



# Domestic Sewage Exclusion

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## Background

In January 1994, the Department of Ecology amended section -071 of the *Dangerous Waste Regulations*, Chapter 173-303 WAC, regarding the Domestic Sewage Exclusion. Before this change, Ecology did not allow any water containing dangerous waste to be discharged to a Publicly Owned Wastewater Treatment Works (POTW), even if the wastewater could be treated by the system. The amended exclusion allows discharge of certain dangerous wastes that are treatable by the receiving POTW.

## The Goal of the Exclusion

The Domestic Sewage Exclusion is designed to:

- protect the environment and human health by permitting only those dangerous wastes that can be adequately treated at a POTW to enter the treatment system,
- provide dangerous waste generators an additional disposal option for wastes that are difficult to manage in any other way,
- minimize the transfer of toxics between environmental media.

## What Dangerous Wastes Qualify Under the Domestic Sewage Exclusion?

Under Chapter 173-303-071 WAC, many wastes that designate as dangerous waste may be eligible for consideration under the domestic sewage exclusion. Before any waste can be discharged into the POTW, it must not exhibit dangerous waste characteristics for ignitibility, corrosivity, reactivity or toxicity (defined in WAC 173-303-090) and must not meet state toxicity or persistence criteria (found in WAC 173-303-100), unless the waste is treatable in the POTW where it will be received. In general, Ecology has found that wastes that are dangerous waste solely because of the state toxicity criteria would likely be treatable in a POTW, (whereas other wastes, i.e., listed wastes, are less likely to be treatable). The dangerous waste determination must be made on the waste stream at the point at which it is generated, before it is mixed with other waste or diluted. Contact the nearest Ecology regional office for information on making these determinations and if the waste is treatable.

The discharger must have a permit from the appropriate authority authorizing the discharge of that specific waste. Before being considered for a permit, pollution prevention measures must be applied to the greatest extent feasible.

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Ecology expects that many wastes will no longer need to be sent to the sanitary sewer after source reduction measures are applied. Permits may take the form of a state waste discharge permit, a general permit, written authorization or best management practices established by the permit authority for that industry.

Dangerous waste generators are responsible for determining whether their wastewater is dangerous waste, and for identifying reduction and recycling options. Ecology offers free assistance in identifying and reducing dangerous wastes through its regional offices.

## Effects on Dangerous Waste Management

The requirements of the Domestic Sewage Exclusion apply to dangerous waste generators of any size, including small quantity generators. The exclusion allows sewerage dangerous waste to be regulated under the state's water quality regulations, rather than the *Dangerous Waste Regulations*, from the point when the wastewater enters the sanitary sewer system. To that point, the wastewater **must** be managed according to the *Dangerous Waste Regulations*.

This exclusion relieves the generator from delivering their wastewater to a permitted dangerous waste treatment, storage, or disposal facility. It also eliminates the process of counting the wastewater **if treatment is not involved** before discharging to the POTW. All other generator requirements found in WAC 173-303-170 through WAC 173-303-230 still apply. If the dangerous waste is treated prior to discharge, treatment must comply with the normal requirements for treatment of a dangerous waste, including treatment-by-generator (WAC 173-303-170) and permit-by-rule (WAC 173-303-802). Untreated wastewater discharged under the Domestic Sewage Exclusion is not counted toward dangerous waste generator status. If you have questions about the on-site treatment of dangerous wastes, contact a hazardous waste specialist at your nearest Ecology office.

## Permit Considerations

Ecology's goal is to promote waste reduction and recycling with the permit applicant before issuing a discharge permit. As part of this effort, applicants will have to determine whether recycling or other waste management options exist, or whether waste reduction is possible through measures such as raw material substitution or process changes. Permit writers may decide not to issue a permit if reduction or recycling is feasible for that wastewater. In concert with this goal, Ecology offers technical assistance through its regional offices to generators who apply for a discharge permit.

If, after reduction, recycling, and pretreatment, an eligible wastewater still designates as a dangerous waste, it must be determined to be treatable at the receiving POTW. The discharge must meet the Clean Water Act pretreatment standards before entering the POTW.

Permit writers will also be concerned with:

- complying with pretreatment standards,
- protecting the health and safety of POTW personnel,
- protecting the treatment plant from upset,

- protecting the collection system from interference,
- preventing pollutants from passing into the receiving waters without treatment, and
- protecting the quality of the biosolids.

## Permit Writers

POTWs with a delegated pretreatment program write discharge permits or letters of authorization for businesses discharging into their system. Generators within the following service areas should contact the appropriate POTW for information about waste discharge permits:

Everett .....	(425) 257-8240
King County METRO .....	(206) 263-3000
Lynnwood .....	(425) 670-8336
Olympia area (LOTT) .....	(360) 753-8219
Pasco .....	(509) 545-3468
Pierce County Utilities .....	(253) 798-5138
Richland.....	(509) 942-7485
Spokane .....	(509) 625-4600
Tacoma .....	(253) 591-5588
Vancouver .....	(360) 696-8008

Ecology's Water Quality Program writes discharge permits for generators who discharge wastewater to treatment systems without delegated pretreatment programs. Contact the appropriate Ecology regional office for information on how to obtain a discharge permit.

## Determining Treatability

The decision of whether a wastewater is treatable, and so eligible for a discharge permit, will be made on a case-by-case basis. For further information on sources of treatability data, see Ecology publication #95-404, *Sources of Treatability Data*.

Treatability of a wastewater depends on both the chemical characteristics of the wastestream and the nature of the receiving POTW. Wastewater treatable in a lagoon system with a detention time of 30 to 60 days or more may not be treatable in a high rate, activated sludge process where the detention time may be only 10 hours. If bench scale tests are performed to assess the treatability of a waste, the tests must be designed to reflect the specific treatment processes at the receiving POTW.

