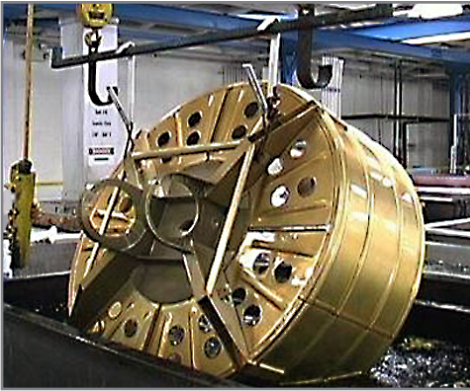


# Summary of National and State Industrial Pretreatment Programs Fact Sheet

Oregon Association of Clean Water Agencies



The U.S. Congress created the national pretreatment program in 1972 as part of the Clean Water Act (CWA) to protect the nation's wastewater treatment plants and waterways from discharges of toxic and other pollutants. The term "**industrial pretreatment**" refers to the requirements that industries discharging excessive pollutants treat their wastewater before releasing it to local municipal sewer systems.

The objectives of the industrial pretreatment program are:

- To protect municipal wastewater treatment systems, referred to as Publicly Owned Treatment Works or POTWs, from interference caused by industrial wastes,
- To protect the nation's waters from industrial pollutants that pass through POTWs untreated, and
- To provide for the beneficial use of POTWs wastewater biosolids (solid material generated from wastewater treatment) as soil conditioners and fertilizers.

The Oregon Department of Environmental Quality (DEQ) received authority from the US Environmental Protection Agency (EPA) on March 12, 1981, to regulate pretreatment programs

in Oregon. DEQ, as the pretreatment program approval authority in Oregon, administers its pretreatment program through the National Pollutant Discharge Elimination System (NPDES) permit program. The Clean Water Act requires any wastewater discharged through a pipe to the nation's waters—such as discharges from manufacturing facilities or POTWs—to secure an NPDES permit.

## Who is subject to these regulations?

All businesses, including industrial, commercial, and government establishments that discharge process wastewater (non-domestic wastewater) are subject to the requirements of the General Pretreatment Regulations (40 Code of Federal Regulations Part 403). For most businesses, this means they must not discharge anything that will adversely affect the sewage system or its workers, or the sewage treatment process including the quality of biosolids generated from wastewater treatment.

For those businesses that discharge significant amounts of toxic pollutants, or other pollutants in amounts that could potentially be detrimental to the POTW, expanded regulations are necessary. The

Pretreatment Program classifies these businesses as **Significant Industrial Users (SIUs)** who are required to limit or treat discharges to environmentally acceptable levels. The types of tools used by municipal wastewater treatment plant utilities to limit industrial discharges can include:

- Business-specific industrial wastewater discharge permits with numeric discharge limitations including self-monitoring and reporting requirement; or
- Requiring the use of Best Management Practice (BMPs) to reduce pollution in lieu of numeric limitations.

## What businesses are classified as SIUs?

The federal pretreatment regulations apply to all businesses who engage in operations identified as "categorical" processes by the EPA. These businesses are automatically considered SIUs. Examples of categorical process include electroplating, metal finishing, semiconductor manufacturing, battery manufacturing, and a number of other activities. EPA has established "categorical standards" for these

processes, which limit the quantities of various pollutants that can be discharged to the sanitary sewer system. Categorical standards are national standards, and all businesses in the U.S. engaged in the same categorical processes are subject to the same standards.

