

PART 2

WATER QUALITY AND WATER WITHDRAWAL REQUIREMENTS

When properly operated, a crushing facility is a dry operation; and water is only used as a mist for dust suppression. This mist is generally evaporated into the air surrounding the equipment and absorbed by the material before it is conveyed to the screening operation. If there is no release (discharge) from this process to the ground or a water body, water discharge permits are not needed by your facility for this specific activity. However, there are other activities closely associated with the crushing facility that may require wastewater discharge permits. The wastewater discharge permit program may apply to the wastewater generated from:



- Wash screen operations.
- Vehicle wash stations such as truck wheel washes.
- Mining activities where groundwater and storm water are dewatered.
- Storm water that comes in contact with industrial materials at the site.

In addition, water withdrawal permits and reporting requirements may apply to mining operations.

An Overview of the Department of Environmental Quality's (DEQ's) Water Quality Permit Programs

There are three water quality operational permit programs that may apply to a crushing facility:

- The **Groundwater Discharge Permit Program**.
- The **National Pollutant Discharge Elimination System (NPDES) Permit Program**.
- The **Industrial Storm Water Program** (which is included in the NPDES Program).

Each program is administered through the Water Bureau and is designed to protect against wastewater pollutants getting into the groundwater or surface water (such as rivers, lakes, and streams) of the state.

To determine which of these water programs applies to your crushing facility, you must first know the discharge destination of the wastewaters that are generated at your site. If all of the waste and/or dewatering water will enter the ground or groundwater, the Groundwater Discharge Permit Program applies. If the wastewater and/or dewatering water has the possibility of entering a surface water (rivers, lakes, and streams) of the state, the NPDES Permit programs apply.

Finally, a construction storm water NPDES Permit-by-Rule would likely apply to the job site during the initial development phase (to control run-off of soil and sediment into water bodies and neighboring properties.)

What permit is required for ponds?

For water quality permitting purposes, if a discharge is made into a pond from the mining of sand and gravel and the pond does not have an outlet to a surface water body, a groundwater discharge permit would likely be required.

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Each of these wastewater discharge permit programs protects the waters of the state pursuant to Section 3109 of Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), so the state's water can be used for activities such as irrigation; recreation; industry; drinking; and the health of plants, animals, and people. For example, dewatering groundwater often contains high levels of total dissolved solids (it may look like milk) or hydrogen sulfide (it may have a significant "rotten egg" odor). In some cases, discharging water with these characteristics can severely impact the uses of the state's water.

The Groundwater Discharge Permit Program

The Groundwater Discharge Permit Program applies to sites where the wastewater or wash water is directed to and discharged back into the ground or, as mentioned earlier, a pond with no surface water outlet that may have been created as a result of the sand and/or gravel mining activity. The discharge authorizations in the Groundwater Discharge Permit Program Rules (Part 22 Rules, Groundwater Quality, R 323.2201 et seq.) are established in order of relative threat to the environment, and the program's annual fees are set in the same manner. There is an annual fee for groundwater permit coverage. The annual fee can be \$200, \$1,500 or \$3,650, depending on the type of permit appropriate for your company.

Certain activities are exempt from having to obtain a permit. These activities are listed in Michigan Rule 323.2210(a-x) while other types of discharges require prior authorization and are issued under the following rules:

Rule 323.2210(y)	(site specific 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)

Exemptions to the Groundwater Discharge Permit Program (Rule 2210)

Certain discharges to the ground are exempt from needing prior authorization from the DEQ's Water Bureau. Examples of exempt discharges to the ground include controlled application of certain dust suppressants, domestic equivalent uses, and development water from groundwater monitoring wells. A more complete list of these discharges can be found in the groundwater discharge authorization application. This application is available online at www.michigan.gov/deqwater. Select "Groundwater Discharge" from the left-hand menu, and then under "Permits" in the middle of the page, select "Groundwater Permit Application Forms and Technical Information."

