



**Minnesota
Pollution
Control
Agency**

This fact sheet is intended to provide guidance to businesses generating any liquid waste that might be discharged to a drain system. Local restrictions may also apply. Contact your local building and sewer-permitting authorities for more information.

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Sewering Liquid Waste

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Most businesses have sinks or floor drains for disposal of liquids. The problem is that not all liquids can be safely disposed of by discharging them into a drain. It is important that every business know the nature of their liquid waste(s) and where each drain goes.

Most shop drains connect to one of the following:

- a municipal sanitary sewer system that is hooked up to a publicly owned treatment works (POTW) that treats the wastewater before discharging it to surface water;
- a storm sewer which discharges directly into surface waters such as lakes, streams or wetlands;
- an on-site treatment device with a National Pollution Discharge Elimination System (NPDES) permit to treat the waste before discharging it to surface water;
- an on-site subsurface disposal system such as a septic system; or
- an on-site sealed, impermeable holding tank or sump from which the waste must be pumped and, depending on the waste's characteristics, taken to a POTW or industrial waste-treatment facility, or land applied.

Each system is designed to handle only certain types of wastes. Discharging a waste that the system isn't designed for can cause the system to fail and/or waste to be discharged directly into soil, groundwater or surface waters.

Occasionally, shop drains are hooked up to a pipe that goes out of the building and illegally discharges directly onto the ground or into surface water. Or, they may drain to a cesspool or drywell that allows untreated waste to seep into the ground and/or groundwater. The resulting environmental damage can lead to very expensive soil and/or groundwater investigations and cleanups and even a significant decrease in property value.

If you are unsure which type of system you have, your city engineer, local zoning official, or local building or sewer-permitting authority may be able to help you. Be aware that being connected to a municipal sewer system does not mean that all drains in your shop are connected to that system. Determine where each drain goes before discharging any waste down the drain.

You must also identify each waste you intend to put down the drain and determine whether or not it is hazardous. Remember to investigate floor washings which may contain diluted hazardous pollutants.

Preventing Problems

There are several steps you can take to prevent problems.

1. Identify the wastes and problematic materials that could potentially be discharged to a drain.



2. Identify where each drain goes.
3. If a drain goes to a subsurface system, seal the drain or use preventative or good housekeeping measures to keep hazardous and inappropriate wastes out of the drain.
4. If approved by the treatment plant, connect all drains to a municipal sewer system connected to a POTW. (You may have local pretreatment requirements to meet.)
5. Look for ways to reduce waste and reuse or recycle waste water — change procedures, train employees, develop and implement spill plans and clean-up procedures, notify trained responders, purchase necessary clean-up equipment, capture liquid spills, etc.
6. Store hazardous materials and wastes away from floor drains. If you cannot, consider curbing the storage area, placing a berm around the drain, or sealing the drain to prevent hazardous waste from entering. You may need approval from local building officials.

Sealing a Floor Drain

1. Open the floor and access the sewer pipe just downstream of the floor drain.
2. Disconnect the floor drain from the pipe connected to it and cap or plug the end of the pipe with fittings approved for this use by the Minnesota Plumbing Code.
3. If your business is located in a town with a population of 5,000 or more, you must have a plumber licensed by the Minnesota Department of Health do the work.
4. Local regulations may require this to be approved by local building officials.

For more information, contact the Minnesota Department of Health.

Municipal Sanitary Sewer Systems

A municipal sanitary sewer system collects wastewater at a wastewater treatment plant — sometimes called a publicly-owned treatment works or POTW. There wastewater is treated and then discharged to surface water or a land treatment

system. Each wastewater treatment plant has discharge limits. Discharge limits restrict the kind and amount of impurities allowed in the treated water and are set low enough to protect surface and ground water from contamination. The operator of the treatment plant is responsible for making sure these limits are met at all times.

