater in the State of Michigan. There is an annual fee for groundwater permit coverage. The discharge authorizations in the rules are established in order of relative threat to the environment, and the program's annual fees are set in the same manner. The annual fee can be \$200, \$250, \$1500 or \$3650, depending on the type of permit appropriate for your facility.

Certain activities are exempt from obtaining permits; these are listed in [Rule 323.2210](#); while discharge authorizations are issued under:

- Rule 323.2210(y) (site-specific low volume discharge)
- Rule 323.2211 (notification only)
- Rule 323.2213 (notification with certification)
- Rule 323.2215 (general permit)
- Rule 323.2216 (permit with specific treatment system requirements)
- Rule 323.2218 (full permit)

The following sections discuss the types of available groundwater discharge authorizations.

Groundwater Discharge Application

Instructions for the groundwater discharge permit application are organized to assist the applicant in determining the type of permit required and how to obtain it. The instructions list reference materials such as applicable laws, rules and guidesheets, and how to access them. Many of the discharges require supporting documentation in addition to the application form. The guidesheets describe how to gather and report the information in a manner that is acceptable to the DEQ. This does not preclude the use of alternative methods; only that if the guidance is followed, the methodology for collecting and reporting the information will be acceptable. Separate application forms incorporate the requirements of each rule.

Each application is a complete stand-alone process with two parts. The first part consists of general information. The second part is tailored to the specific rule covering the discharge type. Certain applications cover multiple types of discharges. Complete the sections that apply to the particular discharge.

The application instructions can be accessed at www.michigan.gov/groundwaterdischarge under “Permits and Fees.”

The applications are located in the MiWaters system at <https://miwaters.deq.state.mi.us>. There are also links to MiWaters at www.michigan.gov/deqwater. All applications must now be submitted through the MiWaters site.

Applicants new to the groundwater program and MiWaters must create an account. Those seeking reissuance of a previous permit should have received information about becoming associated with an existing account; now in MiWaters.

Creating an account is a two-step process. Upon accessing the MiWaters site, choose “Create an Account” located in the upper-right section of the page. Complete the information requested on the page and download the Certifier Agreement Form you will need for step two. Once you create an account you will receive an emailed acknowledgement with further instructions for logging in. With this access you can view and begin filling out an application. In step two, complete the downloaded Certifier Agreement Form and mail it as instructed. Once the certifier status has been approved your e-mail address will identify your security status, enabling you to submit the application.

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If you have questions, call the Groundwater Discharge Unit at 517-284-5570 or your local DEQ District Office (see Appendix C) for assistance.

Groundwater Discharge Permit Renewal

Renewal of a groundwater discharge permit can be divided into two categories. The first is for the same quantity and characterization of discharge(s), and the same treatment process as the previous permit. The second is for effluent quantity, characterization or treatment processes that are different from the previous authorization. In both cases the applicant must submit a complete permit application, but the information to be included with the permit application will be more detailed if the discharge or treatment system is different.

Groundwater Discharge Permit Renewal: No Change in Discharge

The applicant must submit a complete permit application, as described above, and the following information:

- A certification by the discharger that the discharge will consist of the same quantity, effluent characterization, and treatment process as previously permitted.
- A narrative description of the facility's compliance history with effluent and groundwater permit limits and sampling frequency.
- If permit limits were exceeded, describe the steps taken to bring the facility into compliance.
- An evaluation of whether there are general trends in the effluent or groundwater sampling data that may indicate the discharge is approaching permit limits if the renewal is under Rule 2218.
- A current groundwater contour map, if one was previously required, a narrative evaluation of whether changes to the existing groundwater monitoring system are warranted and the rationale for any proposed change.
- The most recent effluent quality results.
- For existing monitoring wells, the most recent groundwater quality results.
- For existing monitoring wells, the most recent static water levels and groundwater elevations.

Groundwater Discharge Permit Renewal: Modified Discharge - Reissuance

A permittee may request a modification of their discharge at any time, either during the life of the permit, or at reissuance.

For a discharge where the applicant changes the effluent quantity, characterization or treatment process at the time of reissuance, the complete application must include:

- Updated information for areas modified including (where appropriate):
 - The basis of design as required by Rule 2218(2).
 - An evaluation of the feasibility of alternatives to discharge to the groundwater in accordance with R 323.2219.
 - The wastewater characterization as required by R 323.2220.
 - The hydrogeologic report as required by R 323.2221.

- If a standard applicable to the discharge is to be determined under R 323.2222(5), the information necessary to determine that standard, including whether a substance is a hazardous substance under Part 201.
- If applicable, the monitoring plan as specified by R 323.2223.
- If applicable, a description of the discharge methods and information that demonstrate that the requirements of R 323.2233 will be met.
- If applicable, information that demonstrates that the requirements of R 323.2237 will be met.
- A narrative description of the facility's history of compliance with effluent and groundwater permit limits and sampling frequency.
- If permit limits were exceeded, the steps taken to bring the facility into compliance.
- An evaluation of whether there are general trends in the effluent or groundwater sampling data indicating that the discharge is approaching permit limits if the renewal is under Rule 2218.
- A current groundwater contour map, if one was previously required, and a narrative evaluation of whether changes to the existing groundwater monitoring system are warranted and the rationale for any proposed change.
- The most recent effluent quality results.
- For existing monitoring wells, the most recent groundwater quality results.
- For existing monitoring wells, the most recent static water levels and groundwater elevations.

