



# Industrial Wastewater in Oregon

An informational guide about  
discharging wastewater to  
your local municipality or  
sewer agency.

## Acknowledgements

The authors gratefully acknowledge the input and review provided by the members of the Oregon Association of Clean Water Agencies Industrial Pretreatment Committee and the material contributed by Clean Water Services of Washington County, King County Washington, the Cities of Troutdale and Canby, Oregon.

The information in this manual can also be found at the Oregon Association of Clean Water Agencies website at: <http://www.oracwa.org>

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## Troutdale Industrial Pretreatment Contact:



Amy Pepper  
 Environmental Specialist  
 342 SW 4th Street  
 Troutdale, OR 97060  
[apepper@ci.troutdale.or.us](mailto:apepper@ci.troutdale.or.us)  
 503-674-7241  
 503-492-3502 (fax)

## Troutdale Local Limits

Pollutant	Local Limit (mg/L)
Cadmium	0.1
Copper	0.9
Mercury	0.04
Molybdenum	0.4
Selenium	0.4
Silver	0.1
Zinc	3.4
TSS	250
BOD	250
FOG (non polar)	100

Other limits:

\*Discharges of industrial wastewater having a temperature greater than 76.5°F shall be in accordance with the City's Thermal Load Policy.

\*pH: 6-9 standard units

## A final word: The high price of polluting

Managing wastewater properly benefits water quality, the environment, and community health. It's also good for business. Businesses or individuals who illegally discharge substances to the sanitary sewer system must pay for any damages and may be fined up to \$10,000 per day per violation. Companies may also be charged for increased monitoring or may be required to install upgraded equipment. Any business found to be in Significant Noncompliance with pretreatment requirements will have its company name published in a significant local newspaper with a display ad entitled: "Companies Violate Pretreatment Standards." You can prevent most violations and avoid the high cost of polluting. Contact your local Industrial Pretreatment Program staff for assistance and more information.

## Useful contacts:

### Spill Reporting

*Hazardous Spills:*

**Call 911**

*Spills to sanitary sewer or combined sewer:*

**Local Pretreatment Program Staff**

*Spills to storm drains, rivers, lakes, or streams:*

**Oregon Emergency Response Systems (OERS)  
1-800-452-0311**

### Hazardous Waste

*DEQ:* [hw@deq.state.or.us](mailto:hw@deq.state.or.us)

### Solid Waste and Recycling

*Metro:* **503-234-3000**

*Outside Clackamas, Multnomah, or Washington Counties:*  
**1-800-RECYCLE**

## Table of Contents

A Clean Water Connection	5
Oregon's Industrial Pretreatment Program	5
How the Wastewater System Works	5
Guidelines for Businesses Discharge Industrial Wastewater	7
Discharge Limits	9
Federal Categorical Pretreatment Limits	10
Local Limits	10
Industrial Wastewater Sample Collection	12
Industrial Wastewater Discharge Permits	12
Important Acronyms	13
A Final Word: The high price of polluting	14
Useful Contacts	14
Troutdale Pretreatment Contacts	15



## Industrial Wastewater Discharge Permits Continued.....

### ***Sampling requirements***

The permit must include the following sampling requirements: sampling location, pollutants to be monitored, sample collection method, monitoring frequencies, analytical method based on Federal, State and local law.

### ***Reporting requirements***

The permit must contain the following information about reporting: **what** type of information is to be included in each report; **when** each report is to be submitted; **who** is responsible for signing the reports; and **where** the reports are to be submitted (address and name of person responsible for receipt of each report, if applicable).

### ***Notification requirements***

The permit must contain information about various notification requirements including, but not limited to, the following: 24-hour notification of violation, reports of changed conditions; reports of potential problems.

### ***Record-keeping requirements***

Requirements to retain all records of information relating to monitoring activities for at least three years shall be included in the permit.

### ***Statement of applicable civil and criminal penalty for violations***

Permits must contain enforcement provisions that define what actions a municipality/sewer district may use to ensure an industry complies with permit requirements. Enforcement provisions may include enforcement proceedings, fines, penalties, civil and criminal liability, recovery of costs incurred by the POTW, and publication of the industry's name in the newspaper, to name a few.