Before sewerage any industrial (businesses) waste, you must make sure the waste complies with local sewer ordinances. Local ordinances regulate the kinds and concentrations of pollutants discharged to the POTW. If you are unsure if your waste complies, contact your local POTW operator for help. The operator can determine if the waste is acceptable and if the plant has the capacity to accept the **amount** of waste and the ability to treat the **kind** of waste you intend to discharge. You may have to pretreat the waste or implement pollution-prevention measures in order to discharge.

Pretreatment might include installing settling tanks, sand traps, flammable waste traps, grease traps at restaurants, and/or holding tanks to separate out wastes the POTW cannot accept. Any wastes resulting from pretreatment (such as sludges) must also be managed according to applicable regulations.

Pollution prevention means reducing the amount or toxicity of waste produced. This could be accomplished by changes in your operation or the materials you use in a process. Contact the Minnesota Technical Assistance Program (MnTAP) for more information and assistance in finding ways to prevent pollution for your type of business.

For more information, contact your local POTW operator.

Storm Sewers

Most storm sewers lead directly to lakes, streams or wetlands. For this reason, take care that **no industrial waste is allowed into storm sewers**. If industrial processes take place outdoors, contain the contaminants to prevent them from soaking into the ground and/or being washed into a storm sewer during rain or snow melt.

More than 500 different kinds of businesses need a Storm Water Permit for their industrial activity and a pollution prevention plan that includes:

- a site map;
- a list of potential pollutants stored on site;
- a list of best management practices that reduces or eliminates the amount of pollutants at the site; and
- a list of management and response procedures.

Best management practices may be developed and implemented in the areas of source reduction, containment/diversion and/or treatment. Ways to achieve source reduction include:

- doing preventive maintenance;
- training employees;
- developing and implementing spill prevention and response procedures;
- substituting less toxic chemicals; and
- improving materials management.

Ways to achieve containment/diversion include:

- segregating;
- separating;
- covering;
- berming; and
- diverting flow.

Treatment may include:

- using an oil-water separator;
- installing a storm-water detention pond; and/or
- recycling on or off site.

For more information, contact the Storm Water Runoff Program.

On-Site Treatment Systems Discharging to Surface Waters

All discharges directly to surface water, including those to storm sewers and those that are part of routine maintenance at your business, must have a NPDES permit from the Minnesota Pollution Control Agency (MPCA). The permit specifies to what levels the company must treat its waste before discharging it to surface water. Businesses operating on-site treatment

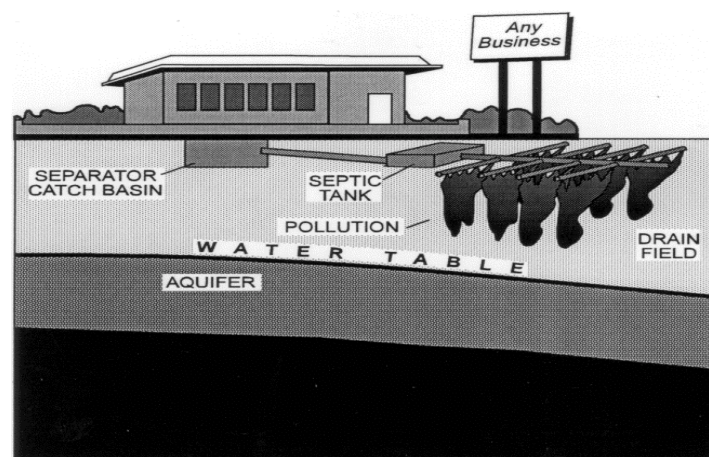
units must maintain them so they work properly. They must also regularly monitor the treated wastewater before discharge. Permits will specify what kind(s) of waste can be discharged to the system and the regulatory levels the treated wastewater must meet before discharge.

For more information, contact the Point Source Program.

On-Site Treatment Systems Discharging to the Land Surface

Businesses that discharge wastes onto the land may need a State Disposal System permit from the MPCA. Examples of land-treatment systems are rapid — infiltration basins, irrigation, or land application of material from holding tanks, etc. Proposals are reviewed on a case-by-case basis to determine feasibility and permit requirements.

To determine whether you need a permit to discharge wastewater to land, contact the Point Source Program.



