

# Wastewater Discharge Authorization Application

## *Exhibit Instructions*

King County Wastewater Treatment Division  
*Industrial Waste Program*



**King County**

**INDUSTRIAL WASTE PROGRAM**

*Partnering with Industries  
to Prevent Pollution*

## EXHIBIT INSTRUCTIONS

Your application will be returned if the applicable exhibits are not included. If the exhibit is required, it will indicate in the top right corner in red: **REQUIRED**

Please contact King County's Industrial Waste Program for any questions.

Phone: 206-477-5300

Email: [info.kciw@kingcounty.gov](mailto:info.kciw@kingcounty.gov)

## EXHIBIT A - SCHEMATIC FLOW DIAGRAM

**REQUIRED**

The schematic process 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 in Exhibit C. 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 Section C, Item 2, of your application.
- Each plant process that generates wastewater and the average and maximum daily quantities generated, as listed in Section C, Item 4. Number each wastewater-generating process using the same numbers from Section C, Item 4, in the site layout (Exhibit B) and in the tank inventory (Exhibit F).
- A sub-schematic of each wastewater pretreatment process, illustrating treatment tanks, piping, and control features.
- Discharge points for each waste stream (side sewers, storm drains, etc.).
- Final sampling location.

## EXHIBIT B - SITE LAYOUT

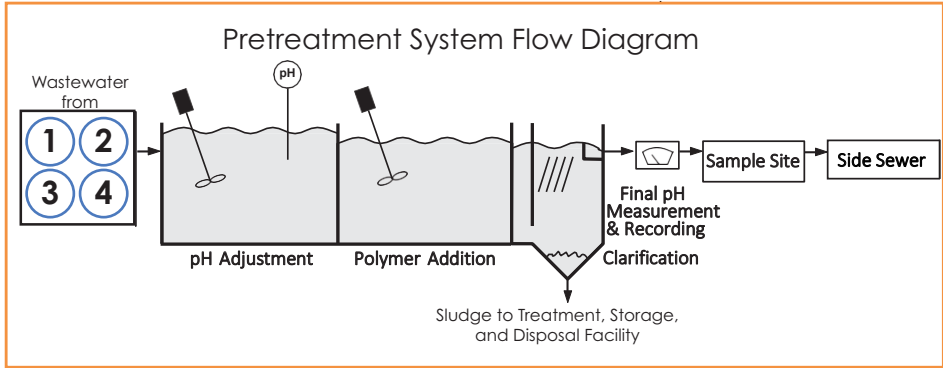
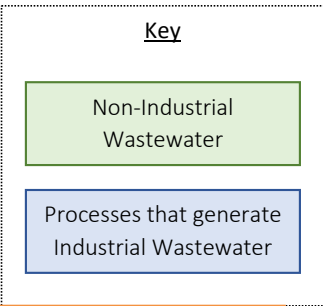
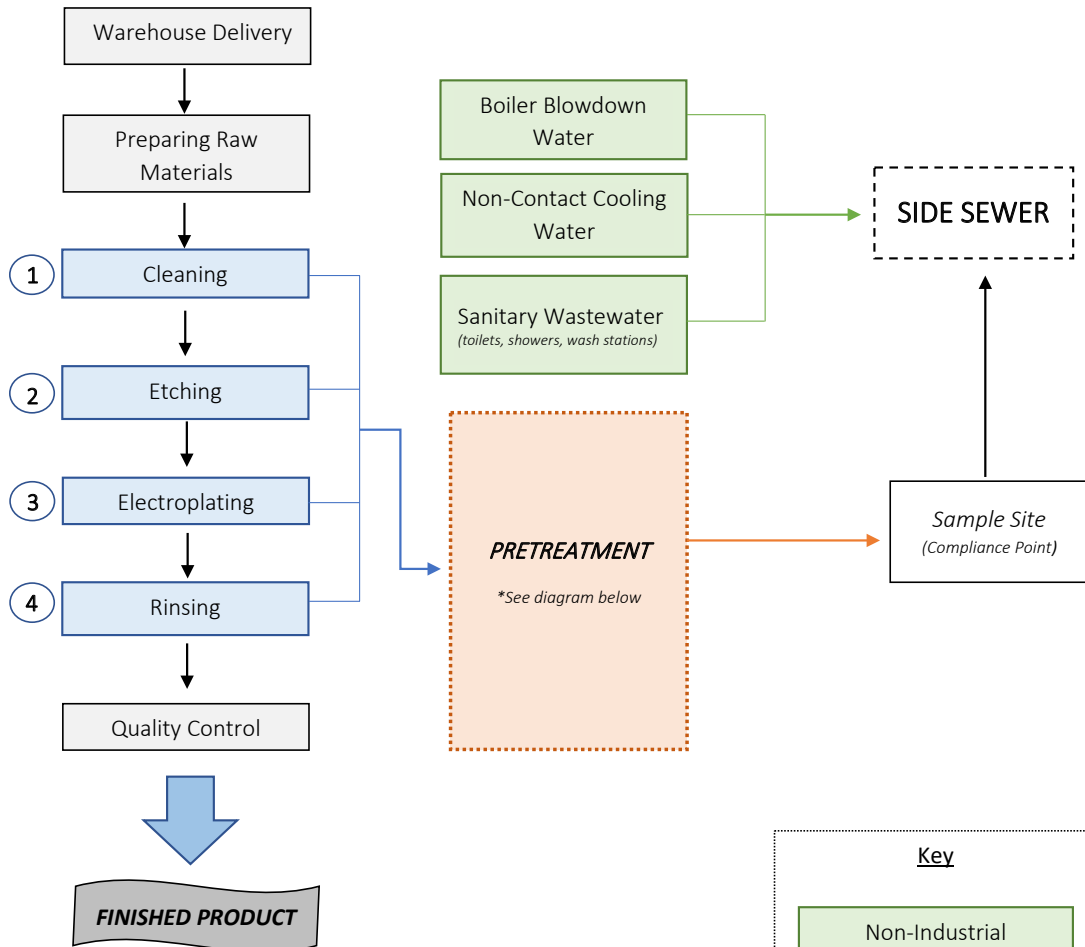
**REQUIRED**

