

Managing Floor Drains and Flammable Traps

Waste/Hazardous Waste #4.18 • October 2007

Contents:

| | |
|-------------------------------|---|
| Problem..... | 1 |
| Solution..... | 2 |
| Maintenance..... | 2 |
| Waste Management Options..... | 2 |
| For More Information | 4 |
| BMP Chart | 5 |

Problem

Washing and maintenance of vehicles, machinery, trailers, other equipment and floors could allow a lot of vehicle fluids and other materials into a floor drain — resulting in a three-phase waste (floating oils, dirty water, sludge) collecting in traps that must be evaluated and managed appropriately. Using good housekeeping methods and following the Best Management Practices (BMPs) outlined on page 5 will help to make sure this waste is nonhazardous, making it easier and cheaper to manage.

Businesses discharging industrial wastes to a holding tank or an on-site disposal (septic) system have additional concerns. If discharging to a holding tank, businesses must carefully monitor materials entering the tank to ensure contents can be pumped and land applied or discharged into a wastewater treatment plant (WWTP) system. Do not discharge industrial materials into septic systems as ground-water contamination may occur and result in expensive environmental cleanups.

This fact sheet discusses recommended waste management options for floor drains and flammable traps. Keeping hazardous substances out of drains and plumbing makes trap wastes easier and cheaper to manage.

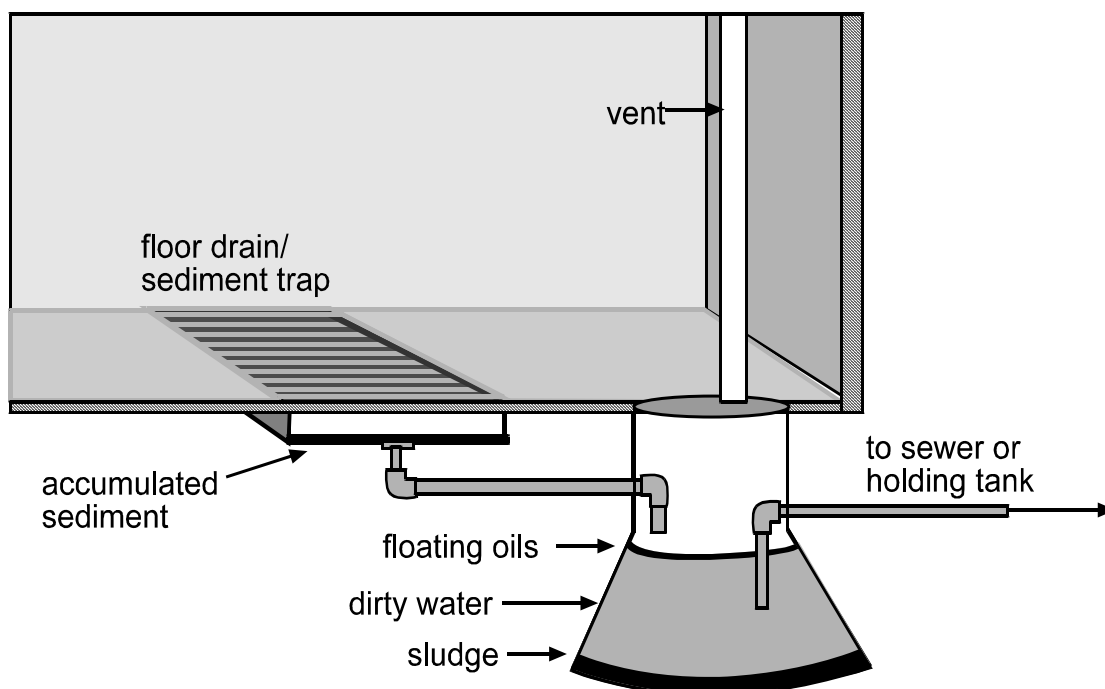


Diagram 1:3-Phase Trap Waste

Solution

Prevention is the best solution! Here are some preventive measures to consider:

- Use good housekeeping techniques and follow the BMP outlined on page 5.
- Follow good storage procedures: Use curbs or berms when possible; consider additional measures beyond those required for insurance purposes.
- Cap drains in storage areas; eliminate them, if possible.

Check with the Department of Labor and Industry Plumbing Program for requirements and recommendations for capping drains (see page 4 for telephone number).

- Prohibit engine and transmission washing in vehicle wash and vehicle repair shops.
- Sweep up nonhazardous solids on the floor and dispose of them in the solid waste. **Hazardous materials should be collected separately and stored following hazardous waste requirements.** For more information about hazardous waste storage requirements, request hazardous waste fact sheet #1.04, *Mark and Store Hazardous Waste Correctly*, from the Business Assistance Unit (see page 4 for telephone number).

