

Environmental rules for aggregate mining

An introduction to local, state and federal rules

The goal of this publication is to help you determine whether your business is subject to environmental rules and where to go for more help. Understanding and complying with environmental rules is an important part of running a business and being a responsible member of your community. It results in efficient use of resources, a safer work place, a sustainable business, and healthier ecosystem.

This document is an overview of most federal, Minnesota state, and local environmental rules. Of course, it is not possible to use this publication as a definitive source. Rules are added, changed or may be interpreted differently based on court decisions.

Local government

Permits

Counties, townships or municipalities have zoning authority for regulating extractive uses like aggregate mining. In many counties, aggregate mining requires a Conditional Use Permit (CUP) or Interim Use Permit (IUP) from the county planning and zoning office. A township may also require a permit in addition to (or instead of) a county permit. Local permits are generally required for new operations that exceed a certain threshold of activity, or for expansion of an existing operation. The threshold for triggering a permit varies from one county to the next and may be related to area, production volumes, or length of time. Operations that were active before the effective date of a required permit may be exempt.

Local permits may address issues such as hours of operation, noise, traffic, dust, reclamation, and road use agreements. Performance bonds or some other form of financial assurance may be required. The term of a CUP or IUP typically varies from as little as 30 days to many decades. Increasingly, local authorities are requiring a mining and reclamation plan along with the permit. For more information on local permits required for aggregate mining, contact the local county zoning or planning office.

In general, state agencies have no regulatory role in administering or reviewing local land use permits. Depending on the size and scope of the mining operation, however, state and federal rules may apply.

Other local requirements

Additionally, local government units (LGU) may be responsible for evaluating compliance with state and federal requirements.

Wetland Conservation Act (WCA): The WCA regulates the draining, filling, and excavation of most wetlands. WCA compliance is evaluated and determined through local government units (LGU) such as counties, cities, watershed districts, and townships. State agencies such as the Minnesota Board of Water and Soil Resources and the Department of Natural Resources (DNR) assist local governments in their compliance review.

A full list of LGUs administering the WCA can be found here: <http://bwsr.state.mn.us/wetland-conservation-act-contacts>. Some local governments incorporate WCA compliance with other permits/approvals they issue under other authorities, while others require a separate WCA approval. Contact the applicable WCA local government unit for information on complying with the regulatory provisions of WCA.

The Shoreland Management Act, the Floodplain Management Act, and the Minnesota Wild and Scenic Rivers Act: These are “land use” or “zoning” type laws that require the DNR to institute minimum statewide development standards for shoreland, floodplains, and on certain rivers designated as Wild and Scenic Rivers. These standards must then be adopted through local zoning or land use ordinance. The law allows local units of government to be more restrictive than the minimum standards. For information on how these regulations might affect your operation, contact your local county planning and zoning office.

Drinking water supply management areas (DWSMA): “Drinking water supply management area” means the surface and subsurface area surrounding a public water supply well, including the wellhead protection area, which must be managed by the entity identified in a wellhead protection plan.

The Minnesota Department of Health’s (MDH) *Wellhead Protection Issues Related to Mining Activities* describes issues to consider when mining in a DWSMA. The document can be found at <https://www.health.state.mn.us/communities/environment/water/docs/swp/mining.pdf>.

To see if a site is in or near a DWSMA use the MDH Source Water Protection Web Map at <https://www.health.state.mn.us/communities/environment/water/swp/mapviewer.html>.

For assistance determining if a site is in a DWSMA, contact MDH Source Water Protection Staff at 651-201-4700. Contact your local county zoning or planning office to learn about requirements in a DWSMA.

Minnesota Pollution Control Agency (MPCA)

Industrial wastewater and stormwater permit

If the primary activity at a site is described by one of the Standard Industrial Classification (SIC) codes listed below, a permit authorizing industrial wastewater and/or stormwater discharges is required.

- Sites with stormwater discharges only may qualify for the Industrial Stormwater (ISW) General Permit at <https://www.pca.state.mn.us/water/industrial-stormwater>.
- Sites with stormwater, dewatering (Subsector J1/J2 only), and wastewater discharges may qualify for the Nonmetallic Mining & Associated Activities (MNG49) General Permit at <https://www.pca.state.mn.us/regulations/nonmetallic-mining-and-associated-activities>.

Most sites qualify for either the ISW or MNG49 general permits. If you do not qualify for either of these, an individual or other type of general permit may be needed.