## Important Acronyms

DEQ	Oregon Department of Environmental Quality
EPA	US Environmental Protection Agency
SIU	Significant Industrial User
POTW	Publicly Owned Treatment Works
IU	Industrial User

## Industrial wastewater sample collection

Prior to discharging industrial wastewater to the sewer system, your business may need to have a representative sample of the wastewater analyzed and the results presented to the local municipality/sewer district's Industrial Pretreatment Program before obtaining discharge approval. Contact your local Industrial Pretreatment Program for guidance on approved sampling and analysis methods.

In some municipalities/sewer districts, the local industry is responsible for installing and maintaining a flow meter and sampling site. Check with your local municipality/sewer district for design criteria and construction standards for sampling sites.

## Industrial Wastewater Discharge Permits

Industrial user (IU) wastewater discharge permits authorize the discharge of wastewater to a POTW in accordance with permit conditions. A wastewater discharge permit is effective for a limited period of time, not to exceed five years, and is revocable by the issuing authority at any time for just cause. In addition, the municipality/sewer district's sewer use ordinance includes a provision prohibiting the discharge of industrial wastewater from an SIU without a current wastewater discharge permit.



A wastewater discharge permit describes, in a single document, all of the duties and obligations of the permittee including all applicable pretreatment standards and requirements. At a minimum, wastewater discharge permits include the following:

### **Statement of duration**

Duration shall not exceed five years.

### **Effluent limitations**

Effluent limits are based on applicable federal pretreatment standards or local limits, whichever is more restrictive. See discussion about discharge limits on page 7.

### **Self-monitoring requirements**

Requirements for industrial user to routinely monitor discharge. Alternatively, the municipality/sewer district may provide monitoring and charge the IU for the cost of the service.

## A Clean Water Connection

When businesses properly dispose of wastewater, state and local communities benefit from cleaner water and reduced wastewater treatment costs. This brochure provides you with general guidelines for discharging industrial wastewater to the Publicly Owned Treatment Works (POTW) in the state of Oregon, served by local sewer districts or municipal treatment facilities. Our goal is to help you conduct business and comply with regulations.



## Oregon's Industrial Pretreatment Program

The Oregon Department of Environmental Quality (DEQ) has delegated authority for the state's industrial pretreatment regulations to local municipalities or sewer districts to administer regulation of local businesses that discharge industrial wastewater to sewage treatment plants throughout the State. Program activities include administration of wastewater discharge permits, inspections, enforcement, sample collection to determine compliance, and collection of surcharge and monitoring fees, if applicable. Routine monitoring is conducted within the individual municipalities/sewer districts to trace discharges that could harm workers or disrupt treatment plant operations. Pretreatment program staff also work with businesses to help them identify and employ pollution prevention practices.

## How the Wastewater System Works

### *What is industrial wastewater?*

Industrial waste is a generic term for any waste material (solid, gas, or liquid) generated by a commercial, industrial, or nonresidential activity. The Industrial Pretreatment Program focuses on companies that discharge wastewater during manufacturing, remediation, cleaning, or rinsing processes. This waste differs from residential household wastewater which includes *domestic sewage* from toilets, showers, washing machines, and other household-related activities.

### *What is hazardous waste?*

Hazardous waste is a federal and state designation for waste material that is toxic, flammable, corrosive, reactive, or may otherwise negatively impact the POTW; these wastes require special handling and treatment at a licensed treatment, storage, disposal facility (TSDF). Hazardous waste can be discharged to the sewer system only with written authorization from the local Industrial Pretreatment Program. For information on how to manage and dispose of your hazardous waste, visit the DEQ website for the Oregon Hazardous Waste Program at <http://www.deq.state.or.us/lq/hw/index.htm>, or e-mail DEQ directly with questions at [hw@deq.state.or.us](mailto:hw@deq.state.or.us).