Groundwater Discharge Permit Renewal: Modified Discharge – In Effect Permit

For a discharge where the applicant changes the effluent quantity, characterization, or treatment process during the period when the permit is "In Effect," the following process will apply:

- A discharger who proposes to modify the quantity or effluent characteristics of a discharge shall notify the DEQ of the proposed modification before it occurs. If the DEQ determines the proposed modification is minor based on the quantity or quality of the discharge, then the DEQ may modify the permit as requested and include new terms or conditions that may be necessary to ensure that the terms of R 323.2204 are met. If the DEQ determines that the proposed modification is significant based on the quantity or quality of the discharge, then the discharger shall submit a complete permit application for reissuance of the permit similar to (b) above.
- A discharger who proposes to modify the treatment process of a discharge shall notify the DEQ of the proposed modification before it occurs. Unless the DEQ notifies the discharger within 30 calendar days that the proposed modification may affect compliance with limitations on the quality or quantity of the discharge, the discharger may make the modification. If the DEQ notifies the discharger and determines that the proposed modification is minor based on the quantity or quality of the discharge, then the DEQ may modify the permit as requested and include new terms or conditions that may be necessary to ensure that terms of R 323.2204 are met. If the DEQ notifies the discharger and determines that the proposed modification is significant based on the quantity or quality of

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the discharge, then the discharger shall submit a complete permit application for reissuance of the permit similar to (b) above.

3.2.4.a Exemptions, Rule 2210

Certain discharges to the ground are exempt from needing authorization from the DEQ, such as sanitary sewage that is discharged at less than 6,000 gallons per day when the discharge is under the jurisdiction of the local county health department. There are other examples of exempt discharges including:

- Potable water used for domestic or domestic equivalent activities (Rule 2210(i)).
- Sanitary sewage less than 6,000 gallons per day, through a septic tank and tile field system, approved by the local health department. (Rule 2210(a)).
- Controlled application of certain dust suppressants (Rule 2210(b)).
- Temporary well dewatering water at construction sites (Rule 2210(e)).
- Swimming pool drainage and backwash if done in accordance with Act 368. (Rule 2210(n)).
- Confined animal feeding operations less than 5,000 animal units (Rule 2110(f)(g)).
- Monitoring well observation or evacuation water (Rule 2210(h)).
- Step test or pump test water from various sources (Rule 2210(j)).
- Heat pump wastewater where systems are rated as less than 300,000 BTU's per hour if there are no chemical additives (Rule 2210(l)).
- Portable Power Washer wastewater **that use no additives** from domestic sources or commercial operators (Rule 2210(m)).
- Non-contact cooling water **that has no additives** where there is less than 10,000 gallons per day, and where the source water was from a municipal water supply (or alternate approved source) (Rule 2210(q)).

A more complete list of these discharges can be found in the appendix and in the groundwater discharge authorization application. While the law and rules provide that a person does not need a permit for the discharge of the above discharges, the law also does not waive liability for causing injury to the waters of the state. This means the discharge cannot cause waters of the state to lose their usefulness for drinking, agriculture, recreation, industry, or other protected uses. Even though these activities do not require a permit, there are certain conditions that must be met according to the law, including the following:

- A prohibition against causing physical damage to neighboring properties or creating nuisance conditions (i.e. runoff onto adjacent properties, ponding or flooding of adjacent properties, odors, etc.).
- A prohibition against creating a site of environmental contamination that would need to be cleaned up.

For these discharges an application does not have to be submitted. In addition, some discharges to the ground or groundwater, which are not specifically addressed under Rule 2210, may be authorized on a case-by-case basis under Rule 2210(y). Such is the case if the applicant demonstrates to the DEQ's satisfaction that the discharge will not have a significant potential to

be injurious based on volume and constituents of the discharge. In order for the DEQ to determine if a particular discharge exemption will be allowed, a discharger must submit an application that includes a narrative description justifying the request for the Rule 2210(y) authorization with the permit application. These discharges are assessed an annual fee of \$1,500, except for the following discharge types, which are \$250:

- Coin operated laundromat
- Car wash or vehicle wash open to the public
- Subsurface sanitary discharge of fewer than 10,000 gallons per day that does not meet the terms of authorization under Rule 2211(a)
- Seasonal sanitary wastewater facility from a park, campground, or camp

3.2.4.b Notification, Rule 2211

Some wastewater dischargers may be able to obtain an authorization to discharge by notification. These include:

| Wastewater Type | Daily Maximum Discharge, Gallons |
|--|----------------------------------|
| Sanitary Sewage, septic tank/drain field | 6,000 – 10,000 |
| Laundromat | < 500 |
| Non-contact Cooling Water, no additives | >10, 000 |
| Fruit & Vegetable Wash water | <50,000 |
| Portable Power Washer, no additives Pump Test Water Hydrostatic Test Water Commercial Animal Care | Varies by discharge type |

To obtain this type of authorization a facility must complete a groundwater discharge authorization application. A facility is authorized to discharge once an adequate and complete application is received by the DEQ. As long as the discharger certifies that they meet the individual rule criteria a facility will be authorized to discharge at the time an adequate and complete application is received by the DEQ. If the application is complete and meets the requirement of the rule, the DEQ will authorize the discharge via a permit. If the application is deficient, the DEQ will notify the applicant and any deficiencies must be corrected before the discharge is authorized. The annual fee for this type of authorization is \$200.



