



Water Quality Permitting for Gravel Mining and Hot Mix Asphalt Operations

The Minnesota Pollution Control Agency (MPCA) has developed a new general water quality permit to cover certain activities at gravel mining, stone quarrying and hot mix asphalt operations. The permit is intended to help consolidate multiple water quality permit requirements into one document. This should make it easier for the industry to achieve compliance, in part by reducing paperwork and better focusing on pollution prevention. For most gravel and hot mix operations, this permit is an optional replacement for MPCA water quality multiple permit coverage.

For those activities covered under the new permit, National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) MN G490000, a company needs to provide just one permit application for their sites throughout Minnesota. For each of these sites, they are responsible for tracking activities, and reporting basic information on those activities, annually to the MPCA. The annual fee for this MPCA permit initially is \$260, although this fee likely will later increase due to the multisector, multiple site, coverage of the permit.

MPCA Permit Coverage

The permit covers these water quality-related activities:

1. Storm water runoff from gravel mines and stone quarries.
2. Pit dewatering from gravel mines.
3. Storm water runoff from hot mix asphalt plants.
4. Management of wet scrubber wash wastewater at hot mix asphalt plants. [Scrubbers are used to control air quality emissions at many asphalt plants, and can accumulate water pollutants that need to be managed in the scrubber wastewater.]

If you conduct, or plan to conduct, any of these activities, you can contact the MPCA at (612)296-7238 to request a permit application for coverage under new general permit MN G490000. If you are now covered under other MPCA water quality permits, the MPCA can, if requested, end coverage for those activities under these other permits when the new permit MN G490000 coverage takes effect for you.

Best Management Practices

Effective pollution prevention depends on the planning and implementation of best management practices. An aggregate industry site that has runoff must implement a Pollution Prevention Plan for that site. Those developing pollution prevention measures at gravel mines and asphalt plants should consult the following references:

1. *A handbook for reclaiming sand and gravel pits in Minnesota.* Minnesota Department of Natural Resources (DNR). 1992. (Available from the DNR by calling (612)296-4807.)
2. *Protecting water quality in urban areas.* MPCA. 1989. (This reference is valuable not only for urban area activities. Available from the MPCA by calling (612)296-3890.)
3. *Storm water management for industrial activities.* Environmental Protection Agency (EPA). 1992. (Available from the Natl. Technical Info. Service, order # PB92-235969, by calling (703)487-4600.)

The following management practices are recommended:

1. Cover material storage and handling areas with an awning, tarp or roof.
2. Practice good stockpiling practices such as: surrounding stockpiles with diversion dikes or curbs; and revegetating areas used for stockpiling to slow runoff.
3. Use curbing, diking or channelization around material storage, handling and processing areas to divert runoff around areas where it can come into contact with material stored or spilled on the ground.
4. Use secondary containment measures such as dikes or berms around asphalt storage tanks and fuel oil tanks. For information on MPCA Storage Tank compliance and assistance programs, please call (612)297-8616.
5. Properly dispose of waste materials from dust collection systems and other operations. Asphalt scrubber sediments should be handled in a way that does not allow scrubber wastewater to infiltrate into the ground.



- 6. Remove spilled material and dust from paved roads by shoveling and sweeping on a regular basis.
- 7. Use catch basins to collect contaminated storm water.
- 8. Implement spill plans to prevent contact of runoff with spills of significant materials.
- 9. Clean material handling equipment and vehicles to remove accumulated dust and residue.
- 10. Use detention ponds or sedimentation basins to reduce suspended solids.
- 11. Use oil/water separators to reduce the discharge of oil and grease.

MPCA Air Quality Requirements

Facilities must meet the MPCA minimum requirements for dust (Minn. R. 7011.0150 and 7011.0700-0735) and noise (Minn. R. ch. 7030) control. Facilities with crushing operations also may have to meet federal standards for emissions of particulate matter from processing equipment. Depending on their capacity and processing equipment, an Air Emission Permit may be required. For more information on air quality concerns and MPCA requirements, please call 1(800)MINN-AIR.

MPCA Solid Waste Requirements

The MPCA encourages recycling of used asphalt, and captured baghouse and scrubber fines, when possible. When this is not practical, these wastes must be disposed of in an approved sanitary or demolition debris landfill. For more information, please call (612)296-7271 in the Twin Cities area, or MPCA offices in Brainerd, Detroit Lakes, Duluth, Marshall or Rochester.

DNR and U.S. Army Corps of Engineers Requirements

Some water-related activities at gravel mines and hot mix asphalt plants also require additional, separate, regulatory approvals from the Minnesota Department of Natural Resources (DNR) and/or the Army Corps of Engineers.

Water withdrawals

Surface or ground water withdrawals of more than 10,000 gallons/day or one million gallons/year require a DNR water appropriation permit. Sand and gravel activities that withdraw more than these volumes for dewatering,

washing, makeup water for scrubbers, roadbed preparation, dust control, irrigation and other purposes require a water appropriation permit. Reuse of dewatering and wash water is encouraged and may help eliminate the need for a permit or reduce DNR water use fees. A DNR water appropriation permit is not required if the water is taken from a municipal or other source of water for which there is a valid appropriation. Information on DNR water appropriation permits is available from the DNR at (612)296-4800.

Riprap and Pit Dewatering Outlets

Riprap installed according to the following requirements does not require a permit from the DNR:

- a. The riprap consists of natural rock only.
- b. The riprap is sized in accordance with the guidelines in Practice 6.18, "Protecting water quality in urban areas," MPCA, 1989 (available from the MPCA by calling (612)296-3890).
- c. The riprap conforms to the natural alignment of the shore or streambank.
- d. No excavation occurs below the top of the streambank or the Ordinary High Waterlevel of a basin or wetland.
- e. The materials are placed less than 5 feet waterward of the ordinary high water mark.
- f. The minimum finished slope is no steeper than 3 feet horizontal to 1 foot vertical (3:1).
- g. No bank shaping or backsloping is required to achieve the 3:1 slope.
- h. The materials do not obstruct the receiving water flow.
- i. And, the discharge is not directly to Lake Superior, DNR-designated trout waters, or a posted fish-spawning area. (Trout waters are designated in DNR Commissioner's Order 2450, Minn. R. 6262.0400, subp. 3, 4 and 5; this order may be obtained from the DNR by calling (612)296-3325.)

Information on DNR protected waters permits is available from the DNR at (612)296-4800.

U.S. Army Corps of Engineers

Activities such as the discharge of dredged or fill material or excavation within waters may require approval of the U.S. Army Corps of Engineers. Activities related to the construction of sand and gravel mine pit dewatering outfall structures also may require Corps approval. The Corps St. Paul District Office may be contacted at (612)290-5375.

For more information, please contact the MPCA Water Quality Division at (612) 296-7238.