SIC codes and subsector requiring a water quality permit:

Subsector J1

- Construction sand and gravel mining (1442)
- Industrial sand mining (1446)

Subsector J2

- Dimension stone (1411)
- Crushed and broken limestone mining/quarry area (1422)
- Crushed and broken granite mining/quarry area (1423)
- Crushed and broken stone mining/quarry area (not elsewhere classified) (1429)

Subsector D1

- Hot mix asphalt production areas, (also known as asphalt paving mixtures and blocks), including portable HMAs (2951)

Subsector E2

- Concrete block and brick (3271)
- Concrete products other than block and brick (3272)
- Ready-mix concrete, including portable concrete plants (3273)

Construction stormwater permit

Construction stormwater permit (CSW) coverage is required if you are the owner or operator for construction activity disturbing:

- One acre or more of soil, or
- Less than one acre of soil, if that activity is part of a larger “common plan of development or sale” that covers more than one acre.

Some water quality permits include coverage for the discharge of construction stormwater and an additional CSW permit is not required.

If your site has, or will obtain, an:

- **MNG49 permit**, a CSW permit is not required for the discharge of stormwater from construction related land disturbing activity that is necessary to establish the industrial activity.
- **ISW permit**, a CSW permit is not required for the discharge of stormwater from construction related land disturbing activity that is necessary to establish Sector J1/J2 facilities, except Sector J1/J2 facilities that will disturb 50 acres or more AND the site discharges within 1 mile to special waters or to impaired waters.
- **Individual permit**, then consult your specific permit to see when an additional CSW permit is needed for construction activity.

View the CSW permit, see steps to take before applying, and find application materials at <https://www.pca.state.mn.us/water/construction-stormwater>.

Air quality

Dust and noise control

All aggregate mining facilities must take reasonable action to prevent avoidable amounts of dust from becoming airborne (Minn. R. 7011.0150) and stay within noise limits for mining activity (Minn. R. 7030).

Air permits

Air permitting requirements depend upon two criteria:

- **Potential emissions:** If a facility’s potential air emissions exceed permitting thresholds, an air permit is required. Production capacity and equipment effect potential emissions. The MPCA’s Small Business Environmental Assistance Program at <https://www.pca.state.mn.us/regulations/aggregate-sand-and-gravel> has calculators to help you calculate emissions and can provide permitting guidance.
- **Federal or state rules:** If certain federal or state rule(s) apply, such as New Source Performance Standards (NSPS) 40 CFR pt. 60, subp. UUU; 40 CFR pt. 60, subp. Kb; or 40 CFR pt. 60, subp. OOO; an air permit may be required regardless of potential to emit. See federal rules below.

If an air permit is required, most facilities qualify for the Nonmetallic Mineral Processing General Permit. If you do not qualify for the general permit, it is possible to obtain a registration Option D permit. If you cannot qualify for either a general or registration permit, then you must apply for another type of permit.

Federal Air Rules

Federal air rules may apply, regardless of whether or not an air permit is required. National Emission Standards for Hazardous Air Pollutants (NESHAPs) specify control technologies to limit pollutants. A list of all NESHAPs is at <https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-9>.

New Source Performance Standards (NSPS) usually require certification or testing to confirm compliance. A list of all NSPS is at <https://www.epa.gov/stationary-sources-air-pollution/new-source-performance-standards>.

Federal rules that may apply at aggregate sites:

- **Reciprocating Internal Combustion Engines** (NESHAP, 40 CFR pt. 63, subp. ZZZZ)*
- **Stationary Compression Ignition Internal Combustion Engines** (NSPS, 40 CFR pt. 60, subp. IIII)*
- **Stationary Spark Ignition Internal Combustion Engines** (NSPS, 40 CFR pt. 60, subp. JJJJ)*
- **Calciners and Dryers** (NSPS, 40 CFR pt. 60, subp. UUU)†
- **Volatile Organic Liquid (Petroleum) Storage** (NSPS, 40 CFR pt. 60, subp. Kb)†
Applies to each storage vessel with a capacity greater than or equal to 75 cubic meters- about 19,800 gals- that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. See rule for exceptions.
- **Nonmetallic Mineral Processing** (NSPS, 40 CFR pt. 60, subp. OOO)†
Consider the three questions below to help determine if you are subject to the rule. If you answer yes to all questions, subp. OOO may apply.
 - Do you have crushing equipment?
 - Is the capacity of your fixed crushing plant larger than 25 tons/hour or your portable crushing plant larger than 150 tons/hour?
 - Was the plant or equipment constructed, re-constructed, or modified after August 31, 1983?

* EPA Regulation Navigation Tool available to help you decide if the rule applies at <https://www.epa.gov/stationary-sources-air-pollution/epa-regulation-navigation-tools>.

† If this rule applies, an air permit is required.

Aboveground storage tanks (AST)

Aboveground storage tanks containing liquid substances that may pollute waters of the state require notification and are subject to AST regulations.

