

Town of North Wilkesboro's Pretreatment Program

What is pretreatment?

Pretreatment refers to the treatment of non-domestic wastewater before it is discharged to the wastewater treatment plant, also known as a POTW, or publicly-owned treatment works.

Through pretreatment, the wastewater customer is able to reduce, eliminate, or alter a pollutant in wastewater before it is introduced into the POTW. Under Title III of the Federal Clean Water Act (CWA), the EPA is required to establish pretreatment standards that must be met by industrial facilities before they discharge wastewater to POTWs. Pretreatment standards target pollutants that would interfere with a POTW's operation, would not be susceptible to treatment by a POTW, or would adversely affect POTW equipment and personnel.

The Town of North Wilkesboro's Pretreatment Program is an EPA federally-mandated program under the administration the State of North Carolina PERCS Unit with the Town of North Wilkesboro as the Control Authority.

What is a publicly owned treatment works (POTW), and how are they regulated?

POTWs, commonly referred to as municipal sewer systems, store, treat, recycle, and reclaim municipal sewage and liquid industrial wastes. They are required to have a National Pollutant Discharge Elimination System (NPDES) permit to discharge treated water from their systems into creeks, rivers, or other waters. This permit regulates the quality and quantity of water the POTW may discharge from its system.

Indirect and Direct Dischargers

Facilities that discharge wastewater to POTWs are known as "indirect" dischargers; these facilities generally are not required to obtain an NPDES permit for such discharges but are usually required to obtain a permit from the local POTW. This permit outlines effluent limitations in terms of volume and concentration of pollutants, thus defining the pretreatment necessary for the facility to perform. Facilities that discharge wastewater directly to streams, creeks, or other bodies of water are called "direct" dischargers; these facilities are required to obtain an NPDES permit for such discharges

Three categories of pollutants / discharges

Pretreatment programs are established on both the national and local level. Restrictions have been placed on substances in three categories: **(1) prohibited discharges, (2) national categorical pretreatment standards, and (3) local pollutant limits**. An individual industrial facility may be subject to some or all of these restrictions.

What are Prohibited Discharges?

Certain wastewater discharges are prohibited for all industrial facilities that discharge to POTWs because of the potential hazards these discharges create. Specific prohibited discharges include:

- pollutants that would create a fire or explosion
- pollutants that would cause corrosive structural damage to a POTW
- solid or viscous pollutants that would obstruct flow in a POTW
- pollutants that result in toxic gases, vapors, and fumes
- ignitable wastes
- oil and grease

What are National Categorical Pretreatment Standards?

National categorical pretreatment standards have been established for specific industry categories and subcategories. These standards specify allowable quantities or concentrations of pollutants or pollutant properties in wastewater that may be discharged to a POTW by both existing and new industrial users. More than 40 industrial categories, such as metal finishing, are subject to the categorical standards. These standards allow for the summation of effluent streams typically found across a facility performing several different processes.

What are Local Pollutant Limits?

Local pollutant limits protect against improper treatment at a POTW. These limits prevent industrial pollutants from flowing through a POTW without receiving adequate treatment that would cause the POTW to violate its NPDES permit. Pollutants that would inhibit or disrupt the POTW operation and result in a violation of a POTW's NPDES permit are also restricted. Local limits are decided based on the equipment and treatment facilities available at the POTW. The Town of North Wilkesboro's Pollutant Local Limits are as followed.

Biochemical Oxygen Demand	250 mg/l
Total Suspended Solids	250 mg/l
NH3	25 mg/l
Arsenic	0.003 mg/l
Cadmium	0.003 mg/l
Total Chromium	0.05 mg/l
Copper	0.061 mg/l
Cyanide	0.015 mg/l
Lead	0.049 mg/l
Mercury	0.0003 mg/l
Nickel	0.021 mg/l
Silver	0.005 mg/l
Zinc	0.175 mg/l