Other businesses that would also be classified as SIUs depending on the specifics of the wastewater utility that receives their wastewater include:

- A business or industry that discharges 25,000 gallons per day or more of process wastewater,
- A business or industry that contributes 5 percent or more of

the dry weather hydraulic or organic capacity of the treatment plant, or

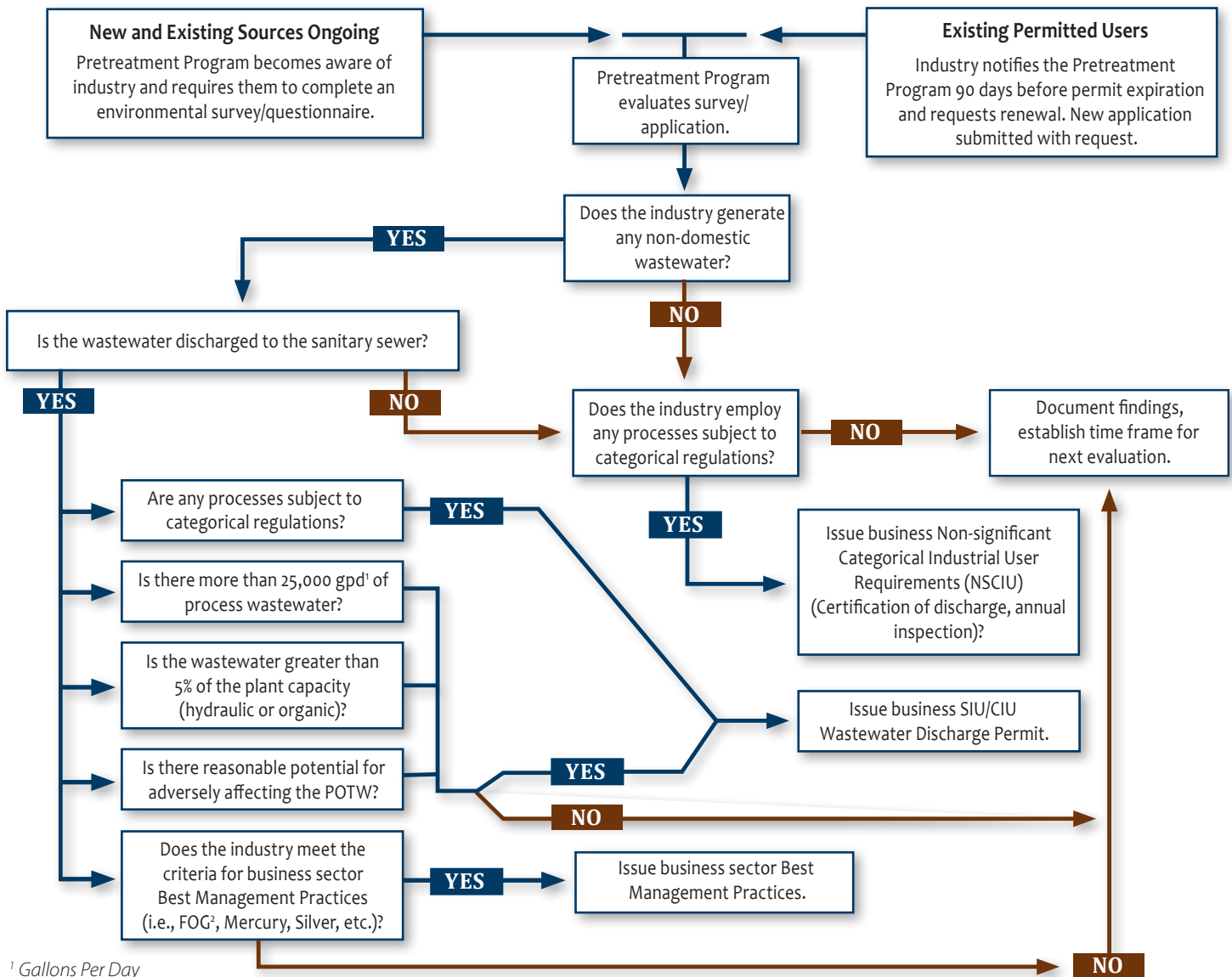
- Any business that has the reasonable potential to adversely affect the POTW's operation or for violating any pretreatment standard or requirement. Refer to Figure 1 for a visual description of industrial permitting evaluation.

