

Land Application of Vehicle Wash and Vehicle Storage Wastewater

Businesses that wash or store vehicles at permanent sites must dispose of the wastewater that is created by the washing process and from rain and snow melt-off. This wastewater can present risks to human health and the environment if improperly managed. Wastewater in Minnesota is regulated by the Minnesota Pollution Control Agency (MPCA).

General requirements, terminology, and management options for vehicle wash and storage wastewater and other wastes collected by floor drain systems are discussed in MPCA fact sheet #w-hw4-18, Floor Drains, Separators and Traps, and Holding Tanks, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-18.pdf>.

Vehicle wash and storage wastewater that is not discharged to a sewage treatment plant (also known as a publicly owned treatment works, or POTW) may be collected in a holding tank for later transport to a POTW or may be land applied under the conditions discussed in this fact sheet. It may not be discharged to a septic system or to a 'daylighted' open drain in Minnesota.

Note: Though certain discharges to septic systems may be allowed by the U.S. Environmental Protection Agency's Class V Injection Well regulations, Minnesota's water quality protections are stricter.

Solids, sludges, and oils from vehicle washing and storage may not be land applied under the allowances in this fact sheet. See MPCA fact sheet #w-hw4-18, Floor Drains, Separators and Traps, and Holding Tanks, at <https://www.pca.state.mn.us/sites/default/files/w-hw4-18.pdf>, for management of these wastes.

Which vehicle wash and storage sites may land apply their wastewater?

You may land apply your vehicle wash and storage wastewater under the allowances in this fact sheet if your site meets all of the following:

- It is an automated or manual vehicle exterior wash, except for livestock truck washes, or is a vehicle storage site at which no vehicle maintenance, including oil changes, is performed. Livestock truck washes may be subject to feedlot or other water quality permits from the MPCA and are not eligible to use the allowances in this fact sheet. See MPCA fact sheet #wq-f5-17, Permitting of Livestock Truck Wash Facilities, at <https://www.pca.state.mn.us/sites/default/files/wq-f5-17.pdf>.
- It is not already subject to a state or federal water quality or waste disposal permit, including a National Pollutant Discharge Elimination System (NPDES), State Discharge System (SDS), or Solid Waste Permit, for any activity other than stormwater.
- It complies with all the conditions in this fact sheet. If you do not follow all the conditions in this fact sheet, you must meet all otherwise applicable requirements of the Minnesota Statutes and Rules. Contact the MPCA to determine your requirements. See [More information](#) on page 4.

What must eligible sites do to land apply their wastewater?

First, calculate the volume of vehicle wash and storage wastewater your site will generate in a year.

If that volume is:

- Less than 50,000 gallons annually, you do not need a permit from the MPCA, but you must follow the [floor drain Best Management Practices](#) (BMPs) on page 5 of this fact sheet, [sample](#) and [characterize](#) your wastewater, land apply it only on [suitable sites](#) at [appropriate loading rates](#), and [keep records](#) of your wastewater management.

- More than 50,000 gallons annually, you must first apply for a SDS Permit from the MPCA. After you apply for an SDS Permit, you may follow the same [requirements as generators of less than 50,000 gallons](#) discussed on page 1 unless you are notified by the MPCA that you must obtain a Permit. To apply for an SDS Permit, submit:
 - MPCA form #wq-wwprm7-03, NPDES/SDS Permit Program Transmittal Form, at <https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-03.doc>; and
 - MPCA form #wq-wwprm7-27, Industrial Land Application of Industrial By-product Application, at <https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-27.doc>.

How must I sample my site's wastewater?

Collect a representative sample of your vehicle wash or storage wastewater from your holding tank. After the initial sampling, you do not need to collect further samples unless your vehicle wash or storage practices change or you make any other substantive changes at your site that could affect the contaminants in your wastewater.

How do I characterize my site's wastewater?

Send your wastewater sample to an analytical laboratory to test it for the criteria in Table 1, Wastewater application criteria, below. You must use a laboratory accredited by the Minnesota Department of Health (MDH), another National Environmental Laboratory Accreditation Program (NELAP) reviewing body, or by another laboratory accreditation program recognized by the MPCA. To identify an MDH-certified laboratory, visit the MDH at <http://www.health.state.mn.us/> or contact the MPCA. See [More information](#) on page 4.

Table 1. Wastewater application criteria

Criteria	Unit
Nitrogen, ammonia	Percent (%)
Nitrogen, Kjeldahl	%, Total
Sodium	mg/L, as Na
Solids	%, Total

Where may I land apply my wastewater?

You or a commercial applicator, sometimes known as a pumper/hauler, may land apply your wastewater at any site that meets all the criteria in Table 2, [Site suitability criteria](#), starting below. The terms used in this table are defined in the Soil Survey published by the Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA). You may also use the Soil Survey to identify the types and permeability of the soil at potential land application sites. You may find an online Soil Survey tool through the NRCS website at <https://www.nrcs.usda.gov/>.