While the law and rules provide that a person does not need a permit to discharge a material that is exempt, the law also does not waive liability for causing injury (i.e., contamination) to the waters of the state. A discharge cannot cause the 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; and the following activities are prohibited:

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

Discharges to the ground falling into this category do not have to submit a permit application form. Yet other discharges to the ground or groundwater, which are not specifically listed as exempt activities under Rule 2210(a-x) or elsewhere in the rules, may be authorized on a case-by-case basis by the DEQ's Water Bureau. If your company demonstrates the discharge will not have a significant potential to be injurious based on volume or content, the Water Bureau may grant an authorization to discharge to the ground under Rule 2210(y). To request this authorization, you must submit an application form that includes a narrative description justifying the request for the Rule 2210(y) authorization with the permit application form.

The Groundwater Discharge General Permit

An authorization for certain classes of discharges can be granted by the Water Bureau under a general permit. Often this is used for operations where wash water is associated with gravel, sand, limestone, or dolomite mining that contains no additives.

To apply for the general permit, submit a **Groundwater Discharge Permit Application** to the Water Bureau with information that characterizes the discharge. The specific General Permit for sand and gravel wash water can be found at www.michigan.gov/deqwater. Select "Groundwater Discharge" from the left-hand menu, and then under "Permits" in the middle of the page select "Groundwater Permit Application Forms and Technical Information." From here, select **Rule 2215-05-4 Gravel Mining** in the middle of the page under "General Permits". A company is authorized to discharge to the ground or to groundwater when it receives a *Certificate of Coverage* (COC) from the Water Bureau that verifies the discharge is authorized under this rule. The annual permit fee for this authorization is \$1,500.

The *Groundwater Discharge Permit Application* lists in detail the types of discharges that require permits. The application packet is quite lengthy because it contains a great deal of guidance on how to apply for a permit and who needs a permit. An applicant actually fills out and submits only a small portion of the application packet. Pages 14-17 of the application require general information, such as owner/company name, address, site maps, etc. Page 17 contains the required signature block for an authorized official to sign off on the permit application for the company. There are two additional pages which must be completed by facility's applying for this permit. Each is specific to the type of discharge authorization for which the company is applying. There is an index on page 18 which directs you to the appropriate additional pages that must be included in the application. As an applicant, you must also submit supporting documentation, which in some cases consists only of location maps and a water use diagram.

An application for a groundwater discharge authorization can be accessed via the Water Bureau's Web site at www.michigan.gov/deqwater. Select "Ground Water Discharge" from the left-hand menu, and then look under "Permits" in the middle of the page. You may also call the Water Bureau Lansing office, 517-373-8148; or your local Water Bureau district office for an application. Instructions to apply for discharge permit coverage are included with the authorization information.

Surface Water Discharges And The National Pollution Discharge Elimination System (NPDES) Permit

NPDES Individual Permits

An individual NPDES permit is site specific. Companies engaged in limestone, sand/silica mining, and other associated processes with a direct discharge into surface waters of the state often need permits from this program. The limitations and requirements in an individual permit are based on the permittee's discharge type, the amount of discharge, company operations (if applicable), and the receiving water body's characteristics. Applications for discharge permits are available from the Water Bureau Web site; the Water Bureau Lansing Office, 517-241-1300; or your local Water Bureau district office. You can get help filling out your application by contacting any of these offices. Additional information is also available on the Web at www.michigan.gov/deqwater. Select "Surface Water" then "NPDES Permits." It is suggested that those needing this type of permit may wish to seek the assistance of an environmental consultant for assistance in completing the NPDES individual permit application.

NPDES General Permits

A general permit is available to permittees with certain similar operations and/or types of discharges. Coverage under an NPDES general permit will only be granted when the general permit provides the needed level of protection for the water receiving the discharge. Wastewater discharges at certain locations may require an individual permit based upon site-specific concerns. Companies that are eligible for coverage under a general permit receive a Certificate of Coverage (COC) from the Water Bureau usually within four to six weeks of submitting a completed application. Two of the general permits most relevant to crushing facilities include Storm Water from Industrial Activities (discussed below) and Sand and Gravel Mining (for process wastewater and pit dewatering water).