In addition to Categorical Pretreatment Standards, local wastewater utilities have the authority to develop local limitations to address community - specific needs to protect the municipal treatment process, ensure high biosolids quality, and safeguard worker health and safety.

Local limits are technically-based, legally defensible, and enforceable just like national categorical pretreatment standards. Typically, these local limits apply to SIUs that discharge industrial process wastewater to local sewer systems. In some municipalities, local limits apply to all non-domestic discharges, and not limited to significant industries.

SIUs are required to install facilities to treat their wastewater prior to discharge to the sanitary sewer system in order to comply with applicable pretreatment standards. Typically, SIUs must conduct monitoring of their discharge and report

### Flow Chart Evaluation for Permit Issuance



<sup>1</sup> Gallons Per Day  
<sup>2</sup> Fats, Oil and Grease

these results to the POTW to prove compliance with applicable regulations. Local businesses and industries that fail to comply are subject to escalating enforcement with the possibility of monetary penalties, judicial enforcement actions, and termination of sewer service.

### Oversight of the Pretreatment Program

Municipalities with approved Pretreatment Programs in Oregon provide legal oversight of industrial discharges, typically through a Pretreatment Ordinance (or Sewer Use Ordinance). The ordinance and approved pretreatment program manuals provide authority and procedures for a municipality to:

- Receive and evaluate waste discharges;
- Inspect facilities;
- Require control mechanisms (discharge permit, BMPs, etc.);
- Require monitoring;
- Require pretreatment devices;
- Require submission of slug discharge and other pollution prevention plans; and
- Enforce when noncompliance is found.

### Successes of the Pretreatment Program

EPA's National Pretreatment Program has led the way to dramatically reduce or eliminate discharges of pollutants to sanitary sewer system and to the nation's water bodies. Along with other CWA initiatives, the National Pretreatment Program has helped create a partnership involving approximately

### Approved Pretreatment Programs in the State of Oregon

City of Albany	Metropolitan Wastewater Management Commission – City of Springfield
City of Canby	City of Newberg
Clackamas Co. Service District #1 (Water Environment Services)	City of Portland
Clean Water Services (Durham, Forest Grove, Hillsboro, Rock Creek)	Roseburg Urban Sanitary Authority (RUSA)
City of Corvallis	City of Salem
City of Dallas	City of St. Helens
City of Grants Pass	City of The Dalles
City of Gresham	Tri-City Service District (Water Environment Services)
City of Klamath Falls	City of Troutdale
City of McMinnville	City of Wilsonville
City of Medford	City of Woodburn
Metropolitan Wastewater Management Commission – City of Eugene	

1,500 communities and 27,000 industrial facilities. This partnership is the model example of intergovernmental cooperation. These industries and their local communities are in partnership to cooperatively meet the following achievements:

- Maintaining and restoring watershed quality, at a much lower cost than upgrading treatment capabilities
- Encouraging pollution prevention, source reduction, and product substitution
- Increasing beneficial uses of biosolids as soil amendments and fertilizers
- Preventing formation of dangerous conditions such as toxic vapors and depleted oxygen levels within the POTW and the collection system
- Continuing to meet evermore restrictive municipal wastewater discharge standards
- Protecting the sewer infrastructure and water quality by instituting emergency-prevention measures such as accidental spill prevention plans
- Reducing sanitary sewer overflows caused by grease blockage through the implementation of Fats, Oils, and Grease (FOG) programs at restaurants and other food service entities
- Extending the life of the nation's wastewater infrastructure, which has an estimated funding gap of over \$6 billion per year, through controls on corrosives and pipe-damaging liquids



## Oregon Association of Clean Water Agencies (ACWA) Members Receiving National Recognition

For the past 22 years, EPA has honored outstanding achievements in the wastewater and stormwater business through its Clean Water Act Recognition Awards. Oregon communities routinely compete well for these national awards. Past winners have included:

YEAR	COMMUNITY	PLACE
<b>Operations &amp; Maintenance Awards</b>		
<b>Large Advanced</b>		
2007	Clean Water Services – Rock Creek	1st
2006	Clean Water Services – Rock Creek	1st
2005	Clean Water Services – Durham	1st
1992	City of Medford – Vernon Thorpe	2nd
<b>Medium Advanced</b>		
1994	Clean Water Services – Hillsboro	2nd
<b>Operations &amp; Maintenance Awards (continued)</b>		
<b>Small Secondary</b>		
1990	Odell Sanitary District	1st
<b>Exemplary Biosolids Management</b>		
<b>Large Operating Projects</b>		
2004	Clean Water Services – Hillsboro	2nd
2000	Clean Water Services	2nd
1999	City of Portland	2nd
<b>Small Operating Projects</b>		
2002	City of Hood River (OMI)	1st
2001	City of Gresham	1st
<b>Special Recognition</b>		
1999	ACWA and Oregon State University	
<b>Pretreatment</b>		
<b>21 – 50 SIUs*</b>		
2001	Clean Water Services	1st
1998	Metropolitan Wastewater Management Commission/Cities of Eugene and Springfield	2nd
1996	City of Salem	1st
1995	Unified Sewerage Agency (Clean Water Services)	1st
<b>6 – 20 SIUs</b>		
2005	City of Wilsonville	1st
<b>0 – 10 SIUs</b>		
2006	City of Corvallis	1st
1999	City of Wilsonville	1st
<b>Combined Sewer Overflow Management</b>		
2000	City of Corvallis	2nd

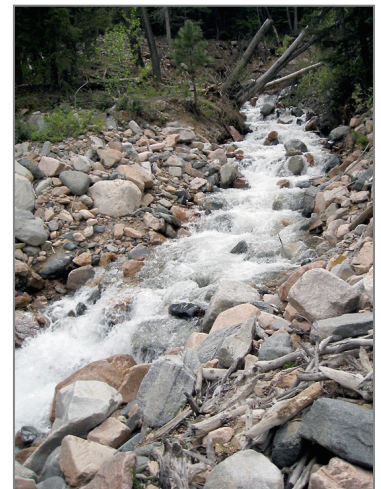
\* Significant Industrial User.

## Future Challenges

The Pretreatment Program must evolve to face tough new challenges in protecting public health and the environment. Some of these future challenges include:

- **Focusing on pollution prevention.** Local wastewater utilities are on the front line in working with businesses and industries to promote pollution prevention and product substitution for effective pollution treatment. More tools and technical assistance is needed - - especially from EPA - - on pollution prevention.
- **Addressing emerging industries and pollutants.** Every year, new industries and new pollutants of concern challenge POTWs. Challenges include EPA's ability to keep pace with the constant shifting industrial processes and the development of new industries and chemicals.
- **New effluent guidelines** to control highly variable and highly toxic waste streams from sources such as steam electric power generation or the health care industry.
- **Water conservation and reuse.** Industries and municipalities have a growing understanding of the economic benefits of using water more efficiently. Effluent waters from POTWs are increasingly used for irrigation and for cooling in power generation and industrial processes. The high quality waters needed for these uses emphasize how important pretreatment is to the growing area of water reuse and conservation.
- **Improving watershed quality through Total Maximum Daily Loads (TMDLs).** TMDLs are established to ensure that waters of the U.S. meet their intended uses, such providing recreation and as drinking water supplies. State and local pretreatment personnel are increasingly called upon to provide expertise in developing appropriate TMDLs and community-based strategies. These individuals are aware of the contributions from industrial pollutants within the local watershed and sewer-shed, and can share their knowledge of how to implement pollutant limits while pursuing complex watershed-based solutions.

Communities will rely on the leadership of the Pretreatment Program to meet these and other unanticipated challenges. While the Pretreatment Program has had many successes in the past 30 years, a firm commitment to the federal, state, and local partnerships established under the Pretreatment Program is critical to protecting public health and the environment in the future.



Oregon Association of Clean Water Agencies

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