

Guide for Discharging Commercial and/or Industrial Wastewater to the Sanitary Sewer



City of Solon
Water Reclamation Department
Industrial Pretreatment Program

October 19, 2022

Industrial Pretreatment Program (IPP)

The Industrial Pretreatment Program (IPP) of the City of Solon Water Reclamation Department monitors, regulates and controls industrial wastewater discharges to the City's wastewater collection and treatment systems.

Mission

IPP's mission is to protect public health and safety, the wastewater collection system and treatment facilities, and the environment by implementing an effective and efficient program for source control of pollutants of concern while enhancing relationships with industry, government and the public.

Vision

IPP's vision for the future is through innovative and thorough methods to control pollutants of concern at their sources to protect public health the environment while delivering exceptional value to the community.



Our Environmental Responsibility

For more than 30 years, the Industrial Pretreatment Program (IPP), of the City of Solon Water Reclamation Department, has worked to protect public health, the City investment in the collection system and treatment plant and the receiving waters (streams, rivers and lakes) by regulating commercial and industrial wastewater discharges to the City's sewers and by administering the City of Solon's Industrial Waste Ordinance (Section 1044, Industrial Wastes) as well as federal and state EPA pretreatment regulations.

IPP's key objectives include:

- Protecting the treatment plant from interferences with process operations due to pollutant loadings and the pass through of harmful pollutants;
- Protecting the life, health and safety of operations, monitoring and maintenance personnel;
- Enhancing the health, safety and welfare of the public;
- Ensuring the opportunity for beneficial reuse of biosolids including energy recovery;
- Providing the opportunity for water reclamation;
- Protecting the receiving water.

IPP's responsibility to control the City's commercial and industrial wastewater discharges and to protect the city's water quality is a significant challenge. The City of Solon's Water Reclamation Plant treats an average of over 3 million gallons a day of wastewater. The treated wastewater is discharged to Beaver Meadow Creek which flows into Tinkers Creek and then into the Cuyahoga River before finally reaching Lake Erie.

The City treatment plant is subject to the strict requirements and limitations of the National Pollution Discharge Elimination System (NPDES) permit, which are issued by the Ohio EPA, under the authority of the United States EPA. NPDES permits are required for all facilities, including wastewater treatment plants, which discharge into navigable waters or surface waters of the state. In order to meet and maintain the requirements of its NPDES permit, the City Water Reclamation Department, through the IPP, regulates businesses discharging to the sanitary sewer system.

Doing Your Part

For businesses operating in the City of Solon, taking a proactive approach to industrial wastewater regulations and being in compliance makes good business sense. Compliance starts with contacting the Industrial Pretreatment Program (IPP), and submitting an Industrial Survey Form. The survey form collects information on business activity, number of employees, chemicals used and other pertinent information. There is no fee required when submitting this

survey. Understanding your responsibilities and knowing the resources available to help you maintain compliance will enable you to handle regulations effectively and efficiently.

This guide provides information to help businesses with questions regarding commercial and industrial wastewater discharges to the sewer. It contains information on permitting, fees, inspection, monitoring and enforcement activities, and lists environmental resources available to the businesses in Solon.

Who Needs an Industrial Wastewater Discharge Permit?

Most businesses in Solon will **not** need a City issued Industrial Wastewater Discharge Permit. Certain industrial and commercial facilities that discharge or have the potential to discharge industrial wastewater that contain certain heavy metals, high strength waste or engage in business activities that are regulated as “Categorical” processes will be required to obtain a permit from the City. Industrial wastewater is defined as any wastewater generated from any manufacturing, processing, or cleaning operation, or any operation that discharges other than domestic or sanitary waste.

The first step in determining whether a permit is required is to complete the Industrial Wastewater Survey. IPP staff will then review the survey form and contact the business if further information is needed. If the survey indicated the potential to discharge significant industrial wastewater, the business would be asked to complete an Industrial Discharge Permit Application. This detailed application will assist the City in determining whether a permit is required. Again, there is no fee for this application.

Understanding Industrial Wastewater Discharge Permits, Requirements and Responsibilities

Industrial Wastewater Discharge Permits are required to be issued by the City under federal, state and local environmental regulations. Permits are issued to define Industrial User (IU's) responsibilities and obligations when discharging industrial wastewater to the sanitary sewer. If you are issued an Industrial Wastewater Discharge Permit, read it carefully and ensure you fully understand and comply with the permit requirements. Discharge Permits have a maximum duration of five years from the date of initial issuance. Applications for permit renewal must be submitted ninety days prior to the permit expiration date.

Permit requirements are determined based on appropriate regulations, best engineering practices and the characteristics and volume of the industrial wastewater discharged. For example, some types of facilities are required to periodically sample and monitor the wastewater and submit reports, which may include technical reports, notification of discharges, and periodic compliance reports. Other requirements may include the implementation of Best Management Practices to control or eliminate certain compounds from the wastewater stream. Additionally,

any change in waste strength or flow, as well as any accidental discharges of prohibited or regulated material must be reported to the City as soon as possible.