### *How is wastewater treated?*



Within the state of Oregon, municipal sewage treatment facilities are designed to treat domestic sewage and other waste through a process known as secondary treatment. The facilities send organic material through a series of skimmers, screens, and sedimentation tanks and

then subject it to microbial breakdown. Microbial breakdown uses “bugs” to convert organic material to harmless by-products which settle and are removed from the wastewater. Some municipal sewage treatment facilities also remove nutrients, such as ammonia nitrogen and phosphorous. Heavy metals and some chemicals cannot be broken down by a biological process, or may be toxic to the “bugs”, and cause interference at the plant or pass through the treatment process into the receiving water.

### *What are biosolids?*

Biosolids is the name for solids produced during the treatment process at a the wastewater treatment facility. Biosolids, like treatment plant effluent, must meet federal quality standards in order to be recycled in a beneficial manner. Most municipalities/ sewer districts in Oregon either use compost facilities to manage biosolids or reuse the biosolids as a soil conditioner on farm and forest lands.

In addition to local limits listed on page 7, municipalities/sewer districts have specific discharge prohibitions including prohibitions to discharge substances or wastewater containing the following pollutants:

#### ***Corrosive Substances (pH)***



Wastewater with a pH either above or below permitted levels can damage sewer lines and disrupt treatment plant operations. It can also react with other substances in the sewage to create noxious fumes.

#### ***Flammable or explosive materials***

Sewer lines have been known to explode, causing severe damage to people and property as a result of explosive or flammable materials entering the sewer. To prevent this, certain pollutants are prohibited from being disposed in the sewer system. Prohibited pollutants include, but are not limited to: gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, peroxides, or any other substance the local municipality/sewer district, fire department, EPA or State recognizes as hazardous to the POTW.



#### ***Organic Compounds***

Organic compounds such as solvents, cleaners, thinners, pesticides, and laboratory chemicals may cause toxic gases and fumes in sewer lines. Discharges of products or compounds that may affect worker safety or cause health problems are prohibited.

#### ***Solids and food waste***

Solids cable of settling can restrict or block flow in sewer lines. Restricting the capacity of a public sewer line is prohibited by federal law.

#### ***Other prohibited discharges***

**Contact your local Pretreatment Program Staff for a complete list of prohibited discharges.**

### Federal Categorical Pretreatment Limits

The federal government has established discharge limits for specific activities, or categories. The following is a **partial** list of industries considered “categorical dischargers.” These companies require a wastewater discharge permit regardless of wastewater discharge volume.

Aluminum forming, Metal foundries, Battery Manufacturing, Nonferrous metal manufacturing, Coil coating, Pesticide manufacturing, Copper forming, Petroleum refining, Electrical/electronic components, Pharmaceutical manufacturing, Electroplating, Circuit board manufacturing, Porcelain enameling, Iron/steel manufacturing, Pulp/paper mills, Leather tanning finishing, Wood preserving, Metal finishing, Inorganic chemical manufacturing, Centralized waste treatment.



### Local Limits

Local limits are established for each specific municipal wastewater treatment facility depending on the capacity of the treatment facility, and are established to protect the municipal treatment process, quality of the biosolids, and worker health and safety. Typically, these local limits apply to Significant Industrial Users that discharge industrial process wastewater to local sewer systems. In some municipalities/sewer districts, local limits apply to all non-domestic discharges, and are not limited to significant industries. Contact your local municipality/sewer district to obtain the specific local limits that apply to your business. Below is a list of pollutants that may be subject to local limits:

#### **Metals and cyanide**

Heavy metals in excess of the permitted limits can upset or disable treatment plant operations. Heavy metals can pass through the treatment facility and be discharged to the local rivers and/or lakes or may accumulate in the biosolids.

#### **Fats, Oils, and Grease (FOG)**

FOG from petroleum, mineral, or non-biodegradable cutting oil origin (non-polar FOG) can harm the biological treatment process. FOG of animal or vegetable origin (polar FOG) can congeal and block sewer lines.

