We Need Your Help

Here are three easy things you can do to protect water quality and minimize treatment cost.

1. Keep trash out of the system.

- Put hair, feminine hygiene products, cotton swabs and grease in the garbage.

2. Reduce your water consumption.

- Conserving water saves money and protects the environment since the less water you use, the less wastewater we have to treat.

3. Keep hazardous waste out of the system.

- Never put hazardous waste down the drain. Hazardous waste includes pesticides, herbicides, solvents, paint thinners and engine oil. Hazardous waste is any material that can catch fire, explode, corrode or is toxic.

  Contact the Snohomish County Household Hazardous Waste Drop-Off Station at 425-388-6050 for disposal locations and information.

Contact Us

If you have questions, please contact us at:

City of Everett Public Works Department
3200 Cedar Street
Everett WA 98201
425-257-8800
email: everettpw@ci.everett.wa.us
web: www.ci.everett.wa.us/pw

City of Everett Water Pollution Control Facility
425-257-8220

Industrial Pretreatment

Municipal treatment plants like the EWPCF are designed to treat residential and commercial wastewater. However, some industrial wastewater contains pollutants that primary and secondary treatment cannot remove.

This wastewater requires industrial pretreatment to remove metals, acids or other chemicals, or in the case of food services, most fats and grease. City staff work with industrial customers to remove these pollutants before the wastewater is sent to the treatment plant.

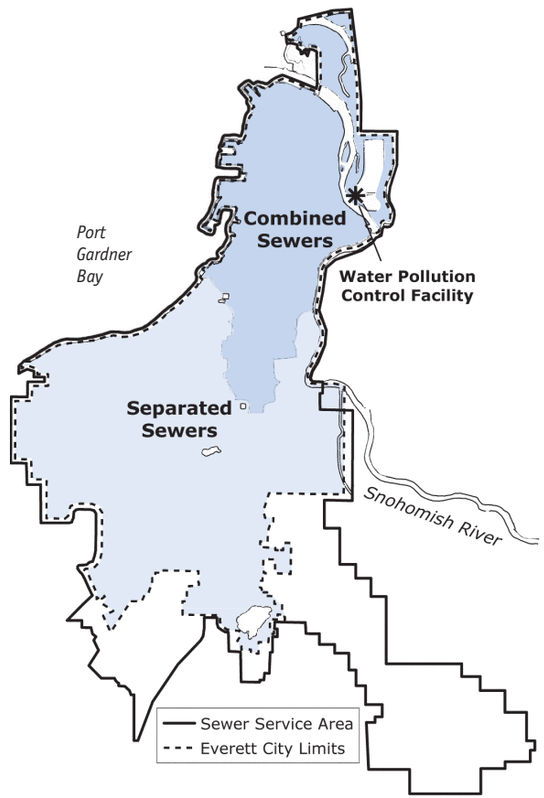
Biosolids

Biosolids are treated organic by-products of the treatment process. They are settled solids and dead microorganisms that digest and stabilize for up to two years in the aeration ponds. They are then dredged and dewatered for use mainly on farm and forest lands. Biosolids may be treated further, with composting for example, to produce Class A Biosolids, the highest quality biosolids product approved for the widest range of uses.

Biosolids are used as a soil amendment since they are rich in nutrients and increase the ability of soil to retain water. Here in Washington, biosolids are used to grow wheat, apples, pasture grasses, trees and other crops. Biosolids are also used in soil revegetation and stabilization projects. Contact us for biosolids product availability or more information at 425-257-8220.

Service Area

The City of Everett's wastewater treatment plant, called the Everett Water Pollution Control Facility (EWPCF), is located on Smith Island in North Everett. The EWPCF serves more than 133,000 people including all of Everett and parts of Mukilteo, Silver Lake and Alderwood. The plant treats an average of 20 million gallons of wastewater per day, although the influent volume to the plant can increase to almost 100 million gallons on rainy days.



REVISED JUNE 2009

How is Wastewater Treated?

Everett Water Pollution Control Facility

Brought to you by the City of Everett.

Treatment

Modern wastewater treatment uses the same process as nature, but treatment plants speed up the process. The process has two main steps: primary treatment and secondary treatment.

Primary Treatment at Everett's Plant

Primary treatment at the Everett Water Pollution Control Facility (EWPCF) includes the following steps. Most of these steps take place at a facility called the headworks, which is the first stop for wastewater entering the plant.