As part of the permit, the City may be required to sample and analyze the industrial wastewater discharge. When monitoring by City personnel is required, the City will invoice the business as authorized under Solon Ordinance, Chapter 1046.

Classification of Industrial Users

Industrial Users are categorized by the City as either Significant Industrial Users (SIU's) or Non-Significant Industrial Users (NSIU's). A SIU is defined as a discharger that is subject to Federal Categorical Pretreatment Standards, discharge 25,000 gallons, or more, per day or is determined to have the reasonable potential to adversely affect the operation of the City's treatment plant. SIU's are further classified as Categorical Industrial Users (CIUs) if they are subject to federal categorical discharge limitations developed by the EPA. CIUs are also subject to the City's prohibited discharges and Local Industrial Discharge Limits. All other SIUs are subject only to the City's prohibited discharges and Local Industrial Discharge Limits.

Non-Significant Industrial Users have lesser permit requirements and are subject only to the City's prohibited discharges and Local Industrial Discharge Limits. Examples of industries that are classified as NSIUs include smaller food processors, machine shops and other industries that do not have discharges regulated as categorical.

Solon Local Industrial Discharge Limits

The City's Local Industrial Discharge Limits (Local Limits) are established specifically to protect the City's treatment plant equipment and processes and are applied to all industries. These local limits are reviewed every five years to determine if revisions are necessary to meet state and federal regulations. As of October 2022 the limits are:

<u>Pollutant</u>	<u>Daily Maximum (ug/L)</u> (as of October 15, 2022)
Cadmium, Total ¹	300
Chromium Total	1,000
Copper, Total ¹	326
Cyanide, Total	110
Lead, Total ¹	300
Mercury, Total	Best Management Practices (BMP's)
Nickel, Total	500
Silver, Total ¹	500
Zinc, Total	607
pH (instantaneous)	6.0-12.0 S.U.

1-limits based on specific limited total maximum industrial contributory flow depending on pollutant.

The most current Solon Industrial Discharge Limits may be viewed at:
<https://www.solonohio.org/DocumentCenter/View/12628/Local-Limits-Table>

Federal Limits

Federal limits apply only to facilities with federally regulated processes and are implemented uniformly throughout the nation. For industries with federally regulated processes, the U.S. Environmental Protection Agency issues national categorical pretreatment standards which are generally less stringent than those imposed by the City's Local Limits. In these cases, the federal limits become part of the CIU's permit requirements and apply to the wastewater stream generated by the regulated processes and the City's Local Limits apply to the facilities combined wastewater stream.

For a complete list of federally regulated categorical industries, please see:
<http://www.epa.gov/eg/industrial-effluent-guidelines>

Prohibited Discharges

Federal and local ordinance contain a list of prohibited discharges including:

- Flammable, reactive, explosive, corrosive or radioactive substances.
- Noxious or malodorous material that may result in a public nuisance.
- Solids or viscous materials which could cause obstruction in the collection system or interfere with the operation of the treatment plant.
- Toxic pollutants
- Petroleum and/or non-biodegradable oil.
- Pollutants which result in the emission of hazardous gases.

A complete list of prohibited waste is included in Solon Industrial Waste Ordinance chapter 1044.05.

Illegal discharges to the sewer of prohibited substances can result in treatment plant upsets, poor quality biosolids, eroded sewers, explosions, hazardous fumes and threats to public health and department staff. Illegal discharges are subject to enforcement actions including civil fines and criminal prosecution.

Industrial Surcharge Fees

The intent of the City of Solon Industrial Waste Surcharge Program is to offset the additional costs associated with treating industrial waste that is above normal strength. Industrial waste for the purpose of this program is any discharge to the sanitary sewer from a business that is not

sanitary waste (rest rooms or cafeterias incidental to the business). Examples of industrial waste include, but are not limited to, wastewater discharges from food processors, chemical manufacturers or blending operations, metal finishers and paper mills. Charges are levied for any discharge of above normal strength industrial waste. For the purposes of this program, normal strength waste is defined as any waste which does not exceed the following parameters:

Biochemical Oxygen Demand (BOD):	250 mg/L
Suspended Solids:	300 mg/L
Phosphorus (measured as P):	20 mg/L
Ammonia (measured as N):	15 mg/L
Oil and Grease (hexane extractable material)	100 mg/L

There are no "maximum" concentrations of surchargeable pollutants allowed so long as the quantity of pollutant does not adversely affect the collections system or treatment plant operations. Industries should typically strive to minimize discharge of surchargeable pollutants as there are typically more cost effective disposal options available.

Rates are determined for each of these parameters based on the additional costs to treat or remove each. These rates are reviewed annually and are listed in Solon Codified Ordinance 1046.

The strength of a business's wastewater is determined by collecting a sample one or more days per month and analyzing the strength of the wastewater according to standardized methods required by the EPA.

The surcharge is then determined by multiplying the sewage flow in million gallons by 8.345 and then multiplying this product by the difference between the actual average concentration and the normal concentration for each parameter to give the pounds subject to surcharge. This quantity is then multiplied by the surcharge rate per pound to determine the surcharge amount for each.