



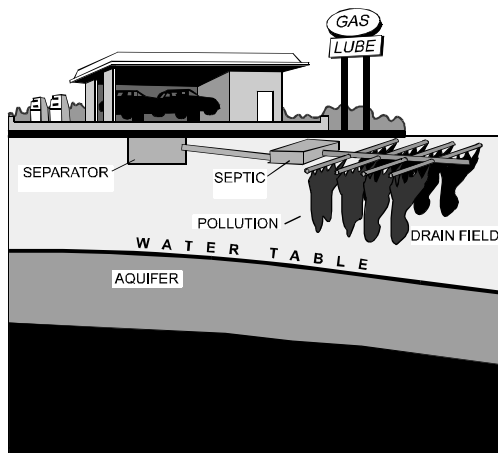
Minnesota
Pollution
Control
Agency

Metro, North
and South
Districts,
Community and
Area Wide
Program

Disposal of Industrial Wastewater and Alternatives

UICP/8-02/July 1999

Underground disposal of commercial and industrial wastewater can cause serious soil and ground-water contamination if not carefully controlled. On-site sewage treatment systems are designed to treat household wastewater and do not provide adequate treatment for the types of contaminants found in commercial and industrial facilities. This series of fact sheets provides an overview of the regulations and restrictions concerning the management, treatment and disposal of industrial wastewater in underground sewage systems in Minnesota. Because of the potential for wastewater to contaminate soil and ground water, the policies and regulations regarding underground disposal systems are strict.



A plumbing system that allows pollutants to enter ground water and soil can cause serious environmental problems.

Hazardous waste disposal

It is illegal in Minnesota to dispose of any hazardous waste through underground discharge, including septic systems and dry wells. All wastes must be evaluated to determine if they are hazardous. Wastes which meet the definition of hazardous waste must be managed in accordance with Minnesota's hazardous waste rules.

Disposal alternatives

A facility owner or operator should consider all alternatives to on-site disposal of non-hazardous industrial wastewater.

Underground disposal should only be considered when all other options are not feasible. The following are some options to underground disposal that facility owners and operators should consider.

Reduce and recycle wastewater

Change processes so that wastes are not generated in the first place. If wastewater is generated, try to recycle as much as possible. By using "pollution prevention" techniques and waste reduction, a facility owner or operator can make changes in a facility to eliminate waste streams or remove problem materials. For technical assistance on waste reduction and recycling, contact the Minnesota Technical Assistance Program (MNTAP) at (612) 627-4646 or toll-free at (800) 247-0015.





Connect to municipal sewer system

The easiest way for an industrial wastewater generator to treat its discharge may be to hook up to the nearest municipal wastewater treatment plant. Industrial facility owners should meet with the local utility to determine if sewage systems can accept their industrial wastewater and if a written application is required. Some industries must receive a permit from the Minnesota Pollution Control Agency (MPCA) or local approval to discharge to a municipal sewer system. For more information on obtaining an MPCA industrial wastewater discharge permit, contact the MPCA at (651) 296-6300 or toll-free at (800) 657-3864.

Connect to a holding tank

Non-hazardous industrial wastewater can be collected and temporarily stored in holding tanks. The kind of tank used depends on the type of wastewater generated.

For information on the types of holding tanks that can be used, refer to fact sheet #3 in this series.

Most often, collected wastewater is transported to a nearby municipal sewer system for treatment. Small amounts of non-hazardous wastewater may also be appropriate for land application. Natural processes in the soil will help to break down the wastewater faster than it would in septic systems. For more information on land application of non-hazardous wastewater, contact the MPCA at (651) 296-7337.

Treat wastewater on-site

A facility owner or operator may purchase equipment to remove certain pollutants and reduce wastewater volume. Devices such as oil/water separators, reverse osmosis systems and waste evaporators can make other forms of waste management more feasible. Waste composition, volume, available capital and operating costs may affect the type of on-site treatment technology that is chosen.

If using treatment devices, care must be taken to ensure that pollutants are captured and treated, and not just discharged into the air. The remaining residue may be hazardous and must be evaluated to determine the appropriate waste management option. For assistance with on-site treatment technologies, contact MNTAP.

Other options

There may be other options for treatment and disposal of non-hazardous industrial wastewater. Some creative options include trading your waste with another business that can use it. Or perhaps municipal solid waste

composting facilities may be interested in using the wastewater as a moisture source in a composting process.

These are just a few ideas. MNTAP has various programs and services available for businesses that want to learn more about pollution prevention options.

On-site underground discharge

If non-hazardous industrial wastewater has to be discharged on-site, it must be one of the following:

- A domestic waste, such as a kitchen or bathroom wastewater;
- Industrial wastewater that meets the Minnesota Department of Health's drinking water standards, such as non-contact cooling water in air conditioning systems; or
- "Greywater" from laundries, restaurants, or from exterior vehicle washing facilities if the following conditions apply:
 - no solvent-based cleaners were used;
 - water cooling and grease traps are used in commercial dishwashers to prevent grease and oil from entering the system; and
 - no engine washing or solvents are used in exterior vehicle washing.

Underground discharges of domestic wastewater from private residences are regulated by local governments. The MPCA advises local governments on domestic wastewater system construction standards. The MPCA is also often asked for input on the design of industrial or greywater systems, and may require additional regulatory controls.

Here are MPCA contacts for more information on various types of wastewater discharges:

- Domestic wastewater systems, (651) 282-6246
- Industrial or greywater systems, (651) 296-5695
- Surface water discharges and National Pollutant Discharge Elimination System (NPDES) permits, (651) 297-1832

All underground discharges of wastes other than domestic sewage must be registered with the United States Environmental Protection Agency (USEPA), and some of these may be required to obtain an USEPA Underground Injection Control permit. The USEPA inventory forms



may be obtained upon request from MPCA at
(651) 296-5695 or directly from the USEPA by calling
(312) 323-4150.

Large quantity treatment

Some larger facilities are choosing to treat their non-hazardous industrial wastewater on-site. They need to obtain a permit from the MPCA if they discharge the wastewater to any type of surface water (please refer to the NPDES contact above).

These facilities should also consider other options. Waste reduction and recycling will decrease the amount of waste a facility needs to treat and dispose of, plus reduce the cost of a treatment system.