### *What is the difference between combined and separated sewers?*

Separate from the sewage system, a storm drainage system is a drain line, usually gravity flow, that transports stormwater to the nearest body of water, typically *without* any treatment. Because of this, it is extremely important to keep contaminants out of storm drains.

Most of the municipalities/sewer districts in Oregon have separate storm and sanitary sewer drainage systems. However, some areas of the state mix stormwater with sewage in a “combined sewage system”. Combined waste is treated at specific treatment plants. All discharges to a combined system must meet local discharge limits.

### *What is wastewater pretreatment?*

Municipal sewage treatment plants are designed to break down and treat biological wastes. Wastewater pollutants such as heavy metals and oils will not break down in the treatment plants; therefore, certain businesses need to treat their wastewater *before* discharging to the sewer. The pretreatment system, such as oil/water separation, chemical precipitation, or filtration, will depend on the type and concentration of pollutants in the wastewater. If you discharge industrial wastewater (not including toilets), you may be required to pretreat that wastewater and get approval from the Industrial Pretreatment Program before discharging or connecting to the sewer.



### **Guidelines for Businesses Discharging Industrial Wastewater**

#### *How does my business obtain approval to discharge?*

Prior to discharging industrial wastewater to the sewer, all dischargers who generate and dispose of industrial wastewater (not including toilets) should contact the local Industrial Pretreatment Program. Potential dischargers will be sent a permit application package if a written discharge approval is necessary.

### *How much advance notice must be given to discharge industrial wastewater?*

The time it takes to obtain a permit depends upon the type and amount of wastewater a company proposes to discharge to the sewer. There are two types of standards and limitations (Federal Pretreatment Limit and Municipal Local Limits) that apply to a company's discharge. See page 7 for a partial list of federally regulated industries. Some approvals for very low-volume or one-time discharges can be made verbally or by letter.

For federally regulated discharges by Significant Industrial Users (SIUs), you must apply for a permit 90 days prior to discharge. Typically, significant industries meet one or more of the following conditions:

- The facility discharges more than 25,000 gallons a day of process wastewater.
- The facility includes a federally identified categorical process (see page 7).
- The facility discharges 5% or more hydraulic or organic load to the municipal sewage treatment system.
- The facility has the potential to cause upset or pass through the municipal sewage treatment process.

### *What are the types of approvals?*

The Industrial Pretreatment Program issues several types of discharge approvals. These may include permits, discharge authorizations, discharge letters, and verbal approvals. The type of approval is established by the local municipality/sewer district, and is determined by the volume discharged, the nature of the business, the characteristics of the wastewater, and the potential risk to the municipal sewage treatment facility. A permit is required if you meet any of the criteria listed above for Significant Industrial Users.



### *What fees does the Industrial Pretreatment Program charge?*

A fee may be associated with the application, issuance, compliance management, and renewal of Wastewater Discharge Permits, Discharge Authorizations, and Letters of Authorization. These fees are over and above the base sewer fees charged by the local municipality/sewer district.

Some municipalities/sewer districts in Oregon also have a Surcharge program. The Surcharge Program charges industrial and commercial facilities that discharge wastewater having Total Suspended Solids (TSS) in excess of a base rate (set by that particular municipality/sewer district) and/or a Biological Oxygen Demand (BOD). These fees are to pay for the costs of treating this high-strength wastewater.

The fee structure associated with the Industrial Pretreatment Program is specific to each local municipality/sewer district. For more information on fees, contact your local Pretreatment Program Staff.

### **Discharge Limits**

There are two types of limits that may apply to your business: local limits and federal categorical pretreatment limits. Local limits are usually concentration-based standards and apply at the point where wastewater is discharged from the treatment process. If no specific treatment process is used, local limits apply at the end of pipe. In addition to local limits, some businesses are subject to federal pretreatment regulations which may be stricter than the local limits. If your business falls in the industrial categories listed on page 7, you are subject to these federal pretreatment regulations, in addition to local limits. Categorical pretreatment standards apply at the end of process. If you are subject to the federal pretreatment regulations and a local limit, the more stringent limit or applicable pretreatment standard will apply.