
Wastewater Discharge Permit Application Instructions and Guidelines

- Answer all questions and include the required exhibits. ***Incomplete applications will be returned to you.***
- If you do not have an answer for the requested information, indicate so and explain why.
- Indicate "N/A" if a section does not apply to your operations.
- Use additional pages, if needed.

Many of you are applying for a permit before you begin discharging. In this case, you will be estimating the quantities requested in the permit application. You can base these estimates on your design engineer's specifications and on performances of similar industries or services. You can also call the City of Richland Pretreatment Program for help 509-942-7485. Remember that you are estimating for a 5-year period. If your estimate is too low, you may have to apply for another permit when your discharges increase to over 20 percent of your published amount.

For those already discharging, you can base most of your answers on the 1-year period prior to the application date and add any allowances for estimated growth over the next 5 years.

PRIMARY AND SECONDARY PERSON TO BE CONTACTED ABOUT THIS APPLICATION. List the name, title, mailing address, telephone number, emergency 24-hour telephone number, FAX number, and e-mail address, of two people who are thoroughly familiar with the information reported in the application and who can be contacted by City of Richland Pretreatment staff.

NATURE OF BUSINESS

Briefly describe your business and the main reason for applying for a wastewater discharge permit:

- State your main activities or processes at the applicant building or site that produce wastewater. Example activities include metal finishing, battery manufacturing, dry cleaning, groundwater remediation (pumping and treating contaminated groundwater), food processing, and construction dewatering. Applications for groundwater remediation should include a description of the activity that caused the contamination, such as leaking underground storage tanks.
- Indicate the reason for the application. You could be applying because regulations require that this activity be permitted (categorical discharger), because the activity generates wastewater that contains regulated substances, and/or because you are proposing to substantially increase your discharges (by over 20 percent).

PERTINENT IDENTIFICATION NUMBERS AND PERMITS

- **STANDARD INDUSTRIAL CLASSIFICATION (SIC).** This is the code number that appears on your business license and tax documents.
- **EPA WAD NUMBER.** According to Chapter 173-303 WAC, your business must have a state/EPA waste identification number (WAD) if it routinely, or even occasionally, generates over 220 pounds of hazardous waste each month, or if it accumulates over 220 pounds at any one time. If you qualify, contact the Washington State Department of Ecology.
- **WATER/SEWER AGENCY AND ACCOUNT NUMBER.** List the water/sewer agency name and account number that appears on your combined water and sewer bill.
- **WATER METER NUMBER(S).** List water meter identification numbers at your site or facility.
- **CURRENT CITY OF RICHLAND PERMIT NUMBER (if applicable).** List your permit or discharge authorization number if you currently hold a City of Richland wastewater discharge permit or authorization and are either renewing your permit or applying for a new permit because of substantial increases in discharges.
- **ENVIRONMENTAL CONTROL PERMITS.** List the type of permit and the permit number of any environmental permits that have been issued for your applicant building or site. Examples include NPDES and BCAA permits.

BUSINESS ACTIVITIES AND PRODUCTS

- **BUSINESS ACTIVITY.** List all the business activities at your site. Activities include manufacturing, processing, commercial, construction, remediation activities, and treatment of any off-site wastes.
- **TYPE OF PRODUCT OR BRAND NAME.** For each activity indicate the types of products or services resulting from the activity, giving the common or brand name and the proper scientific name of each product. (Some activities may share the same product, or may not have any product associated with them.)
- **DAILY QUANTITIES.** List the average and maximum quantities produced or handled each day. If you are estimating quantities, indicate the basis for your estimates.

Example:

Business Activity	Type of Product or Brand Name	Daily Quantities	
		Average	Maximum
Circuit board manufacturing	Printed circuit boards	3,000 ft ² /day	4,000 ft ² /day
Electronics assembly	Personal computers	75 units	125 units

INDUSTRIAL WASTEWATERS DISCHARGED TO CITY OF RICHLAND SEWERS

PROCESS THAT GENERATES WASTEWATER AND PROCESS NUMBER.

Name each process that generates wastewater that you are discharging or are planning to discharge to the City of Richland sewer system. Also, identify each process with a number that corresponds to numbered processes on your schematic flow diagram and your site layout.

SUBSTANCES DISCHARGED TO THE SEWER. List all substances contained in these wastewaters. On a separate sheet, identify specific chemical and physical hazards associated with each process wastestream. You may find part of this information in Material Safety Data Sheets or by contacting your chemical supplier.

TYPE OF PRETREATMENT. Identify the type of pretreatment, if any, for each wastestream (e.g., chemical precipitation, settling, pH neutralization, DAF).

FREQUENCY OF DISCHARGE. Indicate the frequency of discharge. List "continuous" if you discharge wastewaters continuously to the sewer as the wastewaters are generated, or "batch" if you store wastewater and discharge it to the sewer in batches. (Batch discharges are intentional, controlled discharges that occur as the result of non-continuous operations.) For metal finishers, frequency of discharge of drag-out or dead rinses must be indicated.