Remember that even if you have other companies transport and land apply your wastewater, you remain responsible that all the conditions in this fact sheet, including site suitability and loading rates, are being met.

Table 2. Site suitability criteria

The site...	Must be...
Slope: <ul style="list-style-type: none"> • when ground is not frozen or snow-covered • when ground is frozen or snow-covered 	6% or less 2% or less
Depth to: <ul style="list-style-type: none"> • Seasonal High Water Table for soils that are not highly permeable • Seasonal High Water Table in highly permeable soil • bedrock for soils that are not highly permeable • bedrock in highly permeable soil 	3 feet or more 5 feet or more 3 feet or more 5 feet or more

Table 2. Site suitability criteria (continued)

The site...	Must be...
Distance from: <ul style="list-style-type: none"> • drinking water wells • residences • nearest surface water when ground is not frozen or snow-covered • nearest surface water when ground is frozen or snow-covered 	200 feet or more 300 feet or more 200 feet or more 600 feet or more
The site must also:	<ul style="list-style-type: none"> • Be clearly identified at the time of application with easily seen markers such as stakes or fence tags to identify the boundaries of the actual land application. • Not include public roads or public right-of-ways. • Not be ponded with rain, meltwater, or wastewater. • Be notified in writing to the county and township of location prior to the initial land application.

What are appropriate loading rates for my wastewater?

Your wastewater may be applied up to the limits listed in Table 3, Loading rate limits.

The loading rate limit for nitrogen is the Maximum Allowable Nitrogen Application (MANA) rate determined by the University of Minnesota Extension (Extension) in publication #BU-06240-S, Fertilizer Guidelines for Agronomic Crops in Minnesota, available through the Extension website at <http://www.extension.umn.edu/>.

Soil textures in Table 3 are based on USDA classifications.

Note: If the land application site already has been issued an SDS Permit, the land application must be supervised by a Type IV certified operator.

Table 3. Loading rate limits

You may apply...	Only up to...
Nitrogen	MANA (see text above)
Sodium	170 pounds per acre per year (lb/acre/year)
Total daily volume per acre: <ul style="list-style-type: none"> • When ground is not frozen or snow-covered: <ul style="list-style-type: none"> • Fine soil texture • (Clay, sandy clay, silty clay, clay loam and silty clay loam) • Medium soil texture • (Loam, silt, silt loam, and sandy clay loam) • Coarse soil texture • (Sand, loamy sand, and sandy loam) • When ground is frozen or snow-covered 	10,000 gallons per acre per day (gal/acre/day) 15,000 gal/acre/day 25,000 gal/acre/day 15,000 gal/acre total over entire period
In addition, your wastewater must:	<ul style="list-style-type: none"> • Be applied evenly over the entire application area. • Not be allowed to run off from the application area. • Stop being applied if ponding begins to occur at the site. • • Be injected or incorporated immediately after application if the: <ul style="list-style-type: none"> • Site is prone to flooding; or • Surface soil horizon permeability rate is less than 0.2 inch per hour.

What records must I keep?

Both you, the transporter, and commercial applicator of your wastewater, if you use them, must keep the following records for at least three years from the last date the wastewater was land applied:

- [Wastewater application criteria](#) from Table 1 on page 2.
- Documentation that each land application site met the [site suitability criteria](#) in Table 2 on page 2.
- Documentation that each land application event met the [loading rate limits](#) in Table 3 on page 3.
- Land application date and total volume.
- Identification of your business where the waste was generated, your transporter, and your commercial applicator, if you use them.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapters 7041 and 7050 and incorporate regulatory interpretation decisions made by the MPCA 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 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.

Minnesota Pollution Control Agency

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

Small Business Environmental Assistance Program

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

Minnesota Duty Officer

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

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	<p>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</p> <p>You may also consider cleaning parts in a parts washer instead of using aerosol-dispensed solvents and degreasers whenever possible.</p>
Change vehicle fluids (motor oil, brake fluid, etc)	<p>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.</p>
Clean shop floors	<p>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.</p>
Spill products or wastes	<p>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:</p> <ul style="list-style-type: none"> • Very Small Quantity Generators #w-hw1-08a https://www.pca.state.mn.us/sites/default/files/w-hw1-08a.pdf • Small Quantity Generators #w-hw1-08b https://www.pca.state.mn.us/sites/default/files/w-hw1-08b.pdf • Large Quantity Generators #w-hw1-08c https://www.pca.state.mn.us/sites/default/files/w-hw1-08c.pdf <p>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.</p>
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	<p>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</p>
Wash vehicles	Post signs prohibiting engine washing by employees and customers. Immediately stop any employee or customer washing engines.