

## Dry Cleaners: Wastewater Management

### Background

In Oregon, dry cleaners are prohibited from discharging any solvent-contaminated wastewater from the water separation process of a dry cleaning machine to any sanitary sewer, storm sewer, septic system, boiler or state waters.

This prohibition includes separator water from dry cleaning machines using perchloroethylene (commonly known as perc), petroleum, synthetic hydrocarbons, silicon-based solvent and all other types of dry cleaning solvent.

This fact sheet describes how separator wastewater must be managed at dry cleaner operations. Complying with these requirements is necessary for a business to be eligible to use cleanup funds from the Oregon Dry Cleaner Program's Dry Cleaner Environmental Response Account. The Oregon Department of Environmental Quality manages the program and account.

### Disposing of separator wastewater

If separator water from a dry cleaner operation is hazardous waste, dry cleaners must either ship it to a hazardous waste disposal facility or treat it on site according to state rules. Separator water that makes contact with perc is always hazardous waste.

Even if the separator wastewater is not hazardous, it may not be poured down the sewer, septic system, boiler, or into state waters, and may not be poured on the ground or put in the garbage. It may be managed so it is released to the air provided no visible liquid deposition or accumulation is present and no nuisance condition is created.

### Is cooling water and process water prohibited from discharge into the sewer or septic system?

No. Cooling water and process water that does not come in contact with a dry cleaning solvent may be discharged into the sewer, but permission from your local sewer agency is required.

Wastewater from machines that use water to clean clothes is not subject to the prohibition because the water does not come into contact with dry cleaner solvent. This wastewater should

also be managed according to local sewer agency regulations. Local sewer agencies establish requirements that apply to discharges to the sewer.

### Why can't solvent-contaminated wastewater go down the drain?

A goal of the Oregon Dry Cleaner Program is to prevent further environmental contamination from dry cleaning solvents. Even a small amount of perc in wastewater discharged to concrete sewer lines can leak into the soil through cracks in the sewer line or directly through the concrete. Dry cleaners using the sewer to dispose of their perc-contaminated wastewater may be contributing to perc contamination of soil and groundwater.

### Is solvent-contaminated wastewater a hazardous waste?

Yes, in some cases. Wastewater contaminated with perc is a hazardous waste if the level of perc in the wastewater is 0.70 parts per million or above.

Wastewater contaminated with other dry cleaning solvents may also be a hazardous waste. For example, wastewater containing petroleum solvent is hazardous if it contains 0.50 parts per million of benzene or greater.

Wastewater from new, less toxic solvents may not be hazardous and may have different management requirements than those covered in this fact sheet.

For information on how to determine if your wastewater is hazardous waste, see DEQ's fact sheet, "How to Determine If Your Waste is Hazardous" <http://www.deq.state.or.us/lq/pubs/factsheets/hw/HowToDetermineHW.pdf> or see Oregon Administrative Rule 340-102-0011.

### How can I manage my solvent-contaminated wastewater if it is a hazardous waste?

Dry cleaners have three allowable solvent-contaminated wastewater management options. These options are:

- Drumming the wastewater and shipping it offsite to a hazardous waste facility



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Updated: 4/2013  
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04-LQ-012A

- Managing the wastewater onsite. Wastewater is delivered to the wastewater treatment unit by piping from the dry cleaning machine water separator.
- Managing the wastewater on site via a system in which wastewater is collected in a container and carried to the wastewater treatment unit.

A wastewater treatment unit is equipment that removes solvent from hazardous wastewater to below hazardous wastewater levels and then either evaporates or atomizes the treated water to the outside air as water vapor.

Oregon's hazardous waste rules, Oregon dry cleaner law and the federal Clean Air Act all require dry cleaners to store perc-contaminated wastewater in containers that are always closed unless wastewater is being added or removed. In addition, dry cleaner rules require these containers to be labeled as "Hazardous Waste" and to include the date wastewater was first placed in the container. The container must also be in secondary containment, such as on a containment platform.

Evaporating solvent-contaminated wastewater that is hazardous waste in crockpots, pans or other open devices is not allowed and may disqualify the dry cleaner from the state law's liability protection provision.

Disposal of solvent-contaminated wastewater to the land in any form is not allowed and may disqualify the dry cleaner from the state law's liability protection provision as well.

### **Managing solvent-contaminated wastewater that's a hazardous waste**

Collect solvent-contaminated wastewater in a container, drum it up and ship it offsite as a hazardous waste. The hazardous waste disposal company that currently takes your filters and sludge will likely be able to take solvent-contaminated wastewater. Wastewater handled in this manner **must be counted** toward your hazardous waste generator category and reported as hazardous waste.

Directly pipe solvent-contaminated wastewater to a wastewater treatment unit. In this method, the solvent-contaminated wastewater is directly piped from the water separator on the dry cleaning machine to the wastewater treatment unit. This configuration provides no possibility for the wastewater to spill. Solvent-contaminated wastewater managed this way **does not count**

toward your dry cleaner's hazardous waste generator category.