On-Site Subsurface Disposal Systems

An on-site subsurface disposal system includes any type of treatment system that discharges wastewater below the ground surface. These are designed to treat

domestic wastes — bathroom wastes and wash water from showering and washing clothes and dishes — NOT industrial wastes. Industrial wastes may actually kill the bacteria, rendering the system useless for any waste. For this reason, it is important to keep hazardous and industrial wastes out of this system.

A properly designed subsurface disposal system has:

- a **septic tank** which collects the wastewater, allows solids to settle out, and begins bacterial treatment, and

- a **soil treatment system** (drainfield or mound), to which the wastewater is discharged for further treatment before reaching groundwater.

Because cesspools and drywells do not have a soil treatment system, they are not approved subsurface disposal systems and should not be used for waste disposal.

Some wastes are often inappropriately discharged to subsurface systems and may damage the system or cause environmental damage, resulting in expensive cleanup requirements for your company.



DO NOT discharge these wastes to a subsurface system:

- photo fixer
- rinse water from furniture finishing and refinishing processes
- solvents, oils and degreasers
- high-strength cleaners
- high-solids wastes
- wastes requiring large amounts of oxygen to break down (i.e., antifreeze)
- acids and bases
- water from washing shop towels and rags
- business wastes from beauty shops, mortuaries, auto and collision repair, medical, dental and veterinary operations, animal processing and rendering operations

While occasional and incidental amounts of these wastes may not harm a system, routine disposal over a long period of time is almost certain to result in damage to the system and to the environment resulting in expensive cleanups and/or long-term liability.

The only business wastes that can be successfully discharged to subsurface systems are wastes that meet drinking-water standards (for example, non-contact cooling water) and water from washing the exterior of vehicles, provided no chemicals other than soap are used.

When using an on-site subsurface disposal system, the septic tank must be pumped out periodically to prevent system failure. Septic tanks are usually pumped by septage haulers, and the contents often applied to the land. This practice is acceptable for systems holding

normal domestic waste. Pumped waste from systems to which industrial waste has been discharged must be evaluated to determine appropriate options for disposal. Industrial septage can sometimes be discharged to a POTW; however, permission is needed. Many treatment plant operators are reluctant to accept these wastes because of lack of information available about what is in the wastewater and their plant's ability to properly treat it.

For help on how to determine if your waste can be discharged to an on-site treatment system, contact the Individual Sewage Treatment System Program. For help determining if a waste is hazardous, contact the Business Assistance Unit or your metropolitan county hazardous waste office.

On-Site Sealed Impermeable Holding Tanks

On-site sealed, impermeable holding tanks are designed to simply hold waste. No treatment takes place. When full, the tanks must be pumped and the waste:

- discharged to a municipal sanitary system connected to a publicly-owned treatment works;
- land applied by septage hauler; or
- taken to an industrial waste-treatment plant.

If you plan to use this type of system, you need to know that:

- a municipal sanitary-sewer system may not give permission to discharge waste into their system;
- land application may not be appropriate or legal management and may result in environmental damage and clean-up costs; and
- an industrial waste-treatment plant may not accept the waste if it is mixed with domestic waste.

Before installing a holding tank, be certain that you have an acceptable place to haul the waste after it is pumped.

For more information, contact the Individual Sewage Treatment System Program. For help determining if a waste is hazardous, contact the Business Assistance Unit or your metropolitan county hazardous waste office. To determine if your local municipal sanitary-sewer system will allow holding-tank waste to be discharged into its system, contact the operator.

Cleanup

If you have environmental damage resulting from improper use of a system or a failed system, you will need to hire a consultant and contractor to help you clean it up. Cleanup may involve both surrounding soils and ground water.