Many types of aboveground storage tanks are exempt from regulation such as:

- Any tank of 1,100 gallons or less in capacity unless greater than 500 gallons and within 500 feet of a Class 2 surface water
- Temporary tanks located at a site for 30 days or less
- A vehicle, such as a tank truck or railroad car, that contains a substance and is in the same location 30 days or less or which dispenses a substance and is not refilled while on the same site
- Equipment tanks used on machinery for operation purposes (e.g., hydraulic lift tanks, heating or cooling equipment, lubricating oil reservoirs)
- Tote tanks that meet all three criteria below:
 - Not filled or refilled on site
 - 1,100 gallons or less in capacity
 - Located on site for less than 180 days

ASTs storing asphalt cement: Registration is not required but reduced management requirements apply.

If you have an AST not listed above, continue to investigate if the tank is subject to AST regulations. Visit <https://www.pca.state.mn.us/waste/storage-tanks> for compliance information.

Underground storage tanks (UST)

Owners of USTs with a capacity of more than 110 gallons which contain petroleum or hazardous substances used commercially, must notify the MPCA of the existence of these tanks and follow UST requirements. Several types of USTs are exempt. Visit <https://www.pca.state.mn.us/waste/storage-tanks> for compliance information.

Hazardous waste

Sites that have hazardous wastes, such as spent solvents, oil-based paints, and PCB-contaminated used oil, need a hazardous waste identification number (HWID). The MPCA assigns HWIDs statewide. See MPCA factsheet #w-hw1-03, *Obtain a Hazardous Waste Identification Number*, at <https://www.pca.state.mn.us/sites/default/files/w-hw1-03.pdf>.

In addition to a HWID, a hazardous waste generator license may be required. Facilities in Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, or Washington County are licensed by their county. The MPCA licenses facilities in greater Minnesota. Visit <https://www.pca.state.mn.us/waste/hazardous-waste-licensing> for county contact and licensing information.

Spill plans – general requirement

First, plan your work to prevent spills of hazardous substances or oil that could pollute the land, water, or air or threaten the public's safety or health. Identify which materials could spill, areas the spill would affect, and how to minimize the possibility of a spill. Should a release occur, have a plan to contain and recover it as rapidly as possible (Minn. Stat. § 115E at <https://www.revisor.mn.gov/statutes/cite/115E>).

Specific prevention and response plans

See Minn. Stat. § 115E.03 at <https://www.revisor.mn.gov/statutes/cite/115E.03> for thresholds that trigger the requirement for a specific prevention and response plan if you:

- Own or operate barges/vessels, rail car rolling stock, pipeline, or tanks that store or transport oil or hazardous substances
- Own or operate facilities that transfer oil or hazardous substances to or from vessels, tanks, rolling stock, or pipelines

Reporting spills

- **State of Minnesota:** A person who has a substance or material under their control which spills or leaks and, if not recovered, may pollute waters of the state must report it to the Minnesota Duty Officer (Minn. Stat. § 115.061). Example pollutants are antifreeze/engine coolant, hydraulic fluid, diesel fuel, gasoline, asphalt, lime, concrete truck wash out waste, and used oil.

Notification is not required for spills of 5 gallons or less of petroleum. Spills of any quantity of all other chemicals or materials should be reported. If in doubt, report.

Immediately report spills to the Minnesota Duty Officer by calling 651-649-5451 or 800-422-0798. These are 24-hour emergency response phone numbers.

- **Federal government:** The federal government also has reporting requirements. The following releases must be reported to the National Response Center at 800-424-8802:
 - Oil spills to navigable waters or adjoining shorelines in quantities harmful to public health or the environment (40 CFR pt. 110)
 - Reportable quantities of hazardous substances (40 CFR pt. 355)

Spill prevention, control, and countermeasure (SPCC)

The SPCC rule (40 CFR pt. 112) requires the owner or operator of a non-transportation related facility to prepare and implement an SPCC Plan. An overview of the rule is at <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations>.

The rule applies to a facility that:

- Uses, consumes, stores, drills, produces, gathers, processes, refines, transfers, or distributes oil or oil products, such as diesel fuel, gasoline, lube oil, hydraulic oil, adjuvant oil, crop oil, vegetable oil or animal fat.
- Has a total aggregate capacity of aboveground oil storage containers greater than 1,320 U.S. gallons. Do not include containers less than 55 gallons, permanently closed containers, motive power containers, or storage containers used exclusively for wastewater treatment.

Or

More than 42,000 gallons in completely buried containers. Do not include completely buried tanks subject to all technical requirements of 40 CFR pts. 280 or 281, containers less than 55 gallons, permanently closed containers, or storage containers used exclusively for wastewater treatment.

- Could reasonably be expected to discharge oil in quantities that may be harmful into navigable waters of the U.S. or adjoining shorelines, such as lakes, rivers and streams.