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

- Building outlines
- Property lines
- North arrow
- Wastewater routing
- Wastewater drainage plumbing and maintenance hole
- Identification of separate pipelines for industrial wastewater and sanitary wastewater
- Storm drains
- Sampling locations
- Side sewers
- Water lines and meters
- Wastewater-generating processes (numbered with same numbers used in Exhibit A)

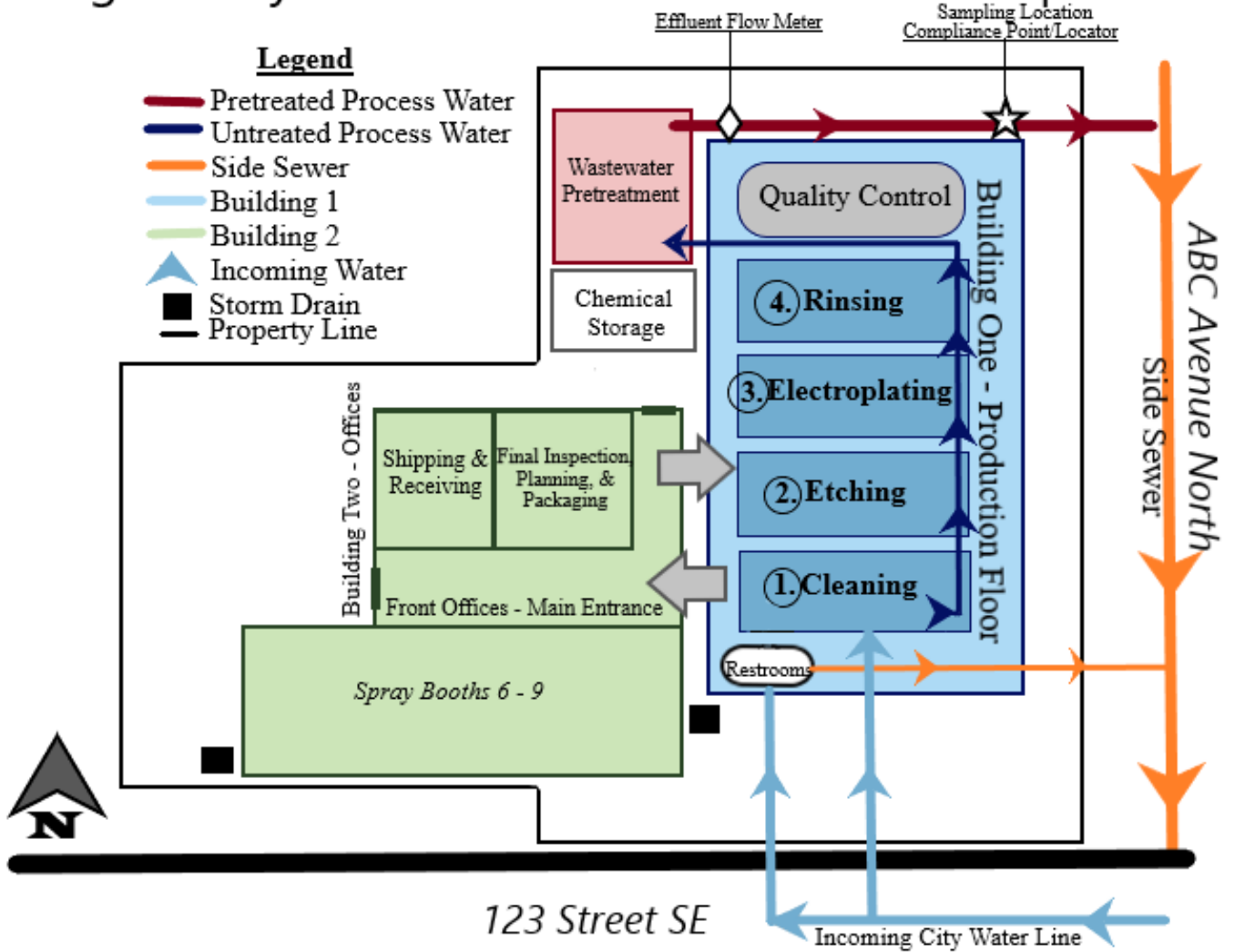
**FIGURE 1: EXAMPLE SCHEMATIC FLOW DIAGRAM FOR EXHIBIT A**

## Metal Finishing Operation



**FIGURE 2: EXAMPLE SITE LAYOUT FOR EXHIBIT B**

# King County Industrial Waste - Exhibit B Example



## EXHIBIT C - ANALYTICAL OR HISTORICAL DATA

This exhibit is required for all new applicants. The purpose of this exhibit is to determine if your waste streams require pretreatment or if your pretreatment systems (proposed or existing) are adequate. This exhibit is not required by existing dischargers applying for a permit renewal unless you are adding a new process.

Submit laboratory analytical data from the last five years that represent the characteristics of the wastewaters that you are currently discharging or are proposing to discharge. Refer to the King County Industrial Waste Program General Fact Sheet (included with the application materials) for an explanation of the substances King County 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 approved test methods.

If you wish to look up an accredited lab near you, please visit Washington State Department of Ecology's website here: <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation>

## EXHIBIT D – SLUG CONTROL PLAN

**REQUIRED**

### **Slug Discharge Control Plan**

This is required for all Significant Industrial Users (SIU) as referenced in [King County Code 28.82.800](#). The purpose of the Slug Discharge Control Plan is to minimize the potential for slug discharges into the sanitary sewer system. The U.S. Environmental Protection Agency (EPA) defines a slug discharge as "any discharge of a non-routine, episodic nature, including but not limited to, an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause interference or pass through, or in any way violate the POTW's [publicly owned treatment works] regulations, local limits, or permit conditions." At a minimum, your plan must include the following elements:

1. General company information:
  - a. Company name
  - b. Address
  - c. Contact person(s)
  - d. Phone number(s)
  - e. Emergency 24-hour phone number(s)
  - f. Operating schedule (days of week, hours)
  - g. Describe nature of business
2. Facility layout flow diagrams (The information submitted with your KCIW permit application can be attached to this plan.)
3. Inventory of process tanks and new and waste chemicals stored on site (include location, chemicals and concentration, container type, average stored volume, total container volume, and special provisions taken to prevent slug discharges)
4. Description of discharge practices, including non-routine batch discharges
5. Procedures for immediately notifying KCIW of spills or slug discharges and for follow-up written notification within five days

6. Inventory of spill and leak prevention equipment