Groundwater Infiltration Bed

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3.2.4.c Notification with Certification, Rule 2213

A notification with certification is required for specific discharges. These discharges include:

| Wastewater Type | Daily Maximum Discharge, Gallons |
|--|----------------------------------|
| Non-contact cooling water, with additives | < 10,000 |
| Egg washing wastewater, may contain additives | < 10,000 |
| Cooling water, may contain additives Groundwater remediation, outside plume | < 5,000 |

To obtain this type of authorization a facility must complete a groundwater discharge authorization application. Within 60 calendar days of receiving a complete application, the DEQ will issue a permit verifying that the discharge is authorized or will indicate why the discharge cannot be authorized under the rule. The annual fee for this type of authorization is \$200.

3.2.4.d General Permit, Rule 2215

An authorization for certain discharges can be granted by the DEQ under a general permit.

| Wastewater Type | Daily Maximum Discharge, Gallons |
|---|----------------------------------|
| Above ground sewage disposal | < 10,000 (annual average) |
| Vehicle wash, not open to the public | < 2,000 |
| Meat processing that does not include slaughter | < 2,000 (annual average) |
| Gravel, sand, limestone, or dolomite mining, no additives Application of oil field brine Vehicle wash, open to public Hydro-demolition | < 2,000 for vehicle wash |

To apply for coverage, submit the permit application to the DEQ along with information that demonstrates conditions required by the general permit. A facility is authorized to discharge to the ground or groundwater once they receive a Certificate of Coverage from the DEQ that verifies the discharge is authorized under this rule. The annual permit fee for Rule 2215 authorization is \$1,500, except for

seasonal above ground sewage disposal discharges from campgrounds and camps which have an annual fee of \$250.



Sanitary Sewage Treatment Lagoon

3.2.4.e Permit for a Specific Discharge, Rule 2216

This type of authorization is granted for very specific discharges and treatment components, including:

| Wastewater Type | Daily Maximum Discharge, Gallons |
|---|----------------------------------|
| Sanitary Sewage, Constructed Wetland | less than 20,000 |
| Sanitary wastewater, Alternative Treatment System | less than 20,000 |
| Sanitary Sewage, Rule 2216 Design | less than 50,000 |
| Laundromat Wastewater, Rule 2216 Design | less than 20,000 |

To apply for authorization, the application for groundwater discharge authorization must be submitted to the DEQ. As part of the application process, the applicant must certify in the application that they provided public notice of the project in accordance with Rule 2217(2). Typically, facilities should obtain assistance from an environmental consultant for this type of coverage. The annual permit fee for this coverage is \$1,500.

3.2.4.f Discharge Permit, Rule 2218

Large volume or complex discharges that are not covered above must obtain authorization under Rule 2218. The following are some examples of discharges that require a 2218 permit.

- ✓ Sanitary sewage (greater than 50,000 gallons per day).
- ✓ Process wastewater.
- ✓ Cooling water at greater than 5,000 gallons per day with additives.
- ✓ Non-contact cooling without additives at greater than 10,000 gallons per day, source water not approved by the DEQ.
- ✓ Non-contact cooling water with additives at greater than 10,000 gallons per day.

Application for this permit include submittal of the following types of information along with the permit application: a basis of design for the wastewater treatment system, discussion of alternatives to a groundwater discharge, wastewater characterization, a hydro-geological study and groundwater monitoring and a discharge management plan. Facilities are strongly urged to obtain assistance from environmental consultants for completion of these items. The DEQ has prepared Guidesheets I-VII that provide assistance to the applicant on the types and format of information that are required for this additional information. The annual permit fee for Rule 2218 authorization is \$3,650.00.



Guidance information on groundwater discharge permit and application requirements (Part 22 Guidesheets) are available on the Internet at www.michigan.gov/groundwaterdischarge.

3.2.5 Deep Injection Well Disposal

Class I injection wells dispose of industrial hazardous, industrial non-hazardous and municipal (non-hazardous) waste.

Class I injection wells are sited and constructed such that they are protective of drinking water. Fluid disposal is below all underground source of drinking water and must include confining zone(s) above the injection zone. Injection zone reservoirs typically range in depth from 1,700 to over 10,000 feet below the surface. Typical costs associated with constructing a deep injection

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well are around a million dollars.

