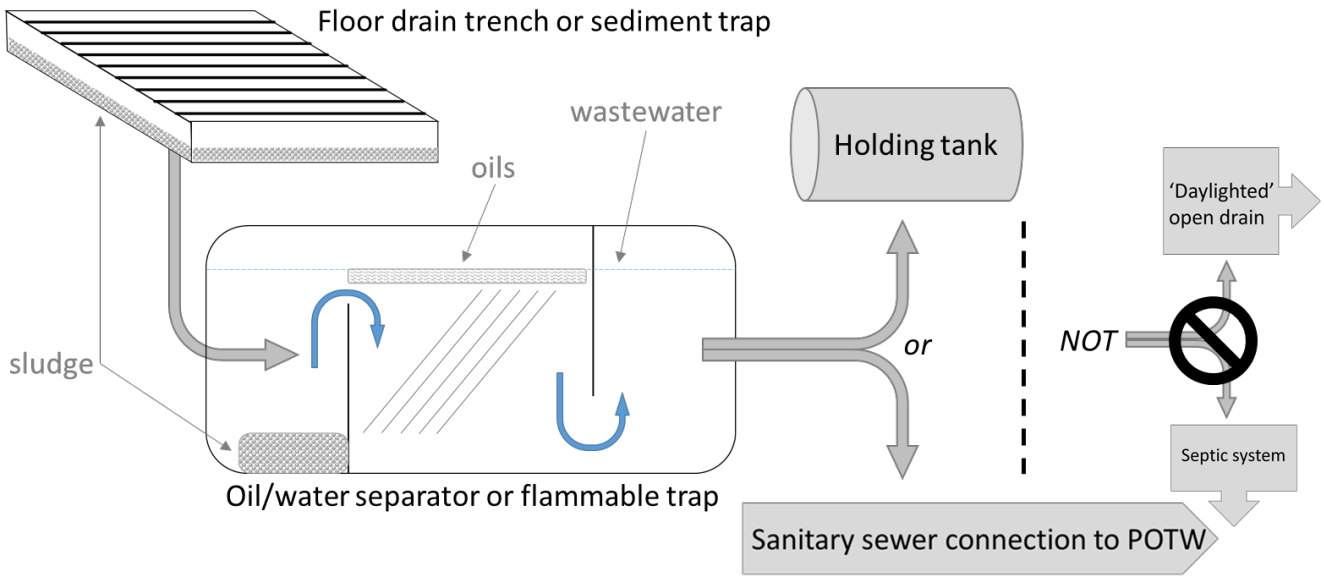
Floor Drains, Separators and Traps, and Holding Tanks

Many businesses that store, fuel, repair, or wash vehicles indoors have floor drains to catch snowmelt and wash water from the vehicles. Floor drains may also be used to collect releases from industrial and manufacturing equipment. The wastes held by floor drains and associated plumbing can present risks to human health and the environment if improperly managed. This fact sheet will discuss the waste management requirements for these wastes administered by the Minnesota Pollution Control Agency (MPCA) and the Metropolitan Counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties).

What types of waste are generated by floor drains?

Floor drains can mix many sources of waste, including wash water, used oil, chemicals, and sediments into a single difficult-to-manage semi-liquid stream. Many floor drain systems include trenches, also known as a sediment trap, and use an oil/water separator, also known as a flammable trap, to segregate these wastes.

Diagram 1: Common parts of floor drain systems



Sludge consists of solids and liquids heavier than water. Sludge may appear to be mainly sand or grit, however it may not be assumed to be clean dirt; it is a solid waste.

Oils consist of the floating liquids that are lighter than water.

Wastewater includes all liquids in your floor drain system after sludges and oils have been removed. Wastewater may appear clear, however it may not be assumed to be clean water; it is a regulated wastewater.

How must floor drain wastes be managed?