Fact sheet can also be found on MPCA Web site at <http://www.pca.state.mn.us/waste/pubs/1-041-05.pdf>

- Use screens in the drain to prevent solids from reaching the trap.
- Use drip pans to collect fluids. Try first to pick up liquids from the floor using a squeegee and dustpan. Combine recovered liquids with waste of the same type. For example, oil spills recovered with a squeegee and dustpan may be placed in the used oil container.

If you cannot collect or recover liquid, use a sorbent material to soak it up. If using sorbent materials, they must be managed in the same way as the waste material they contain. If they contain used oil, for example, they may be wrung and reused, burned for energy recovery or recycled. Disposal of sorbent material in the solid waste is not allowed unless it has been shown to be nonhazardous.

- Prepare and train for emergencies. Have a plan and the necessary equipment in place to quickly clean up a spill before it can escape.
- Design and implement a plan to reduce the amount of slush and snow/sand/salt carried in on tires before parking indoors.
- For more information or help with prevention, contact the Minnesota Technical Assistance Program (MnTAP) (see page 4 for telephone number).

Maintenance

Maintenance is second only to prevention in importance. Traps that are not cleaned regularly may allow oils and other chemicals into a septic system, holding tank or sanitary sewer, resulting in disposal problems and/or environmental damage. Be aware that maintenance of these systems may involve entry into a confined space and require additional employee training and precautions.

Waste management options

If you have not followed the BMPs on page 5, you will need to test the liquid and solid portions to determine whether or not each is hazardous. Test results will determine how to manage each portion. Nonhazardous trap waste may be managed according to the guidance below. Hazardous waste must be managed according to the hazardous waste rules. For more information about hazardous waste management requirements, contact the Hazardous Waste Business Assistance Unit (see page 4 for telephone number).

If you carefully follow the BMPs, the Minnesota Pollution Control Agency (MPCA) allows you to assume the drain and trap wastes are nonhazardous. Here are the options for managing them:

Floating layer

If BMPs are carefully followed, little or no floating oily material should accumulate. If there is a significant floating layer, the MPCA must assume that BMPs were not followed. If a thin floating layer of oil is present:

- Skim or vacuum it off and recycle it with other used oil.

- Use an absorbent pad to remove the oil. Wring and reuse the pad or recycle it with other oil-contaminated sorbent materials by laundering, oil extraction or burning for energy recovery. If these options for managing the absorbent material are not possible, test it for metal and volatile contaminants using the Toxicity Characteristic Leaching Procedure (TCLP). See hazardous waste fact sheet #2.04, *Characteristic Wastes*, for more information. **“Fact sheet can also be found on MPCA Web site at <http://www.pca.state.mn.us/publications/w-hw2-04.pdf>”.** If the material is nonhazardous, it may be managed as an industrial solid waste and sent to a solid waste landfill or burner that can accept it. Check with the landfill operator before shipping.

Liquid layer

Carefully following BMPs will keep levels of hazardous metals and organic compounds below maximum allowable concentrations. Your county solid waste officer and/or local WWTP operator can provide information to help you determine which of the following management options will work best for you:

- If you are hooked up to a WWTP and discharge is approved, you may discharge it to the sanitary sewer. The WWTP may require testing prior to discharge. Check with your local WWTP operator first.
- Nonhazardous liquid wastes discharged to a septic system or holding tank may be managed like domestic septage. A certified septage hauler can pump out the waste and dispose of it at a WWTP or by land application in accordance with an MPCA-approved land application management plan. The WWTP may require testing. Check with your local WWTP operator.
- Send it to a solid waste incinerator or power plant that is able to incinerate it. They may require testing. Check with your county solid waste officer to determine your local options.
- Pretreat it using an appropriate pretreatment unit, such as an oil-water separator, reverse osmosis or activated carbon filter. Treated liquid may then be hauled or discharged to a WWTP, if approved by the plant operator, or land applied in an approved manner. Check with the Solid Waste Section (see page 4 for telephone number) to determine if land application is appropriate. If the liquid waste has been sufficiently treated to meet drinking water standards, it may be able to be discharged to a septic

system outside a well-head protection area. Contact MPCA’s Underground Injection Control Program for guidance (see page 4 for telephone number). For help with pretreatment options, contact your local WWTP.

Sand/sludge

Carefully following BMPs will keep levels of hazardous metals and organic compounds below maximum allowable concentrations. These are your management options:

- De-water and send the sand/sludge to an approved mixed municipal or industrial landfill that is able to accept it. Contact the operator first; they may require testing.
- Incinerate or thermally treat it, only if organic compounds are not halogenated, at an approved facility. For a listing of facilities, contact the MPCA Emergency Response Section (see page 4 for telephone number).
- Some soils can be land treated in accordance with an MPCA-approved management plan. For more information, contact the MPCA Solid Waste Section (see page 4 for telephone number).
- Send de-watered sludge to a mixed municipal compost facility if there is one in your area that will accept it. Contact the operator first.