LIQUID WASTES AND SLUDGES REMOVED BY MEANS OTHER THAN CITY OF RICHLAND SEWERS

TYPE OF WASTE SUBSTANCE. List the type of waste or other spent materials removed from the site by means other than City of Richland sewers. Examples include alkaline cleaners, organic solvents, treatment sludges, caustics, distillation residues, reactive materials, pesticides, plating solutions, and heavy metals hauled offsite for disposal or reclamation.

MEANS OF REMOVAL. List the type of firm or facility that removes or accepts these materials from your site.

FREQUENCY. List how often each substance is removed.

VOLUME. List the volume of substances removed, showing the volume for each removal or for a specific time period (tons/each removal; gallons/day).

WATER BALANCE TABLE

The purpose of the water balance is to demonstrate a direct relation between the amount of water coming into your site each day and the amount that is discharged. All water sources must be balanced with water uses and allocated to specific discharge points. Calculate all quantities for the past year, adjust them for future growth, and list them in gallons per operating day. If there is a significant discrepancy between water received and

water discharged, state the reason for the difference. You should include this statement and the basis for any estimates.

Remember that the water balance covers the entire site, both the inside and outside of buildings.

WATER IN

Water Source. List the appropriate letter in the "Water Source" column for the type of water source for each water use, and determine the daily amount of water that lists your site from each source:

- **City Water** Review meter readings and past water bills. Call your water utility if you need help. Submit copies of the two most recent water bills and water or sewer meter number.
- **Private Well Water**
- **Reclaimed Water** This is treated wastewater that is "reused" for site irrigation or plant processes.
- **Raw Materials** Raw materials that you use in your process may contain water that accounts for some of the wastewater discharged from your site.
- **Industrial Storm Water** This is the daily amount of rainfall at your site. The fate of this rainfall depends on your site. It could be captured and used for various purposes on the site. It could infiltrate into the groundwater. It could run off impermeable surfaces (paved surfaces, roofs) and list the nearest surface water body. It could list the storm sewer via drain pipes on the site. It could discharge to the sanitary or combined sewer and be the subject of this permit application. Or, it could meet any combination of these fates.
- **Groundwater** This is groundwater pumped for site remediation or construction dewatering.

WATER USE

Each water use may have more than one source. Allocate the amount of each water source to each water use (average and maximum daily quantities).

- Start with water usage for processes that can be measured from meters and exempt meters, product labels, or other accurate means. Use the Uniform Plumbing Code estimates on the next page for determining sanitary uses and discharges.
- Then calculate other water uses that are less precisely known. You can do this by measuring instantaneous flows and estimating process operation.
- Estimate the remaining uses by subtracting the measured and calculated amounts from the total amount for each source.

SANITARY WATER/WASTEWATER

This refers to the volume of water supplied for and the volume of wastewater discharged from restrooms, showers, and meal preparation facilities. You may use the following Uniform Plumbing Code volumes for both the "Water Use" and "Water Discharge" columns:

- Field service employees - 5 gallons per employee per day
- Office employees - 20 gallons per employee per day
- Production employees - 25 gallons per employee per day
- Production employees with showers - 35 gallons per employee per day

COOLING WATER. Do not include volumes that are re-circulated within the plant or within a closed-loop system.

WATER OUT

DISCHARGE POINTS. Where does the water go once you have used it? Are you connected to a sewer system? How much of your storm water and wastewater leaves the site through these drains? How much is lost to evaporation during site irrigation and cooling processes?

Determine the discharge points and list the appropriate letters in the "Discharge Point" column:

- *Sewer*
- *Storm Drain*
- *Receiving Water*
- *Waste Hauler*
- *Evaporation*
- *Product*

WATER DISCHARGE OR LOSS. To calculate discharges and losses, follow the same basic steps you used to calculate water uses:

- (1) Determine measurable amounts from sewer meters and other sources,
- (2) Calculate other amounts from water flow measurements, and
- (3) Estimate the remainder.

INDUSTRIAL WASTEWATER. Include contaminated groundwater and construction dewatering groundwater in the quantities for industrial wastewater. Also include pretreatment wastewater here.

COOLING WATER. Do not include volumes that are re-circulated within the plant or within a closed-loop system.

WATER INCORPORATED INTO PRODUCT. This refers to water leaving the plant as part of the finished product. This consumed water may be in a liquid form or in an unidentifiable mixture with other materials. If you have an exempt meter or a separate sewer meter, indicate this on your application.

SANITARY WASTEWATER. Use the Uniform Plumbing Code figure given earlier.

EVAPORATION. Evaporation refers to both natural and heated process water loss to the atmosphere, including boiler and cooling water losses indicated by (and equal to) make-up water volumes.

DAILY QUANTITY DISCHARGED IN GALLONS. Note the average and maximum daily discharge quantities in gallons. For example, if your plant usually discharges one 10,000-gallon batch of wastewater each week and you operate 5 days, then the average quantity will be 2,000 gallons per day, plus an allowance for growth. The maximum daily quantity will be the largest batch based on your plant history or on your estimated operating patterns. If you are estimating quantities, indicate the basis for your estimates.