The EPA's *A Facility Owner/Operator's Guide to Oil Pollution Prevention* describes who is covered by the rule and rule requirements at <https://www.epa.gov/sites/default/files/documents/spccbluebroch.pdf>.

Facilities subject to the SPCC rule have oil discharge reporting requirements, reportable to the EPA Regional Administrator. For questions related to SPCC, contact the EPA Region 5 SPCC Coordinator at 734-214-4898.

Minnesota Department of Natural Resources (DNR)

Water appropriation permit

Required if withdrawing more than 10,000 gallons of water per day or 1,000,000 gallons per year from state water, including ground water from pit dewatering.

Public waters work permit

Applies to lakes, wetlands, and streams identified on the DNR Public Water Inventory maps. Proposed projects affecting the course, current, or cross-section of these water bodies may require a Public Waters Work Permit. Visit Do I Need a Permit at <https://www.dnr.state.mn.us/permits/water/needpermit.html>.

Burning permit

A burning permit may be required to burn brush from clearing and stripping operations. You may purchase a burning permit at any DNR Forestry Office, from any fire warden, or online. Find contact info by county and purchase a permit online at <https://www.dnr.state.mn.us/forestry/fire/questions.html>.

Minnesota Environmental Quality Board

The Minnesota Environmental Quality Board determines when environmental review is needed for development projects and names the Responsible Governmental Unit completing the review. For aggregate mining proposals, completing environmental review is the responsibility of local government, most often the county planning or zoning office in which the proposed project is located.

Environmental Assessment Worksheet (EAW)

Mining projects that trigger an EAW:

- An aggregate mining operation of sand, gravel, stone or other nonmetallic minerals, other than peat, that will excavate 40 or more acres of land to a mean depth of 10 feet or more during its existence. EAWs can be conducted on a discretionary basis if a proposed project is below the mandatory threshold under certain conditions.
- Development of a facility for the extraction or mining of sand, gravel, stone, or other nonmetallic minerals, other than peat, which will excavate 20 or more acres of forested or other naturally vegetated land in a sensitive shoreland area or 40 acres of forested or other naturally vegetated land in a nonsensitive shoreland area.
- Development of a silica sand project that excavates 20 or more acres of land to a mean depth of ten feet or more during the project's existence.

Environmental Impact Statement (EIS)

Mining projects that triggers an EIS:

- An aggregate mining operation of sand, gravel, stone or other nonmetallic minerals, other than peat, that will excavate 160 acres of land or more to a mean depth of ten feet or more during its existence.

- Development of a facility for the extraction or mining of sand, gravel, stone, or other nonmetallic minerals, other than peat, which will excavate 40 or more acres of forested or other naturally vegetated land in a sensitive shoreland area or 80 or more acres of forested or other naturally vegetated land in a nonsensitive shoreland area.

U.S. Army Corps of Engineers

The Army Corps of Engineers is a federal agency that regulates construction activity occurring in the nation's waters, including wetlands, rivers, lakes and ponds. A Corps permit may be required for:

- Work in, over or under a 'Navigable Water of the U.S.'
- The discharge of dredged or fill material into waters of the U.S.

Activities that might trigger a permit include mining activities, the construction of access roads, building sites, storage areas, or water retention ponds. Contact the St. Paul District at 800-290-5847 ext. 5525 or 651-290-5525 or visit <https://www.mvp.usace.army.mil/Missions/Regulatory/>.

Contact information	
<p>Minnesota Pollution Control Agency (MPCA) Toll free all offices 800-657-3864 All offices 651-296-6300 Website https://www.pca.state.mn.us/</p>	<p>MPCA Small Business Environmental Assistance Program Free confidential compliance assistance for businesses with fewer than 100 employees. Toll free 800-657-3938 Metro 651-282-6143 Website http://www.pca.state.mn.us/sbeap Email smallbizhelp.pca@state.mn.us</p>
<p>Minnesota Department of Health Drinking Water Protection Program Phone 651-201-4700 Website https://www.health.state.mn.us/communities/environment/water/dwp.html Email health.drinkingwater@state.mn.us</p>	<p>Minnesota Department of Natural Resources Toll free 888-646-6367 Website https://www.dnr.state.mn.us/ Email info.dnr@state.mn.us</p>
<p>Minnesota Environmental Quality Board Phone 651-757-2873 Website https://www.eqb.state.mn.us/ Email Env.Review@state.mn.us</p>	<p>Minnesota Duty Officer Toll free 800-422-0798 Metro 651-649-5451</p>
<p>US Army Corps of Engineers St. Paul District Office Toll free 800-290-5847 ext. 5525 St. Paul District Office 651-290-5525 Website https://www.mvp.usace.army.mil/ Email cemvp-pa@usace.army.mil</p>	