Liquid and sand/sludge together

If accepted, take or discharge to a WWTP. You must first get approval from your local WWTP operator to discharge.

Three phases together

If the waste is hazardous, or you are not sure whether or not it is hazardous, vacuum it out. Then, ship it with a hazardous waste transporter who meets the U.S. Department of Transportation standards for transportation of hazardous wastes to a permitted hazardous waste disposal facility. *This may require testing; check with your transporter.* You may send this waste to a registered petroleum recycling facility. A list of transporters, recycling facilities and treatment storage and disposal facilities are available from the Hazardous Waste Business Assistance Unit (see page 4 for telephone number).

For More Information

| | | |
|--|--------------|-----------------|
| Department of Labor and Industry Plumbing Program | 651-284-5067 | |
| Minnesota Duty Officer | 651-649-5451 | or 800-422-0798 |
| Minnesota Pollution Control Agency | 651-296-6300 | or 800-657-3864 |
| Emergency Response Section | 651-649-5451 | or 800-422-0798 |
| Hazardous Waste Business Assistance Unit | 651-297-8362 | or 800-657-3724 |
| Underground Injection Control Program | 651-296-7773 | or 800-657-3864 |
| Brainerd Regional Office | 218-828-2492 | or 800-657-3864 |
| Detroit Lakes Regional Office | 218-847-1519 | or 800-657-3864 |
| Duluth Regional Office | 218-723-4660 | or 800-657-3864 |
| Marshall Regional Office | 507-537-7146 | or 800-657-3864 |
| Rochester Regional Office | 507-285-7343 | or 800-657-3864 |
| Metropolitan Hazardous Waste Offices | | |
| Anoka County Environmental Services | 763-422-7063 | |
| Carver County Environmental Services | 952-361-1800 | |
| Dakota County Environmental Management | 952-891-7557 | |
| Hennepin County Environmental Services | 612-348-3777 | |
| Ramsey County Environmental Health | 651-266-1199 | |
| Scott County Public Health | 952-496-8477 | |
| Washington County Public Health and Environment | 651-430-6655 | |
| Minnesota Technical Assistance Program (MnTAP) | 651-627-1300 | or 800-247-0015 |

Pretreatment help:

Contact your local wastewater treatment plant

Best Management Practices for Managing Floor Drains and Flammable Traps

(Post in Shop)

Using these best management practices in your shop will enable you to manage flammable trap waste as an industrial solid waste rather than a hazardous waste.

| If you: | You need to know that: | Best Management Practice: |
|--|---|--|
| Use aerosol solvents or other degreasers | These chemicals can compound waste management problems by contaminating wash water and sludge with hazardous materials. | Clean parts over a drip pan — not on the floor; collect waste. Use a parts washer to clean engine parts and manage the solvent in the washer as a hazardous waste. To prevent contamination of the parts washer by listed* solvents, do not spray listed aerosols over the unit. |
| Change vehicle fluids (oil, brake fluid, antifreeze, etc.) | These chemicals can compound waste management problems by contaminating wash water and sludge with hazardous materials. | Use drip pans under vehicles to collect fluids. Recycle transmission and brake fluids with used oil. Drain radiators before flushing and recycle waste antifreeze. |
| Clean shop floors | Hosing down the floors with water or solvent can flush contaminants into floor drains, contaminating liquids and sludges in the drain system. | Use drip pans to collect fluids. Use dry sweeping compounds. Reuse them as long as they remain absorbent. Combustible sweeping compounds may be burned to heat your shop if burned in an approved burning device. |
| Accidentally spill material | Many materials used in vehicle maintenance may be hazardous and can contaminate other wastes in the plumbing system. | Clean up spills immediately. Notify the Minnesota Duty Officer at 612-649-5451 or 800-422-0798 — if it is a petroleum spill of more than 5 gallons or if it is a spill of any material of any size that impacts soil or water. Have appropriate spill cleanup materials on hand and train employees how to properly use them. |
| Store solvents | Spilled or leaked solvents and their vapors are dangerous and can contaminate other wastes in the plumbing system | Keep containers sealed when not in use. Store solvents in a “flammables” cabinet. Do not use solvents near drains. |
| Store waste vehicle fluids in a room with a floor drain | Spilled or leaked solvents and their vapors are dangerous and can contaminate other wastes in the plumbing system | Keep containers sealed when not in use. Keep waste containers in a separate storage area with no floor drain. Install a curb or berm to contain any wastes that may leak from storage containers. Inspect containers for leaks on a weekly basis. See MPCA Hazardous Waste fact sheet # 2.41, <i>Documenting Container Inspections</i> . |
| Wash engines | The resulting wastewater is likely to be hazardous from greases, oils and solvents. | Only wash engines if absolutely necessary. If you do, separate the resulting wastewater and evaluate it. |

*Solvents on F-list like methylene chloride, methyl ethyl ketone, tetrachloroethylene, toluene and xylene.