

Water Pollution Control

The basic framework for the current national water quality programs was put in place by Congress with the enactment of the Federal Water Pollution Control Act (FWPCA) of 1972, and the Marine Protection, Research and Sanctuaries Act of 1972. The Clean Water Act (CWA) of 1977 reorganized the FWPCA and added a major new program to control toxic water pollutants. Of the subsequent amendments to these statutes, the most significant are the Water Quality Act of 1987, which addressed storm water discharges, and the Oil Prevention Act of 1990, which tightened control of discharges of oil and hazardous substances.

In Missouri, the Water Protection Program (WPP) is responsible for protecting, maintaining, and improving the quality of Missouri's water. This entails prevention, abatement, and regulating wastewater discharges from commercial, industrial, and municipal sites in order to protect surface and ground water from contamination. The primary state enabling legislation is the Missouri Clean Water Law, Chapter 644 (RSMo). The portion of the Code of State Regulations (CSR) defining the organization and responsibilities of the Water Pollution Control Program is recorded in 10 CSR 20.

The primary purpose of the CWA is to restore and protect the quality of the nation's surface waters. As originally approved, the ultimate goal of the Act was to eliminate the discharge of pollutants into navigable waters. The surface waters covered by the Act are defined quite broadly and include rivers, lakes, intermittent streams, and even wetlands. Federally, the definition does not extend to ground water, which is covered by the Safe Drinking Water Act. Missouri's clean water law includes groundwater in the definition of "waters of the state".

CWA established the National Pollutant Discharge Elimination System (NPDES) to limit pollutant discharges into streams, rivers, and bays. EPA regulations can be found in 40 CFR 122. The WPP administers the program in Missouri. The WPP requires state operating permits for all point source discharges to waters of the state. The EPA maintains authority to review applications and permits for major dischargers, based on discharge quantity, and content.

The federal Clean Water Act requires cities in urbanized areas having populations over 1,000 and certain counties in urbanized areas to develop storm water management plans and obtain discharge permits for storm water outfalls. In Missouri this program is handled by the WPP, which issues National Pollutant Discharge Elimination System (NPDES) permits. Companies must submit applications to the WPCP to ensure that storm water discharges that enter streams directly from industrial facilities are also permitted.

Permits

For some circumstances wastewater treatment is regulated by the Missouri Department of Health and Senior Services. If a business is located in an area where no wastewater treatment facilities are available, wastewater treatment for the business may be regulated by the Missouri Department of Natural Resources or by Missouri Department of Health and Senior Services (DOHSS). The regulating authority is determined by the quantity of wastewater produced and whether the wastewater is considered domestic or industrial. Domestic wastewater or sewage is defined as human excreta and wastewater, including bath and toilet waste, residential laundry waste, residential kitchen waste and other similar waste from household or establishment plumbing.

If the business will dispose of domestic wastewater with a design flow of less than 3000 gallons (design flow) per day to an approved no discharge soil absorption system, the business will be regulated by the Department of Health and Senior Services. Contacts may be made to the Department of Health (573) 751-6095 or the local county Health Department.

Some **Concentrated Animal Feeding Operations** (CAFOs) are required to have a No-Discharge State Operating Permit. Any operation where the animals are confined may require a No-Discharge State Operating Permit. Contact the Water Protection Program regarding any questions concerning CAFOs.

If the business will be producing 3000 gallons per day (design flow) or more of domestic wastewater or will be producing any other type of wastewater, the business is required to get a **Wastewater Treatment Construction Permit** and a state **Operating Permit** from the Missouri Department of Natural Resources Water Pollution Control Branch. Contact the Water Protection Program (WPP) or the local regional office for application information.

If the business is located in an area where wastewater treatment facilities are available, the municipality, sewer district or private sewer company responsible for the wastewater treatment facilities should be contacted for information about approvals, costs, and procedures for connection. Unless waived by the local authority, connection to an existing system is required.

An NPDES permit required for operating a sewer or sewage treatment plant is referred to as a state **Operating Permit**. Land application of sludge and wastewater can be included under the same site-specific operating permit if the site is within a 20-mile radius. A facility may choose to apply for a general permit where available.

A **General Permit** may be developed for a specific category of discharge or activities. The General Permit contains a standard set of requirements. There are General Permits for the land application of food processing wastewater and sludge and domestic sewage sludges including septage from a septic tank. A General Permit must be obtained for each operating location, which is not contiguous. The department may choose to require a permit on a case-by-case basis where determined to be necessary to protect human health and the environment.

A state-operating permit is required where there will be storm water runoff from certain industries. A **Storm Water Permit** is also required if construction activity will disturb one or more acres of land. General storm water permits are available for many industries in Missouri. Some industries with general storm water permits are lumber and wood processors, chemical manufacturers, and motor freight transportation.

404 permits and 401 water quality certifications

When construction or filling (including dredging or installing and repairing utility lines) will disturb a water of the U.S., including wetlands, a **404 Permit** is required from the U. S. Army Corps of Engineers. Section 404 of the Clean Water Act requires a permit to excavate in or discharge dredged or fill material into a water of the United States.

Construction activities can be authorized in waters of the United States when the discharges of dredged or fill material meet the requirements of the federal Clean Water Act, Endangered Species Act, and National Wild and Scenic Rivers Act. Permits may be required even if the work is on private land. If the work is in a water area, or where water lays or runs part of the year, the activity may be regulated by federal law. Individuals, commercial enterprises, port

authorities, marinas, and local, state and federal agencies need a 404 permit to work in waters of the United States.