Class I injection well disposals in Michigan are regulated both by the U.S. EPA, and the DEQ's Oil, Gas and Minerals Division (OGMD). A permit must be obtained from both the DEQ and the U.S. EPA for this wastewater disposal option and consultants are typically utilized for permitting, construction and testing of these wells. The timeline associated with permit issuance would be six months to a year for both agencies. For more information, [contact the DEQ](#), Lansing Office at 517-284-6826, or appropriate District Office (See Appendix C).

UIC Branch (WU-16J)
US EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590
312-886-1493
Fax: 312-886-4235

There are some general operating requirements for operation of a deep injection well including regular testing to demonstrate mechanical integrity of the well. There is a monthly reporting requirement for volumes of fluid injected and operating pressures. Finally, for the state program there is a \$2,500 fee per disposal well.

In those instances where the waste is considered hazardous and the processor is storing and or treating the waste prior to discharge, the facility is subject to the Treatment, Storage, and Disposal Facilities permit. Discuss the requirements with the DEQ Hazardous Waste Program.

3.3 Common Non-Compliance and Frequently Asked Questions

There are several issues that are commonly associated with non-compliance or areas where staff receive many questions. The following section discusses some of these.

3.3.1 Water Treatment Additives

Water Treatment Additives (WTAs) include any material that is added to water used at a facility or to a wastewater generated by the facility to condition or treat the water. Biocides, algaecides, herbicides, sanitizers, flocculants, and lubricants are examples of water treatment additives that can be found in the wastewater of facilities. WTAs that are discharged to surface waters of the state from a National Pollutant Discharge Elimination System (NPDES) permitted discharge or a groundwater discharge permit require prior review and approval by the Water Resources Division (WRD). Permittees should check their NPDES permit and/or groundwater discharge permit requirements to determine if they need to apply prior to using a WTA. As such, these WTA products must be included in the application for wastewater discharge, or requested during the permit cycle. WTAs must be reviewed whenever they are changed; the use of the new WTA could change the characteristics of the wastewater effluent. Both groundwater and NPDES permits require prior review and approval before new WTA's can be used.

For NPDES Permits:

In the event a permittee proposes to discharge water treatment additives (WTAs) at a facility with a NPDES permit, the permittee must submit a request through MiWaters (Chapter 3.1.1) to discharge WTAs. Instructions to submit a request through MiWaters are available via the internet (www.michigan.gov/deqnpdes); then click on either non-select or select water treatment additives discharge application instructions under the heading of Water Treatment

Additives). Written approval from the Department to discharge such WTAs at specified levels shall be obtained prior to discharge by the permittee. Failure to obtain approval prior to discharging any WTA is a violation of the permit. Additional monitoring and reporting may be required as a condition for the approval to discharge the WTA.

The request to discharge WTAs must contain the following information. If any of this information is missing the request cannot be processed:

1. The WTA Safety Data Sheet (SDS).
2. Ingredient information: Name of each ingredient, CAS number for each ingredient, and fractional content by weight for each ingredient.
3. The proposed WTA discharge concentration including calculations to explain the discharge concentration.
4. The discharge frequency (i.e., number of hours per day, week, etc.).
5. The outfall(s) from which the WTA is to be discharged.
6. The type of removal treatment, if any, that the WTA receives prior to discharge.
7. The WTA function (i.e., microbiocide, flocculant, etc.).
8. A 48-hour LC₅₀ or EC₅₀ for a North American freshwater planktonic crustacean (either Ceriodaphnia sp., Daphnia sp., or Simocephalus sp.).
9. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2)(a) of the Water Quality Standards. Examples of tests that would meet this requirement include a 96-hour LC₅₀ for a rainbow trout, bluegill, or fathead minnow.



More information on obtaining authorization to discharge water treatment additives can be obtained at www.michigan.gov/deqnpdes (click on either non-select or select water treatment additives discharge application instructions).

For Groundwater Discharge Permits:

In the event a permittee proposes to discharge water treatment additives (WTAs) to groundwater, the permittee shall submit a request through MiWaters to discharge WTAs. Instructions to submit a request through MiWaters at (<http://www.michigan.gov/deqnpdes>; then click on either non-select or select water treatment additives discharge application instructions under the heading of Water Treatment Additives). Written approval from the Department to discharge such WTAs at specified levels shall be obtained prior to discharge by the permittee. Failure to obtain approval prior to discharging any WTA is a violation of this permit. Additional monitoring and reporting may be required as a condition for the approval to discharge the WTA. WTAs include such chemicals as herbicides used to kill weeds and grasses as part of lagoon maintenance.