There are two types of help available:

1. Under the Voluntary Investigation and Cleanup (VIC) Program, property owners may voluntarily investigate and clean up property with assistance from the MPCA. MPCA staff members set the

standards for a site investigation, review the investigation to make sure it is adequate and complete, and approve cleanup plans. The VIC Program also offers several administrative and legal assurances, which may serve as protection from Superfund liability and as an aid in obtaining financing. Parties entered into the VIC Program are required by state statute to reimburse the MPCA's costs of providing assistance. By using the VIC Program, parties can be confident they have identified the environmental problems on a property and that any cleanup needed satisfies statutory requirements. In the case of petroleum contamination, property owners may be referred to the Voluntary Petroleum Investigation and Cleanup (VPIC) Program. For complete VIC information, call the VIC Program.

2. Low-interest loans are available from the MPCA for small businesses that are required to investigate and clean up contamination from hazardous waste at their business location. Businesses must employ less than 50 full-time staff and must declare an after-tax annual profit of less than \$500,000. The loan will have an interest rate one percent (1%) below prime rate and must be repaid within five (5) years. The loan program is intended to help decrease the financial impact of a hazardous-waste cleanup on small companies.

For complete requirements and more information, call the Hazardous Waste Cleanup Loan Program.

TIPS FOR REDUCING WATER WASTE

Using less water cuts both supply and disposal costs. For best results, make sure everyone in the company understands the changes and is involved in making them work. Here are a few ideas to get you started. Ask employees for others.

1. **Segregate.** Recover liquids as liquids to reuse or recycle. Managing waste separately, (i.e., not mixing it with other waste) may allow you to reuse it in the same process.
2. **Reuse.** Look for opportunities to reuse waste (and other liquids). For example, can rinse water be collected and reused for the first rinse after the process. Will filtering, settling or recirculating the water allow it to be reused? Remember, using rinse waters, chemicals and other raw materials only once adds to purchase costs and waste charges.
3. **Improve efficiency.** Look for ways to do a job more efficiently. Can you rinse using a mist or fog rather than a full stream? Can you clean using higher pressure and less water? Increased efficiency means less water coming in and going out and less cost.

This fact sheet was prepared by the Minnesota Pollution Control Agency Hazardous Waste Division in cooperation with the Water Quality Division, the Minnesota Department of Health, the Minnesota Technical Assistance Program, Metropolitan Council Environmental Services and other POTW operators.

FOR MORE INFORMATION

If you have questions about any of these areas, call the contact given below:

Construction Activity Stormwater Permit Hotline: (800) 657-3804
 Department of Health: (651) 215-0841
 Hazardous Waste Cleanup Loan Program: (651) 297-8378
 Individual Sewage Treatment System (ISTS) Program: (651) 282-6246
 Industrial Stormwater Permit Hotline: (800) 657-3754
 Local Codes and Zoning: Call your city or county offices
 Local Sewer Ordinances: Call your local POTW operator
 Metropolitan Council Environmental Services: (651) 772-7003
 Metro County Numbers:
 Anoka: (612) 421-7063
 Carver: (612) 361-1800
 Dakota: (612) 289-7011
 Hennepin: (612) 348-8100
 Ramsey: (651) 773-4466
 Scott: (612) 496-8473
 Washington: (651) 430-6655
 Minnesota Technical Assistance Program (MnTAP): (612) 624-1300
MPCA Main Numbers: (651) 296-6300 (Call general number and ask for
 program of interest OR call program number) OR (800) 657-3864
MPCA Regional Numbers:
 Brainerd: (218) 828-2492
 Detroit Lakes: (218) 847-1510
 Duluth: (218) 723-4660
 Marshall: (507) 537-7146
 Rochester: (507) 285-7343
 Point Source Program: (651) 296-8711
 Stormwater Runoff Program: (651) 296-6798
 Voluntary Investigation and Cleanup (VIC) Program: (651) 296-7291
 Voluntary Petroleum Investigation and
 Cleanup (VPIC) Program: (651) 297-8600

These related fact sheets are
 available by calling:
 (651) 282-6246

1. Overview of Underground Disposal Control Program.
2. Disposal of Industrial Wastewater and Alternatives.
3. Holding Tanks for Liquid Wastes.
4. Car Wash and Vehicle Maintenance Facilities.
5. Best Management Practices for Vehicle Maintenance Facilities.