Your application will be returned if the required exhibits are not included. Submit each exhibit on 8½ x 11 inch paper, if possible.

SCHEMATIC FLOW DIAGRAM

The schematic flow diagram is a simple line drawing that illustrates the nature and flow of your plant's processes, placing particular emphasis on the processes that generate wastewater and their associated pretreatment systems. For sites already in operation, your diagram should also show any proposed changes in your processes. Describe these proposed changes. Your diagram should be no larger than 11 x 17 inches. At a minimum, your schematic flow diagram should include the following:

- Each business activity, as listed in your application.
- Each plant process that generates wastewater and the average and maximum daily quantities generated. Number each wastewater-generating process using the same numbers in the site layout and in the tank inventory.
- A sub-schematic of each wastewater pretreatment process, illustrating treatment tanks, piping, and control features.
- Discharge points for each wastestream (side sewers, storm drains).
- Final sampling location.

SITE LAYOUT

The site layout enhances the schematic flow diagram by locating each activity and process in a geographical setting. Remember to include proposed changes, as you did in the schematic flow diagram. Your layout should be no larger than 11 x 17 inches. At a minimum, your site layout should indicate the following:

- Building outlines
- Storm drains
- Property lines
- Sampling locations
- North arrow
- Side sewers
- Wastewater routing

- Water lines and meters
- Wastewater drainage plumbing
- Wastewater-generating processes and manholes

Describe the sampling locations in detail and how to gain access to them.

Briefly describe any planned new installations or changes to existing processes, including pretreatment systems and waste disposal methods. (Make sure these changes are shown in Include proposed construction and startup dates. You may be required to prepare an engineering report for proposed installation or modification of pretreatment systems.

This exhibit is not required by existing dischargers applying for a permit renewal unless you are adding a new process, or have not submitted this exhibit previously for some reason. The purpose of this exhibit is to determine if your wastestreams require pretreatment or if your pretreatment systems (proposed or existing) are adequate. Submit laboratory analytical data from two samples that represent the characteristics of the wastewaters that you are currently discharging or are proposing to discharge. Refer to **City of Richland Title 17.30** to see what the City of Richland regulates and their discharge limits. Analytical data should be submitted for all substances that are reasonably expected to be in the discharge. If you do not have access to such data, you may submit historical data from another business with a similar process or other evidence documenting the potential waste concentrations, as long as the information is sufficient to determine the need for pretreatment. Any data submitted must be analyzed by a Washington State accredited laboratory following 40 CFR Part 136 approved test methods.

GENERAL REQUIREMENTS

Submittal of an engineering report and approval by the City of Richland are required prior to the installation of all new pretreatment systems (Chapter 173-240 WAC). It is also required for significant changes to existing pretreatment systems, including the following:

- A change in pretreatment process influent parameters (flow rate, concentration, chemical composition) that could adversely affect the effluent quality.
- A change in the pretreatment system (equipment or chemical processes).

REPORT CONTENTS

An engineering report must meet the requirements set forth by Chapter 173-240 WAC. The purpose of an engineering report is to document the work done to develop or redesign the pretreatment system. The report should be detailed enough to allow a judgment on the appropriateness and effectiveness of the proposed system. It should contain, at minimum, the following components:

- Type of industry or business.
- Kind and quantity of finished product.
- Wastewater sources, quantity, and chemical characteristics to be treated by the pretreatment system.

- A site map showing the location of your pretreatment system.
- A layout diagram of your pretreatment system to include the location of wastewater sources at the site, the routing of wastewater, and the City of Richland discharge point.
- Description of the physical provisions for oil and hazardous material spill control and/or accidental discharge prevention.
- Sound engineering justification through the use of pilot plant data, results from other similar installations, and/or scientific evidence from the literature that indicates that the effluent from the proposed facility will meet applicable permit effluent limitations and/or pretreatment standards.
- Basic design data and sizing calculations of the pretreatment system components (for example pumps, tanks, mixers).

Description of your treatment process including the amount and kind of chemicals used in the treatment process.

- The general operations and the set points of all control features.
- A flow diagram of the treatment process, illustrating the system piping, tanks, and control features.
- A discussion of the method of final sludge disposal selected.
- A statement regarding compliance with SEPA, if applicable.
- A schedule for final design and construction.

Submit a thorough documentation of the information, methods, and assumptions used to calculate your site's water balance. This documentation should include the following:

- Assumptions used in the process.
- A breakdown of each meter, its type, purpose, location, identification number, and its discharge point.
- Meter readings.
- Square footage of permeable and impermeable site surfaces and the calculations for industrial storm water listing and leaving the site (only for industrial storm water that you currently discharge to the storm sewer).
- Basis for determining the amount of water in raw materials and in products leaving the site.
- Evaporation calculations.
- Copies of your two most recent water bills.