When a dangerous waste enters a POTW, portions of it will be volatilized, concentrated in the biosolids, discharged through the effluent, or biodegraded. For nonmetal waste constituents, only that portion which is biodegraded will be considered to be treated. To minimize the transfer of toxics to the environment, a dangerous waste should be more than 50 percent biodegraded in the receiving treatment plant.

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## Examples

### Antifreeze

Vehicle antifreeze (ethylene or propylene glycol) can be economically recycled. It probably would not be considered for discharge to the sewer.

### Dip Tanks

Many auto shops use hot dip tanks to clean paint and grease from metal parts. These tanks generally use sodium hydroxide as the primary active ingredient. Because of the large variety of toxic constituents, the dip tank waste is usually not considered for exclusion without pretreatment by the generator. When they become spent, the dip tank solutions usually designate as dangerous waste. Because of the high pH and the myriad of constituents that are not strictly state-only toxics, the waste cannot be considered for exclusion.

### Detergent Parts Washers

Some auto shops have replaced their solvent dip tanks with dishwasher-type parts cleaners that use water and detergent to clean parts. The soapy water discharge from these units may exhibit high toxicity, may be slow to biodegrade, and may contain contaminants such as metals, grease, and oils. The waste would have to meet local limits for the discharge of metals, oils, and grease, and the detergent would have to be biodegradable at the POTW. In addition, generators would have to show that they have considered source reduction and recycling options, such as preserving and refurbishing the detergent solution, before a permit would be granted.

### Ethyl Alcohol

An applicant wishing to discharge a dangerous waste containing ethyl alcohol would have to disclose the concentration of the alcohol in the wastewater, and the presence and concentration of any other dangerous constituents which are likely to be in the wastewater after source reduction and all known, available, and reasonable methods of treatment have been applied. Ethyl alcohol is around 85 percent biodegradable in a conventional activated sludge treatment plant. It could be considered for the Domestic Sewage Exclusion, but must also meet other permit criteria such as prevention of treatment system inhibition.

### Acetone

Acetone is a listed waste (F003). It could be considered for exclusion if it exhibits no dangerous waste characteristics or criteria and meets permit requirements.

## Ecology Publications Relating to Pretreatment Permits

### Regulations

*Engineering Reports for Wastewater Facilities*, <http://www.ecy.wa.gov/biblio/wac173240.html>

*State Waste Discharge Permit Program*, <http://www.ecy.wa.gov/biblio/wac173216.html>

*State Requirements for Submission of Engineering Reports and for Industrial Wastewater Treatment Facilities*, <http://www.ecy.wa.gov/biblio/0510014.html>

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## Guidance

General Information About Wastewater Permits, <http://www.ecy.wa.gov/pubs/wqr019.pdf>

Permit Writer's Manual, <http://www.ecy.wa.gov/biblio/92109.html> or order from the Department of Printing, <http://www-application1.wa.gov/printers/storefront.htm>. In particular, Chapter 2 provides an overview of the permitting process; Chapter 3 explains how to apply for a permit; Chapter 4 describes the standards of treatment; Chapter 10 explains the pretreatment program; and Chapter 13 explains how to monitor industrial wastewater.

State Waste Discharge Permit Application (Discharge to POTW), <http://www.ecy.wa.gov/biblio/ecy040177.html> or <http://www.ecy.wa.gov/biblio/ecy040177w.html>

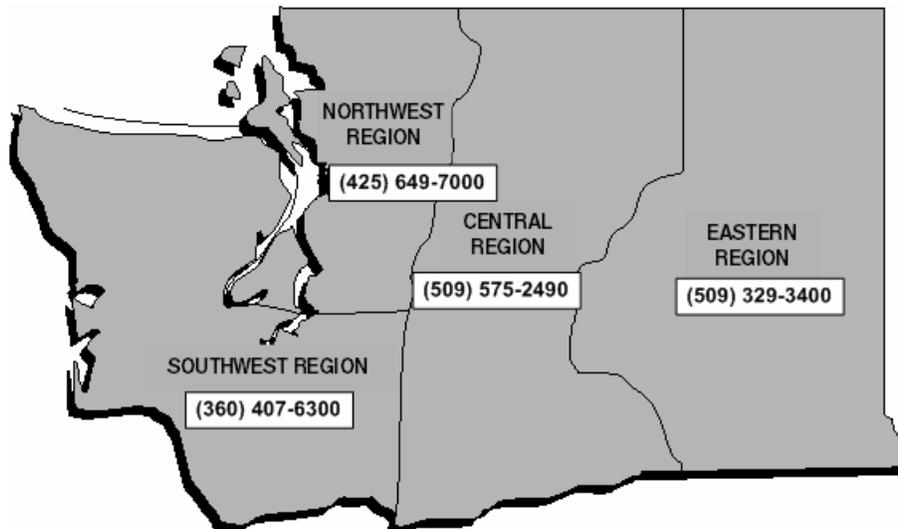
Related publication *Process Mapping* #00-04-007 at <http://www.ecy.wa.gov/biblio/0004007.html>

Available by request:

*State Requirements for Submission of Engineering Reports and Plans for Industrial Wastewater Treatment Facilities* or on the Internet at [http://www.ecy.wa.gov/programs/wq/wastewater/eng\\_rpt-ind\\_fac.pdf](http://www.ecy.wa.gov/programs/wq/wastewater/eng_rpt-ind_fac.pdf)

## For More Information

Contact a hazardous waste specialist near you.



If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.