A request to discharge WTAs to groundwater shall include all of the following:

1. Product Information:
 - a. Name of the product;
 - b. Product Safety Data Sheet (SDS);

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- c. Product function (i.e. microbiocide, flocculants, etc.);
 - d. Specific gravity if the product is a liquid; and
 - e. Annual product use rate (liquids in gallons per year and solids in pounds per year).
2. Ingredient information:
 - a. Name of each ingredient;
 - b. CAS number for each ingredient; and
 - c. Fractional content by weight for each product;
 3. The monitoring point from which the WTA is to be discharged;
 4. The proposed WTA discharge concentration, including calculations to explain the discharge concentration.
 5. The discharge frequency (i.e., number of hours per day and number of days per year);
 6. The type of removal treatment, if any, that the WTA receives prior to discharge;
 7. Relevant mammalian toxicity studies for the product or all of its constituents (if product toxicity data are submitted, the applicant shall provide information showing that the product tested has the same composition as the product listed under Item "a" above. Preferred studies are subchronic or chronic in duration, use the oral route of exposure, examine a wide array of endpoints and identify a no-observable-adverse-effect-level. Applicants are strongly encouraged to provide the preferred data. If preferred data are not available, then the minimum information needed is an oral rat LD50 study. In addition, an environmental fate analysis that predicts the mobility of the product/ingredients and their potential to migrate to groundwater may be provided.
 8. If the discharge of the WTA to groundwater is within 1,000 feet of a surface water body, the following information shall also be provided:
 - a. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Ceriodaphnia sp., Daphnia sp., or Simocephalus sp.); and
 - b. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2) of the Water Quality Standards. Examples of tests that would meet this requirement include a 96-hour LC₅₀ for a rainbow trout, bluegill, or fathead minnow.

Prior to submitting the request, the permittee may contact the Permits Section by telephone at 517-284-5568 with any questions.

Note: The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive. **You must receive facility-specific and written approval.**

For Discharges to a POTW

If you discharge to a POTW, then check with the local sewer authority to see what is required to change additives or products, as there may be similar restrictions. Some communities might have local requirements for cleaning solutions. For example, some communities require that low or no phosphate detergents and additives be used. It is generally recommended that low or no

phosphate detergents and additives be used in all areas. Calling the POTW before discharging is especially important for products associated with boiler blow down activities and other sanitizers.

3.3.2 Cleaning Equipment and Floors

Cleansers used for industrial cleaning, even if they are the same formula as standard household cleaners, are considered non-domestic wastewater if generated from cleaning industrial equipment or the area around it. The reason is that the area being cleaned has the potential of introducing contaminants to the wastewater that are not typically found in household wastewater, such as machine lubricants, etc. Therefore, substances that may be in the cleaning water, and the solutions or detergents used for cleaning, must be included in the application for wastewater discharge. It is unlikely that this discharge would be authorized to go directly into surface water or groundwater without treatment.

Some management practices for consideration include:

- Keep water use to a minimum when cleaning floors. Hoses should not be used to “wash down” the floors. Mop floors with biodegradable floor detergent according to the manufacturer’s directions. Any accumulation should be recovered by a wet vacuum or mop.
- Minimize or eliminate the use of degreasers and solvents where possible. Degreasers put oil into a solution, which makes it nearly impossible to remove the oil from the wastewater by conventional methods. Overuse of degreasers will make oil/water separators ineffective. Degreasers could also contain volatile organic compounds, which can be toxic and are highly mobile.
- Pressure washers use less water volume and generate much less wastewater per minute of use than a standard hose. They also provide better cleaning, reducing the need for chemical cleaning agents.

3.3.3 Cooling Water

Water used for machine cooling; solvent coolers and stills; condensers; or in heating, ventilation, and air conditioning (HVAC) systems is considered non-domestic wastewater. This water cannot be discharged to the surface water without a permit. A discharge to the ground or groundwater requires an exemption, notification, or permit. To discharge water used for cooling to the publicly owned treatment works, you should have authorization from the local treatment authority. These disposal options are discussed further in Chapter 3.2. Chemicals and/or biocides or algacides are sometimes used to prevent scale build-up, freezing, or slime growth. If additives are being proposed, then review Chapter 3.3.1.

3.3.4 Floor Drains

Many manufacturing facilities have floor drains and trench drains that are connected to their wastewater treatment system and are authorized under their facility's discharge permit. However, an inspection of the facility should be conducted to assure that all floor drains are properly connected to the wastewater system and are authorized under a permit instead of discharging to the environment, either directly or through a separate storm sewer system.

Except for discharges authorized under a discharge permit program, it is unlikely that a groundwater or surface water discharge permit will be issued for floor drain waste as most of these built-in connections and conveyances are prohibited in local building and plumbing codes.

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Sections 701.2 and 1104.3 of the Michigan Plumbing Code (R 408.30701 et seq.) require floor drain discharges go to an available sanitary sewer system or an approved private system and prohibit connections of floor drains to storm sewers. Many fluids are prohibited from discharge entirely due to the hazardous chemicals in them. Some POTWs will accept waste from floor drains, such as antifreeze, engine wash down water, small quantities of oily substances, etc., at specific rates and times. Wastewater that is not authorized for discharge must be managed and disposed of as a liquid industrial by-product or hazardous waste depending on its classification. See Chapter 2.4.2 for information on how to determine waste and by-product classification.



To get a copy of the Michigan Plumbing Code contact the Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Plumbing Division, at 517-241-9330 or go to www.michigan.gov/lara (select “Construction Codes,” “Divisions,” then “Plumbing Division”).

