



PUBLIC WORKS DEPARTMENT
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Industrial Flow Monitoring and Sampling Standards

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Salem requires flow monitoring facilities for qualified industrial wastewater discharges. Qualified facilities are dischargers with non-consistent (variations of greater than 100 percent) discharges of domestic strength biochemical oxygen demand or total suspended solids, discharges of 15,000 gallons per day or greater, or facilities without an approved metered water source. The purpose of industrial billing is to provide the City, with reasonable compensation for treating high strength, high volume, or non-typical waste streams. The monitoring system shall be capable of documenting the waste stream with a minimum accuracy within two percent of actual flows. Wastewater pretreatment is a separate requirement and is not being addressed in this requirement.

The requirements for flow monitoring facilities are found in Salem Revised Code, Chapters 73 and 74. Guidelines for Flow Monitoring and Sampling are:

1. Flows shall be monitored through a primary measuring device, such as a flume for gravity flows, a machined round pipe for pressure or full pipe flows, or a system approved by the Public Works Director. Pumps and timers are not an approved system. The device shall be accessible for calibration and inspections, flumes shall have an attached staff level reading system, a designed, or designated monitoring location, and uniform/linear flows per the manufacturer installation standards. Round pipe monitors shall be sized to provide a minimum self-cleaning velocity for 80 percent of expected flow conditions, but in no case less than 0.2 feet per second.
2. The monitoring system may be mechanical or electronic, compatible with the primary measuring device. The monitor shall record, or log, the flows for a minimum period of seven days. The read out will show the instantaneous flow in Gallons per Minute (GPM) and the cumulative totalized flows in Total Gallons (TG) or Million Gallons per Day (MGD). The monitor shall have interface ability with the City owned samplers to allow for comparison checks.
3. The facility shall install a wastewater sampler capable of flow proportional sampling, compatible with the waste stream and the monitoring system, easily accessible, and approved by the City. The sampler shall have the ability to store up to three days of sample volume at a temperature of between 34 and 39 degrees Fahrenheit. Inline BOD & TSS monitors with data logger may be allowed as an alternative, upon pre-approval of the Public Works Director.
4. It is requested that the facility have a potable water source and drain for area clean ups and routine cleaning of the sampler and containers, and area lighting to allow safe after hours access and inspections.
5. The site shall have a safe and solid access to allow City vehicles within 50 feet (or greater, if approved by the Public Works Director) of the monitoring facility, and a safe and solid walkway City staff may use to access the facility. A safe and sanitary access is required for the City staff.
6. The facility owner shall have the monitoring system calibrated upon activation and at least twice yearly (suggested to be on a six-month cycle), or more often if recommended by the equipment manufacturer.
7. Additional monitoring systems may be required depending on the type of discharge (ie. pH, temperature, conductivity, etc.), and will be determined for each facility when they start or apply for discharge authorization to the City sewer system.