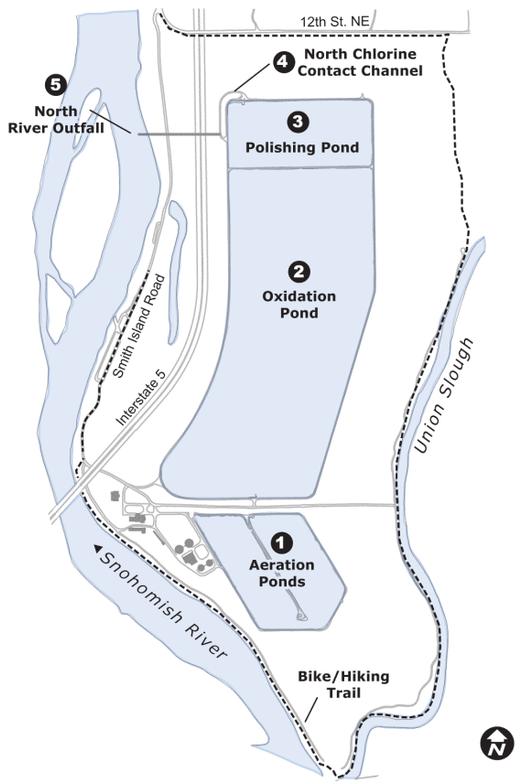
1. **Bar Screens:** Large bar screens remove trash, sticks and leaves.
2. **Grit Collectors:** Large sand and gravel settles out in the grit collector tank and is sent to a landfill.
3. **Primary Sedimentation Tank:** Small particles settle out here and grease and fat are skimmed off the top of the water.
4. **Biofilters:** These filters contain wood chips and compost and filter the air to reduce the odor released from the wastewater.

Secondary Treatment at Everett's Plant

The EWPCF has two parallel systems for secondary treatment: a pond system and a mechanical plant. The two systems perform identical functions, but the treatment process is different in each system. Wastewater is treated in the mechanical plant using a process called Trickling Filter Solids Contact. This process takes up much less space and is much faster than the original pond system. The mechanical plant can clean wastewater in a matter of hours, while it takes several weeks in the pond system.

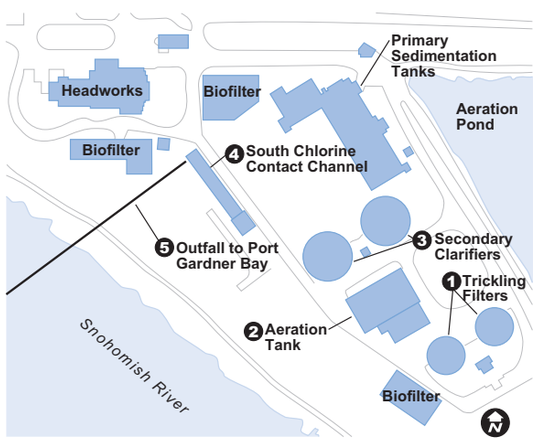
POND SYSTEM

1. **Aeration Ponds:** Microorganisms living in the ponds consume pollutants and eventually die. They settle to the bottom of the ponds along with settled solids and are dredged every two years and recycled into biosolids.
2. **Oxidation Pond:** This pond allows for further biological activity and settling.
3. **Polishing Pond:** This pond provides even more biological treatment.
4. **Chlorine Contact Channel:** Chlorine is added to kill any remaining disease causing microorganisms. The water is then dechlorinated so that chlorine is not released into the Snohomish River.
5. **Snohomish River:** Treated wastewater, called effluent, is discharged to the Snohomish River.



MECHANICAL PLANT SYSTEM

1. **Biological Trickling Filter:** Microorganisms grow on plastic media designed to provide surface area and air flow. These microorganisms consume pollutants as the wastewater trickles down this plastic media. As they grow and get full, they wash out of the tower into the aeration tank.
2. **Aeration Tank:** Microorganisms continue feeding on pollutants in this tank. Blowers inject oxygen to help keep the microorganisms as active as possible.
3. **Secondary Clarifiers:** Slow moving water allows the microorganisms and solids to settle to the bottom of these tanks. Most of the microorganisms are recycled back to the aeration tank. Some of the microorganisms are sent back to the aeration ponds.
4. **Chlorine Contact Channel:** Chlorine is added to disinfect any remaining disease causing microorganisms. The water is then dechlorinated so chlorine is not released into the bay.
5. **Port Gardner Bay:** Treated wastewater, called effluent, is discharged through a series of underground pipes to a deep-water outfall on Port Gardner Bay. Treated effluent may also be reused as non-contact cooling water at the Kimberly Clark Corp. before discharge to Port Gardner Bay.



Where Does Wastewater Come From?

Wastewater comes from many sources including homes, businesses, industry and stormwater runoff. Wastewater is 99 percent water and 1 percent solid and dissolved materials that are poured or flushed down the drain. The wastewater enters a network of more than 300 miles of underground sewer pipes that lead to the treatment plant.

Not all drains lead to the treatment plant. The City of Everett is divided into a **Combined Sewer Area** and a **Separated Sewer Area**.