Currently, waste entering floor drains is legal only if the discharge goes to one of the following:

- To the facility's wastewater collection system that treats the wastewater and has authorization through the Groundwater Discharge Permit Program or NPDES (Chapters 3.2.3 and 3.2.4).
- POTWs, if in accordance with local ordinances (3.2.2)
- Holding tanks, which the wastewater and sludge is later pumped out and hauled to an approved facility (See Chapter 3.2.2). Holding tanks should be located to allow for easy access for cleaning and repair. If a facility wants to dry the materials out on-site to save on transportation and disposal costs, see Chapter 3.3.5.

Any floor drains that do NOT discharge to any of the above must be closed off or rerouted to an authorized destination. Plugging the drainpipe that connects to the storm sewer/drain with concrete can eliminate the discharge. However, if the discharge access is a direct manhole into a storm sewer or drain, a concrete contractor can prevent future access to the manhole by installing a lock-down concrete cap or bolt down cover. Be careful not to block drainage in an existing storm drain with concrete.

For holding tanks, aboveground storage tanks (AST) are recommended. These allow the prompt detection and correction of any leaks. ASTs must be constructed with a material that is compatible with the waste liquids. It is recommended all ASTs have secondary containment that is designed to allow easy access for cleaning and regular inspections (See Chapter 4.1 and Chapter 6.2.2). The secondary containment structure should be equipped with a sump pump to allow easy removal of collected precipitation or any waste liquids in the event of a leak. If there is a sump pump it should not activate automatically. Instead, it should only allow manual activation after verification that the liquid is precipitation or waste water. If precipitation needs to be removed from the containment area, it must meet the DEQ wastewater discharge requirements to be discharged on-site. If wastewater is being removed, the liquid should be pumped into a disposal container and managed appropriately (see Chapter 2.3 and 2.4). Check for the cause of any waste water leak and repair the AST if necessary. Concrete vaults can be used as secondary containment if the structure is constructed with a water-stop-joint design and the concrete is coated with an impermeable material compatible with the waste. Concrete vaults may not be used as primary containment due to the potential to crack.

Although not recommended because of the difficulty to inspect for leaks, underground storage tanks (USTs) can also be used for holding tanks. If made of steel, USTs should be equipped with secondary containment and cathodic protection. Double-walled tanks are recommended. They should also have spill and overflow protection, plus leak detection and a high-level alarm to alert over flows or leaks. If the wastewater contains UST regulated substances, you must call the Department of Licensing and Regulatory Affairs (LARA) Storage Tank Unit at 517-335-7211 to discuss if you need to meet the requirements in Chapter 4.3.1.

All piping leading from the floor drains to the holding tank should be double-walled. Buried pipe should also have some type of leak detection system.

3.3.5 Restrooms and Breakrooms

Standard domestic wastewater may be discharged to a POTW, privately-owned sanitary treatment system, or septic system. Pouring non-domestic wastes down the drain or in the toilet is illegal unless the toilet drains to a municipal treatment system AND the discharge is in compliance with the local sewer authority regulations.

3.3.6 Air Compressor Condensate

The regulations related to air compressor condensate will be based upon the wastewater destination, volume and pollutant characterization of the condensate. This issue is site specific because air compressor condensate contains pollutants that exist in the ambient air surrounding the air intake. For example, certain deicing and dry cleaning chemical storage areas have been found to cause pollutant concentrations in air compressor condensate that required control to reduce pollutant concentrations in the wastewater. The most common destination of air compressor condensate for manufacturers is to a POTW and the discharge is usually regulated by the local sewer authority.

Discharges to surface waters and groundwater would be evaluated on a site specific basis in terms of the NPDES and Groundwater Discharge permit programs.

A few site-specific management practices can be considered:

- Consider use of a pollutant-compatible filter fitted over the air intake of the air compressor to capture pollutants preventing them from ending up in the condensate.
- If the POTW will accept the wastewater, then re-route the discharge or capture and then release the condensate to the POTW.
- If the wastewater cannot be accepted by the local sewer authority, then capture the wastewater and arrange disposal in accordance with liquid industrial by-product or hazardous waste requirements.
- Assure proper housekeeping and storage of materials to prevent their release into the air. This will benefit both employee health and prevent the capture of the pollutant in the air compressor intake.

3.3.7 Pit or Trench Drain Sludge

This type of material is the semi liquid residue that accumulates in the bottom of trench drains or holding tanks that receive non-domestic wastewater. This is not the same as residues and water

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collected in storm sewer catch basins. Trench drains or holding tanks are typically located inside buildings where loading or unloading may occur; they may also be located so they are convenient to receive vehicle wash water or other types of non-domestic wastewater. The liquid portion of this wastewater is directed to the facility's wastewater disposal system or a holding tank. This type of wastewater cannot be discharged to surface waters such as through storm sewers, the ground, the groundwater, or to a septic system, nor can it be discharged to a POTW without prior approval. The waste or residue that collects on the bottom may contain oil, antifreeze, heavy metals, degreasers, or other contaminants. This type of waste cannot be disposed in your facility's solid waste containers and must be treated as a liquid industrial by-product unless the material is known to have been impacted by hazardous waste, in which case it would have to be handled as hazardous waste and according to procedures outlined in Chapter 2.4

If the waste is not hazardous there are three options for handling the sludge, depending on its water content.