Sludge

If you have documented that your site follows the Floor Drain Best Management Practices (BMPs) on page 4, you may assume that your sludge is non-hazardous. You may manage non-hazardous sludge by:

- Dewatering it into your floor drain system and then disposing of the solids as an industrial solid waste. Do not dewater sludge on the ground. Do not use sludge as fill on your site or spread it on the ground. If managing it as a solid waste, place it into your solid waste collection container.

- Sending it off-site as a used oil-contaminated waste. You may mix sludge with other solid used oil-contaminated wastes, such as used floor dry and sorbents. See MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.
- Land applying it at your site or another site. You must follow the requirements in MPCA fact sheet #w-sw4-18, Land Application of Business Traps and Holding Tanks, at https://www.pca.state.mn.us/sites/default/files/w-sw4-18.pdf.

If your site has not followed the Floor Drain Best Management Practices on page 4, you must assume that your sludge is a hazardous waste. See MPCA fact sheet #w-hw1-06, Treat or Dispose of Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf to determine how to manage it.

Oils

You may manage floating oils as used oil. See MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.

If you do not manage the floating oils as used oil, you must evaluate them to determine if they are a hazardous waste. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.

Wastewater

If you follow the Floor Drain Best Management Practices on page 4, you may assume that your wastewater is non-hazardous. You may manage non-hazardous wastewater by:

- Discharging it through a sanitary sewer to a municipal sewage treatment plant, also known as a publicly owned treatment works (POTW). Notify the receiving POTW and comply with any reporting or testing conditions they require.
- Accumulating it in an on-site holding tank before transporting it via truck to a POTW that has agreed to accept the wastewater.
- Land applying it at your site or another site. You must follow the requirements in MPCA fact sheet #w-sw4-18, Land Application of Trap and Holding Tank Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf, unless the wastewater is from a vehicle wash or storage site.

  *If your wastewater is only from a vehicle wash or a vehicle storage site where no vehicle maintenance, including oil changes, is performed, you may instead follow the less stringent requirements in MPCA fact sheet #w-lndapp2-08, Land Application of Vehicle Wash and Vehicle Storage Wastewater, at https://www.pca.state.mn.us/sites/default/files/w-lndapp2-08.pdf.

If your site has not followed the Floor Drain Best Management Practices on page 4, you must assume that your wastewater is a hazardous waste. See MPCA fact sheet #w-hw1-06, Treat or Dispose of Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf to determine how to manage it.

How may floor drain wastes not be managed?

'Daylighted' open drain

The practice of discharging floor drains directly to the ground outside a building, commonly known as 'daylighting', is prohibited in Minnesota for commercial sites and for residential garages used for commercial activities, such as home-based auto repair businesses.

Septic system

Septic systems that receive any commercial or industrial wastes beyond sink, toilet, and cooking wastes are considered Class V injection wells that are closely regulated by the U.S. Environmental Protection Agency (EPA). They are also discharges to the unsaturated zone regulated by the MPCA. Septic systems are also known as subsurface treatment systems (SSTS) or individual sewage treatment systems (ISTS).

EPA Class V injection well regulation

Most Class V injection wells that receive wastewater from floor drains where any motor vehicle servicing or repair is performed, including home-based auto repair businesses, are prohibited, even if the BMPs in this fact sheet have been followed.

Some Class V injection wells that receive wastewater from floor drains where any motor vehicle servicing or repair is performed, but that have been in operation since before 2000 and are not in a wellhead protection area, are allowed, but only if their operators submit well inventories to the EPA, test their discharges, and document that their discharges meet drinking water standards. These standards are extremely difficult for most floor drain wastewater to meet.

Other Class V injection wells that receive any other commercial wastes, including from floor drains at factories, coating operations, and warehouses, are allowed only if their operators submit well inventories to the EPA, test their discharges, and document that their discharges meet drinking water standards. These standards are extremely difficult for most floor drain wastewater to meet.

For more information regarding Class V injection well requirements, visit the EPA at http://www.epa.gov.