Collect solvent-contaminated wastewater in a container and carry it to the wastewater treatment unit for treatment. Collect the wastewater in a container such as bucket. Remember that the wastewater bucket must be closed and labeled as "Hazardous Waste" and with the date wastewater was first placed in the container. The container must also be placed in a secondary containment area. The chance of spilling is increased when wastewater is carried and poured into the wastewater treatment unit. Wastewater handled by this method **must be counted** toward your dry cleaner's hazardous waste category and reported as hazardous waste.

### **What type of wastewater treatment units provide onsite treatment?**

DEQ cannot endorse a particular type or brand of wastewater treatment unit, but state rules specify components and performance of these units. (See OAR Chapter 340, Division 124, Section 40, Subsection 2 (OAR 340-124-0040(2)).

Wastewater treatment units must meet the following component and performance requirements:

- **Secondary separator.** A unit must have at least one solvent/water separation settling chamber and at least two stages of filtration to remove remaining solvent from the wastewater. The separation settling chamber allows recovery of any phase-separated or "free" perc that escapes the dry cleaning machine. The free perc settles in the separation chamber and can be retrieved and returned to the dry cleaning machine. This ensures that only wastewater containing no free perc and only trace amounts of solvent is sent to the filters for treatment.
- **Solvent warning alarm and shut-off valve.** A unit must have an alarm or warning device and shut-off valve that alerts the operator to high levels of solvent in wastewater going to the secondary filter. The unit must shut down when the initial filter becomes saturated with solvent.
- **Two filters: initial filter and secondary filter.** From the settling chamber the wastewater must be processed through an initial filter, which does most of the work to remove cleaning solvent from the water. When the initial filter is full of solvent, it must be changed. The solvent warning

alarm should notify the operator when the initial filter is full of solvent. The secondary filter will continue to treat the wastewater until the alarm sounds and the machine automatically shuts itself down. Filters should be changed according to the manufacturer's recommendations or when the machine shuts down.

- **Filter changes.** Once the initial filter is full of solvent, it must be changed. A new filter can replace it, or a secondary filter can function as the initial filter with a new filter used in the secondary position. Filters that have treated perc-contaminated water must be managed as a hazardous waste and should be placed in a hazardous waste drum. Replace filters according to manufacturer guidelines. Log the wastewater filter changes on your Dry Cleaner Compliance Calendar to estimate how long the filters last.
- **Equipment manual.** Keep an operations and maintenance manual for the unit on site at all times.
- **Discharge of treated wastewater.** All units must treat perc-contaminated wastewater to below 0.7 parts per million and discharge that water to the air in such a way that no visible liquid deposition or accumulation is present and no nuisance occurs. Treated wastewater should be discharged as water vapor at a height of at least 8 feet above ground and to the outside of a building. If a unit discharges inside a building, it must be well ventilated to ensure that solvent levels in the air do not exceed Oregon Occupational Health and Safety Administration standards. For more information on OSHA requirements, call OR-OSHA at (503) 378-3272 or 1-800-922-2689.

#### **Other things to remember about treatment units**

- Not all units on the market have all the required components to treat hazardous wastewater.
- Units are designed to manage wastewater containing very small amounts of solvent, not pure solvent.
- Units must be operated and maintained according to manufacturer recommendations and guidelines.
- All units must have a solvent/water separation settling chamber, initial and secondary filters, a monitor that alerts the operator when the initial filter is

saturated, a shut-off valve that automatically shuts down the unit, and safe discharge of treated wastewater vapors outside or to a well-vented area.

#### **Performance requirements for waste treatment units**

If a unit does not have all components previously listed, it may still be used if it meets the following performance requirements:

- Unit meets federal definition of wastewater treatment unit (Code of Federal Regulations 40-260.10)
- Unit is designed to remove free phase dry cleaning solvent.
- Wastewater is treated below hazardous waste levels. To meet this requirement, a dry cleaner must test to see if hazardous waste levels of solvents exist in the treated wastewater.
- Unit will not operate if hazardous waste levels of solvents exist in the treated wastewater.
- Unit's operation and maintenance manual is kept on site at all times.
- Treated wastewater is released to environment in such a way that no visible liquid deposition or accumulation is present and no nuisance condition is created.

Requests for approval of an alternative wastewater treatment unit based on these performance requirements must be submitted to the DEQ in writing.

#### **Who do I call with questions?**

If you have questions about the Dry Cleaner Program, contact Joe Westersund, program coordinator, at (503) 229-6240.

#### **Dry cleaner fact sheets**

Several other DEQ fact sheets explaining the Oregon Dry Cleaner Program are available on DEQ's dry cleaner home page at:

<http://www.deq.state.or.us/lq/cu/drycleaner/>

#### **Alternative formats**

Alternative formats of this document (such as Braille or large type) can be made available. Contact DEQ's Office of Communications and Outreach for more information at (503) 229-5696. Hearing-impaired persons may call 711. Fact sheets are also available in Korean and Vietnamese. Contact Ed Patnode at (503) 229-6783.