1. Check to see if your POTW will allow you to pump this liquid into the sanitary sewer system. You may be required to pretreat the liquid portion before disposal to a POTW. A common method of pretreatment is to pass the liquid through a grit chamber and an oil/water separator.

If your facility has either a grit chamber or an oil water separator you need to have an inspection and maintenance program in place to ensure that the chamber/separator continues to operate effectively. Check with your local POTW and the building/zoning authority for local requirements (See Chapter 36). The cleaning frequency is often based on the size of the separator and the volume and contents of the wastewater that flow through it. Your program should include:

- Regular inspections.
 - Recycling or disposal of separated oil (see Chapter 2.4.9.a).
 - Sludge analysis to determine proper disposal options.
 - Cleaning/removing sludge and refilling the chamber with water (to ensure proper oil water separation).
2. Drying the sludge on-site. If you choose this option, you must be able to dry the material in a container of some type. You cannot dry the material in a manner that any liquid can impact the ground, or if not authorized, the on-site sewer system. If you can dry the material in an appropriate manner, the dried sludge can then be disposed in facility solid waste containers, which are subsequently directed to a licensed landfill. There cannot be any free liquid left in the sludge. Discuss this option with your local DEQ District Office (see Appendix C). See Chapter 2.2 for more information on solid waste disposal.
 3. Have the sludge pumped from the holding tank by a permitted and registered liquid waste transporter (see Chapter 3.2.2) for appropriate disposal at an approved facility. Under no circumstance should wastewater or pit sludge from trenches be directed into a facility's septic tank and/or tile field.

3.3.8 Power Washing

Regulations for power washing wastewater discharges depend on where the discharge goes. Options for this wastewater are described in the following.

Power Washing Discharges to Ground (Groundwater Discharge Permit Program)

The DEQ may authorize a discharge to the ground or groundwater from a power washing operation by an exemption, notification, or permit, depending on the type of discharge.

A groundwater discharge is exempt if the washing is done by a commercial operator or performed in an industrial setting to remove non-polluting substances from vehicles and surfaces, and only clean water with no additives is used for the cleaning. In this instance, discharges must go into the groundwater; they may not be directed to a storm drain or surface water.

If a commercial operator is using an additive for the cleaning, a notification permit is required under Rule 323.2211. In this case, a groundwater discharge permit application must be submitted. The application instructions can be accessed at www.michigan.gov/groundwaterdischarge under “Permits and Fees.” The applications are in MiWaters, miwaters.deq.state.mi.us. There are also links to MiWaters at www.michigan.gov/deqwater. All applications must now be submitted through MiWaters.

Power washing operations that do not qualify for an exemption or authorization via notification may be able to obtain a site-specific exemption or a groundwater discharge permit. It will depend on the quality and quantity of the wastewater and discharge location. Interior washing of vehicles does not qualify for permit by notification process.

Power Washing Discharges to Surface Water (NPDES)

The discharge of power washing wastewater directly to a creek, river or other water body, directly or through a storm sewer, or other conveyance, is illegal without first obtaining a NPDES permit (Chapter 3.2.3) from the DEQ. An NPDES permit would be necessary for each job site where there will be power washing discharge from vehicles or equipment. Applying for an NPDES permit for each site will likely not be a practical option for mobile power washing operations. However, if no detergents or other compounds are used and the discharge will only be from routine building wash-down or pavement washing an NPDES permit is generally not required assuming there have not been spills or leaks of toxic or hazardous materials that would contaminate the wash water. For anything other than routine building wash down (use of power washing to remove paint is not routine building wash down), you should discuss your options with an NPDES or Groundwater Discharge Permit program staff in the appropriate DEQ District Office (see Appendix C for contacts).

Power Wash Hazardous Waste Characterization

If you do not have authorization from the DEQ to dispose of the wash water as discussed above, it will be necessary to determine if the wastewater or other wastes from power washing are hazardous waste before shipping it off-site. For example, if your company is power washing old paint off a building, paint chips need to be collected, evaluated, and disposed of properly. Paint chips cannot be left on the ground at the job site. Old paint stripped off commercial buildings may contain high enough concentrations of metals (such as lead, chromium, cadmium, and mercury) to be regulated hazardous waste. Another example is the wastewater

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containing solvents as degreasing agents; such wastewater should be considered hazardous waste unless sampling proves otherwise.

There may be additional requirements at contaminated job sites. See Chapter 2.3 and 2.4 for more waste management information. Contact your local DEQ District Office, Hazardous Waste Program (see Appendix C) for questions about evaluating wastes and what requirements may apply.

Power Wash - More Information

For more information on power washing see the guidance document titled "[Mobile Power Washing](#)," which may be obtained via the DEQ's publication center at www.deq.state.mi.us/pubcenter (select "Key Topics," and "Publications" then search by keywords "mobile power washing").

3.3.9 Transferring Permit Ownership

Transferring ownership under the National Pollutant Discharge Elimination System (NPDES) and Groundwater Discharge permit programs requires the permittee to submit a request through the MiWaters system (Chapter 3.1.1). Guidance about the MiWaters system is available at www.michigan.gov/miwaters.