MPCA regulation

The MPCA regulates all discharges of business wastes to the ground, other than sink, toilet, and cooking wastes, as discharges of potential pollutants to the unsaturated zone. Discharge of any potential pollutant to a septic system is prohibited if it does not meet drinking water standards. These standards are extremely difficult for most floor drain wastewater to meet.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapters 7035, 7045, 7050, 7060, and 7080 and incorporate regulatory interpretation decisions made by the MPCA in December 1993, and on March 23, 2018. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review applicable Minnesota Statutes and Rules.

For more information, contact your Metro County hazardous waste office or the MPCA. The MPCA's Small Business Environmental Assistance Program can provide free, confidential compliance assistance for many businesses. The Minnesota Technical Assistance Program can assist you with waste minimization and pollution prevention. Report all spills of hazardous waste or other pollutants immediately to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka 763-324-4260
..... https://www.anokacounty.us/
Carver 952-361-1800
..... http://www.co.carver.mn.us/
Dakota 952-891-7557
..... https://www.co.dakota.mn.us/
Hennepin 612-348-3777
..... http://www.hennepin.us/
Ramsey 651-266-1199
..... https://www.ramseycounty.us/
Scott 952-496-8177
..... http://www.scottcountymn.gov/
Washington 651-430-6655
..... https://www.co.washington.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
All offices 651-296-6300
..... https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free 1-800-422-0798
Metro 651-649-5451

Small Business Environmental Assistance Program

Toll free 1-800-657-3938
Metro 651-282-6143
..... https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
..... http://www.mntap.umn.edu

Floor Drain Best Management Practices

If you…	Then…
Are connected to a city sanitary sewer (POTW)	Notify the city's sewage treatment plant (POTW) operator about your floor drain wastes. Comply with any conditions required by the POTW.
Have a septic system at your site	Collect all floor drain waste in a holding tank. Ensure that no floor drain waste is discharged to the septic system or a 'daylighted' open drain.
Use aerosol-dispensed solvents or degreasers	Clean parts over a drip pan, not the floor. Transfer the drip-off from the pan immediately after use to a closed waste container. Manage the waste container as instructed in MPCA fact sheet #w-hw1-05, Accumulate Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf. You may also consider cleaning parts in a parts washer instead of using aerosol-dispensed solvents and degreasers whenever possible.
Change vehicle fluids (motor oil, brake fluid, etc)	Use drip pans under vehicles to collect fluids. Manage motor oil, brake fluid, and transmission fluid as used oil as instructed in MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.
Clean shop floors	Use dry sweeping compounds if needed instead of hosing floors down. Manage used sweeping compounds and other absorbents contaminated with fuels or used oil, such as floor dry, as used oil-related wastes as instructed in MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.
Spill products or wastes	Clean up all spills immediately, even small ones. Maintain appropriate spill control equipment and perform required emergency planning for your hazardous waste generator size. See MPCA emergency planning fact sheets for: Ÿ Very Small Quantity Generators #w-hw1-08a https://www.pca.state.mn.us/sites/default/files/w-hw1-08a.pdf Ÿ Small Quantity Generators #w-hw1-08b https://www.pca.state.mn.us/sites/default/files/w-hw1-08b.pdf Ÿ Large Quantity Generators #w-hw1-08c https://www.pca.state.mn.us/sites/default/files/w-hw1-08c.pdf If you are unsure of your hazardous waste generator size, see MPCA fact sheet #w-hw1-02, Determine Generator Size, at https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf.
Store liquid chemicals, fuels, or oils	Keep containers closed. Ensure all product containers are labeled with their contents. Store flammable chemicals in a fire-resistant cabinet with integral containment.
Store liquid wastes	Keep containers closed. Ensure that no possible leaks could reach your floor drain. Inspect waste containers weekly. Follow all other waste accumulation requirements in MPCA fact sheet #w-hw1-05, Accumulate Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf
Wash vehicles	Post signs prohibiting engine washing by employees and customers. Immediately stop any employee or customer washing engines.