Under Section 10 of the Rivers and Harbors Act of 1899, a permit may be required from the Corps of Engineers for any structure or work that takes place in, under or over a navigable water or wetland adjacent to navigable waters of the United States. The Corps of Engineers requires a completed federal application form with appropriate drawings and a copy of the letter sent to the Missouri Department of Natural Resources requesting certification. Contact a U.S. Corps of Engineers' Regulatory Branch with any questions:

Missouri State Regulatory Office
221 Bolivar Street, #103
Jefferson City, MO 65101
(573) 634-5657

St. Louis District
1222 Spruce Street
St. Louis, MO 63103
(314) 331-8575

Kansas City District
700 Federal Building
601 E. 12th Street
Kansas City, MO 64106
(816) 983-3990

Section 401 of the Clean Water Law requires an applicant for a federal permit for an activity which may result in a water quality problem in navigable waters to provide the federal agency an approval from the state water quality agency. In Missouri, the Water Pollution Control Branch issues **401 Water Quality Certifications**. A letter requesting water quality certification for the proposed project and one copy of the federal application including drawings should be sent by the applicant to the Missouri Department of Natural Resources Water Pollution Control Branch. Contact the Water Pollution Control Branch for information regarding 401 Water Quality Certification.

Sludge

The Clean Water Act requires the EPA to establish minimum national standards for the use and disposal of domestic sludge. Sludge means solid, semi-solid or liquid residue removed during the treatment of domestic wastewater. EPA specifies the technical standards for sludge use and disposal in the federal rule, Title 40 Code of Federal Regulations Part 503, (40 CFR 503). This regulation contains risk-based limitations for metals and pathogens, and includes best management practices. Sludge permit requirements for the National Pollutant Discharge Elimination System (NPDES) can be found in 40 CFRs 122, 123 and 501.

EPA Region VII handles the compliance assessment and enforcement of the 503 regulations. State operating (NPDES) permits are issued with the sludge requirements addressed in the Missouri Clean Water Law.

From production to disposal, the generator of the sludge is responsible for complying with all sludge standards and permit requirements. The generator is the person owning the wastewater treatment facility producing the sludge. An exception is the single family, residential septic tank. In this case, the septage hauler is the responsible party, rather than the homeowner. The generator remains responsible for sludge disposal unless the sludge is hauled to another permitted sludge use or disposal facility. A contract hauler is considered an agent of the generator. The use of a contract hauler does not relieve the generator of the responsibility under the EPA regulations, unless the hauler obtains a separate sludge permit.

A state **Construction Permit** is required for all persons who build, erect, alter or replace facilities for sludge or biosolid storage, treatment or disposal. Each construction permit application must include engineering plans and specifications. Plans must be developed

according to design regulations published in the Missouri Code of State Regulations (CSR) under 10 CSR 20. MoDNR will review the application. A public notice of the proposed permit action is then issued for a 30 day comment period. After resolving the public comment, the department issues a construction permit. The sludge management system must be built according to the approved design. A professional engineer (P.E.) must certify the complete construction.

Missouri's sludge regulations are incorporated into the standard conditions of the state-**Operating Permit**. A state operating permit is required for all persons who operate, use or maintain facilities for the storage, treatment or disposal of sludge or biosolids.

If you are a sludge generator, the sludge requirements are included in the wastewater discharge (NPDES) permit. If you are not a generator, but you operate a sludge use or disposal facility, a sludge-only permit is required. For new facilities, the operating permit application must include certification by a P.E. that the facility was built according to the construction permit.

For an existing facility built without a construction permit, the application must include as-built engineering plans and specifications. The facility must go through the same public notice procedure as a new construction project.

Sludge that is not reused as biosolids must be disposed in a permitted sludge disposal facility. There are two types of disposal: surface disposal and incineration. Surface disposal sludge requires a solid waste disposal permit under the Missouri Solid Waste Management Law. The corresponding regulation can be found in 10 CSR 80-3. This applies to sanitary landfills, sludge monomials, sludge disposal lagoons, and other types of sludge disposal on land. Sludge disposal lagoons include any sludge-only lagoon, that has more than two years accumulation of sludge, unless an alternate storage and clean out plan has been approved by the department and the EPA.

The incineration of sludge must comply with air emission standards. The ash must comply with all other sludge use or disposal standards. Incinerating the sludge concentrates the metals and other inorganic pollutants in the ash, but does not reduce the environmental risks from these pollutants. Ash disposal must meet the same surface disposal requirements as other sludges.

Biosolids are treated sludge that has met the sludge standards for use as a fertilizer or soil conditioner. These standards include meeting metal limitations, pathogen reduction, vector requirements, and best management practices.

Sludge pumped from residential septic tanks and similar treatment works is considered septage. However, septage has fewer requirements for treatment and monitoring than other types of sludge. A general permit covers requirements for the land application of septage. Contract haulers for septage are responsible for complying with sludge standards and must obtain permits if they store, treat, land apply or dispose of septage. Septage may also be mixed with other sludges. The more stringent set of sludge standards would apply to the mixture.

Annual Sludge Reports are due January 28 of each year for the previous calendar year period. Report forms (Form S) are provided by the Missouri Department of Natural Resources and are approved for use by the EPA. This means Missouri permit holders may use the same form for reporting to both the Missouri Department of Natural Resources and the EPA and keep detailed reports on file for at least five years. These records must be made available for inspection by the department. The department's Regional Offices will continue to handle

permitting issues, complaints and lagoon closure plans. General sludge questions are to be directed to the Water Pollution Control Branch at (573) 751-1300 or the EPA Region VII office at (913) 551-7492.

Many of the required forms are available on-line under the heading *Water Pollution Control* at <http://www.dnr.mo.gov/forms/index.html> For more information about the specific permits, *Environmental Permits and How to Obtain Them* may be helpful, and is also located online. To receive a paper copy of any water pollution control application forms, please contact the Water Pollution Control Branch at (573) 751- 4041.