Storm Water from Industrial Activities General Permit

If a site has a site-specific individual NPDES permit, industrial storm water permit conditions and requirements will be included within the individual permit (general storm water permit coverage will not be necessary).

Companies with coverage under a general NPDES permit for sand and gravel mining may need to apply for coverage under a general storm water permit if storm water is separate from other waters at the site (such as dewatering or other wastewater). If all of the storm water at the site is intermingled with the dewatering or process wastewater, the storm water is no longer considered storm water and should be covered accordingly (e.g., by an individual NPDES permit or a general NPDES permit for sand and gravel mining). Industrial storm water permit coverage may be necessary for companies that:

- Do not have other wastewater requiring an NPDES permit at the site, and the storm water associated with the facility's industrial activity is discharged to a separate storm sewer system or to nearby surface waters of the state (e.g., river, lake, stream); or
- Have wastewater or dewatering water which requires other NPDES coverage, but the storm water is separated from the other wastewaters that are directed to surface waters of the state.

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The industrial storm water program applies to industrial sectors 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 companies. SIC codes describe the primary nature of business in which a facility is engaged. The following industrial categories applicable to sand and gravel mining are regulated:

- Transportation (SIC 40 – 45, including SIC 41)
- Mining (SIC 10 – 14)

It is likely that crushing facilities fall under one of these SIC codes. You can find your four-digit SIC code, for comparison, in your corporate tax returns 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.

Next, you must identify areas where storm water could come into contact with industrial materials or activities at your site. These are areas where you store or transport materials related to your industrial activity outside without some type of permanent covering such as a storage yard (final products manufactured for use outside are exempt). Upon contact with these areas, the quality of the storm water that runs off from these materials could be altered. The term “exposure” is used in the storm water program to indicate the potential for contact between storm water and your industrial materials. This includes outside storage of raw materials, intermediate products, waste materials, and material handling activities associated with your industrial activity.

If your company falls under one of the regulated SIC codes and you have a discharge of storm water to surface waters of the state from areas associated with your industrial activity, you will likely need a storm water permit. There is a no-exposure exemption for the storm water permit program, but most crushing and associated operations are conducted outside so the no-exposure exemption will probably not apply. However, for guidance on the “no-exposure exemption” go to the industrial storm water program Web site at www.michigan.gov/deqwater. Select “Surface Water” from the left-hand menu, then “Storm Water” from the drop-down menu. Then select “Industrial Program” under “Information” in the middle of the page and pick the document entitled “No Exposure Certification Guidance.”

To begin the process to get a COC, a document that demonstrates coverage under the *Storm Water from Industrial Activity General Permit*, you first have to submit a *Notice of Intent* (NOI) ([EQP 4664](#)). The NOI is a permit application that must be submitted to the local Water Bureau district office (see Appendix E). If your NOI is appropriate and complete, then a COC will be issued by the Water Bureau. Once the COC is issued, your company can begin its operation. There is an annual storm water permit fee of \$260 that is assessed at the end of each calendar year. Invoices usually are mailed in February of the following year. It is important to note that before a COC is granted, you must have:

- A certified operator who has supervision over the control structures at the company.
- Eliminated any unauthorized non-storm water discharges to the storm sewer system and waters of the state.
- A Storm Water Pollution Prevention Plan (SWPPP) developed and implemented (for existing facilities), and new facilities must have a SWPPP developed and ready for implementation.

How do you know if you need an Industrial Storm Water General Permit?

Answer: If you can answer yes to the following questions, you will need general permit coverage:

- Does the SIC code for my company fall under the categories that are regulated?
- Are there any areas on my job site where storm water is exposed to my industrial activities (i.e., storage or process equipment) and then discharged into surface waters of the state (e.g., any storm water that is not co-mingled with another wastewater stream, dewatering water, or otherwise covered under a different NPDES permit)?

Storm Water Construction Permit or Permit-By-Rule

A construction storm water NPDES Permit-by-Rule would in all probability apply to your site at the initial development phase or ground breaking. A NPDES Permit-by-Rule is used to control run-off of soil and sediment into water bodies and neighboring properties if there is storm water run off that enters the surface waters of the state. The permit often controls storm water run off from the site in the initial development period. This usually lasts until the storm water co-mingles with other wastewaters such as the dewatering water. Discharges after this are then covered by an operational permit.