Groundwater discharge and NPDES permits both contain specific permit conditions related to transfer of ownership or control that are to be followed by the permittee prior to the transfer. The permits state the following:

"In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the DEQ 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing:

- 1) the legal name and address of the new owner;
- 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and
- 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the DEQ may propose modification of this permit in accordance with applicable laws and rules."

To notify the Department of the ownership change, the current permittee must complete a form in the MiWaters database. The permittee can find the form by logging into MiWaters, clicking on All Sites, selecting the appropriate site, then click on 'Apps, Requests and Reports', choose Permit Change Forms. From this screen, the permittee can find the form by typing in "Transfer" into the Form Name filter. One form appears for groundwater permittees. Two forms appear for NPDES: one for industrial storm water certificate of coverage (COC) permittees and the other form is for all other NPDES permittees. The permittee will then click Begin Submission for the appropriate form, complete, and submit the form. The form requires that the permittee include the written agreement as described above.

The new permittee will use the MiWaters system to report facility or operational changes requiring a permit modification.

The DEQ will not modify the permit documents until after the change in ownership has been completed. Change in ownership is a minor modification that does not require payment of a fee.

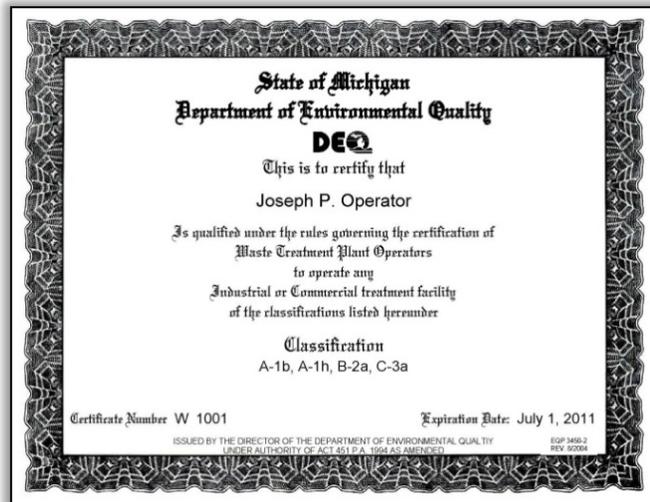
3.4 Wastewater Treatment Operator Training and Certifications

Technical assistance, operator training and certification for POTW operators are offered by the Operator Certification Program of the DEQ.

Industrial/commercial wastewater certification exams are offered twice a year in February and August.

Certification is offered in a variety of classifications each relating to a different process of wastewater treatment.

Operator certifications required under Permit-by-Rule and the Storm Water from Industrial Activities General Permit are offered at the DEQ District Offices (see Appendix C), usually on a regularly-scheduled basis. Schedules for certification and recertification training classes are located online at www.michigan.gov/deqstormwater under the “Construction Site” and “Industrial” programs. To register for training, contact the Registration Contacts listed on the training schedules, by phone or email. More information can be found at www.michigan.gov/deqoperatortraining.



WHERE TO GO FOR HELP

SUBJECT: Wastewater discharge permitting
CONTACT: DEQ, NPDES Permit Section, Water Resources Division (See Appendix C)
www.michigan.gov/deqwater

SUBJECT: Industrial pretreatment (questions not answered by local POTW)
CONTACT: DEQ, Industrial Pretreatment Program
586-601-7985 | www.michigan.gov/ipp

SUBJECT: Storm Water Discharge Permits
CONTACT: DEQ, NPDES Storm Water Program
517-284-5588 | www.michigan.gov/deqstormwater
PUBLICATIONS: 1. Scrap Metal Bins and Roll Off Boxes – Guidance Publication
2. [Guidebook of BMPs for Michigan Watershed Nonpoint Sources](#)
3. Sample Storm Water Pollution Prevention Plans
4. Michigan’s Permit-by-Rule for Construction Activities Rule 323.2190
5. Industrial Storm Water Operator Training Manual
6. Construction Site Storm Water Certified Training Manual

SUBJECT: Wastewater discharges to groundwater, including septic/tile field systems with more than 10,000 gallons per day discharge
CONTACT: DEQ, Groundwater Discharge Permit Program
517-284-5570 | www.michigan.gov/groundwaterdischarge
PUBLICATIONS: 1. Part 22 Groundwater Discharge Authorization Application

SUBJECT: Septic tank/field systems with <10,000 gallons/day discharge
CONTACT: Local Health Department: www.malph.org
DEQ, Land Division and Local Health Program
517-284-6528 | www.michigan.gov/deqonsitewastewater

SUBJECT: Lists of permitted and registered hazardous waste and liquid industrial by-product transporters
CONTACT: DEQ, Hazardous and Liquid Industrial By-Products Transporter Program
www.michigan.gov/deqwaste (under “Transporters”)

SUBJECT: Lists of licensed septage waste transporters
CONTACT: DEQ, Septage Waste Program
www.michigan.gov/deqseptage

SUBJECT: Wastewater operator certification and training
CONTACT: DEQ, Operator Training Program
517-284-5487 | www.michigan.gov/deqoperatortraining