At this time, construction sites over one acre are covered by a “permit-by-rule.” “Permit-by-rule” means that permit requirements are stated in a formally promulgated administrative rule by the Water Bureau. A facility requiring coverage under a “permit-by-rule” must abide by the provisions written in the rule. The rule requires that an application be submitted for construction sites over five acres; construction sites between one and five acres have no application requirement.

Owners of construction sites of five acres or more must submit a form called a *Notice of Coverage* (NOC) to apply for NPDES permit coverage. In order to submit an NOC, the applicant must first obtain a Soil Erosion and Sedimentation Control (SESC) permit. The SESC programs are administered by local jurisdictions and counties in your area. SESC agencies can be identified online at www.deq.state.mi.us/sesca or by calling the Environmental Assistance Program (EAP) at 800-662-9278. Authorization to discharge water from your job site is automatically granted upon submittal of a completed NOC and paying a one-time fee of \$400 to the Water Bureau in Lansing.

Construction sites that disturb one to five acres are provided automatic coverage under the NPDES Storm Water Construction Permit (Permit-by-Rule) as long as the site is first covered under a local or county Soil Erosion and Sedimentation Control (SESC) Program. Even though there is no application requirement or permit fee for one to five acre sites, construction site owners/operators must comply with the Permit-by-Rule requirements. Sites disturbing less than one acre could be required to have Permit-by Rule coverage if the site is part of a larger common plan of site development or if it has the potential for adverse impacts on water quality.

The Permit-by-Rule requires an owner/operator 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 should be inspected within 24 hours of a major rain event that causes run off from the site. These inspections should be conducted by, and recorded in, inspection logs by a Certified Storm Water Operator. The certification materials and testing to become a Storm Water Certified Operator are available in each of the Water Bureau district offices.

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For more information on the Permit-by-Rule, including application materials, certified operator exam training materials and exam schedules, or storm water program contact information, contact any Water Bureau district office or go to www.michigan.gov/deqwater (select “Surface Water” then “Storm Water”).

Large Quantity Water Withdrawal Permits

Mining companies that have a new or increased water withdrawal capacity of over 100,000 gallons per day must register with the DEQ prior to making the withdrawal. Withdrawals greater than two million gallons per day capacity from an inland source, or five million gallons per day capacity from a Great Lakes source, must also obtain a new large quantity water withdrawal permit from the DEQ. The company can determine whether these withdrawal thresholds are met based upon the discharge flow volumes contained in the company's wastewater discharge authorization (i.e., NPDES or groundwater discharge permit). Due to the nature of the industry, this program will most likely apply to the limestone mining industry.

This new program was passed into law to prohibit a new or increased large quantity withdrawal from causing an “adverse resource impact.” An adverse resource impact is defined as impairing the lake or stream’s ability to support its characteristic fish population. The Michigan Department of Natural Resources (DNR) can determine the characteristic fish population of a stream by comparing the amount of groundwater contributing to stream flow to the size of the stream’s watershed. Taking too much water from a stream will change the flow depth, velocity, and temperature of the stream and hence the types of fish expected to be found there. Until February 28, 2008, this program prohibits an adverse resource impact only to trout streams. After that date, it prohibits an adverse resource impact to all streams and lakes.

In addition, a person making a large quantity withdrawal must report the volume of that withdrawal to the DEQ by April 1 of each year on a form provided by the DEQ. There is an annual \$200 reporting fee, which is slated to be reduced to \$100 in two years. Fees are used to help defray the cost of administering the program. A person who withdraws less than 1.5 million gallons within the year is exempt from the fee and from reporting water usage in terms of volumetric measures. However, these persons will still need to file a [water use report](#) to indicate other information (e.g., location, baseline capacity, and intended use).

For a permit application or to learn more about this program, please call the Water Bureau, Drinking Water and Environmental Health Section, at 517-241-1355 or go to www.michigan.gov/deqwateruse.