7. Operation and preventative maintenance measures used to prevent a spill or slug discharge
8. Employee Safety and Training Program content and schedule
9. Description of previous slug or spill discharges that have occurred at your facility and corrective actions implemented to prevent recurrence

#### **EXHIBIT E- TANK CAPACITIES AND CONCENTRATIONS**

**REQUIRED**

The tank capacities and concentrations exhibit supplements the schematic flow diagram (Exhibit A) by detailing the locations, volumes, and working concentrations of tanks used in your plant's processes.

At a minimum your exhibit should include the following:

- For each business activity listed in Section C, Item 2, indicate the volume and operating concentrations of materials in tanks associated with these activities.
- For each process shown in the schematic flow diagram and listed in Section C, Item 4, show a sub-schematic diagram indicating all tanks used in the process and the direction of workflow through the tanks.
- Indicate the location of each process line on the site layout (Exhibit B) and indicate its position in relation to any floor drains. List the amount of secondary containment available for each tank. Show the direction of drainage and where each tank's contents would accumulate if the tank failed.

#### **EXHIBIT F – WASTEWATER TREATMENT SYSTEM DESCRIPTION**

**REQUIRED**

Attach a description of your current wastewater pretreatment system or systems. Include the following:

- Diagrams, specification sheets, and design data for pretreatment system components (pumps, tanks, mixers, etc.)
- Schematic flow diagram of the treatment process that shows the piping, tanks, filters, and control features
- Maximum flow rate for the treatment system design

#### **EXHIBIT G - ENGINEERING REPORT OR EVALUATION**

**May be REQUIRED – Contact KCIW**

Submittal of an engineering report for review and approval by KCIW is required prior to installation of a new pretreatment system or a modification to an existing pretreatment system. It's best to consult with KCIW before or during this application process to determine if your facility's pretreatment system requires engineering submittals developed per Chapter 173-240 WAC including an engineering report, plans and specifications, and an operation and maintenance manual. For certain situations, KCIW may require a professional engineer evaluation of the impact of a changed condition for an existing pretreatment system. Facilities that don't have an approved engineering report for their pretreatment system on file with KCIW, despite having made no modifications, will likely be required to provide one.

Examples of changes to the pretreatment process include:

- A change in treatment process influent parameters which has the potential of adversely affecting the effluent quality (i.e., increased flow rate, increase or change in pollutant concentration, or a change in chemical composition)
- A treatment plant modification (e.g., change in the type of clarifier, addition/replacement of pretreatment plant equipment, modification of the chemical process used, etc.)

Please contact the King County Industrial Waste Program at 206-477-5300 or [info.kciw@kingcounty.gov](mailto:info.kciw@kingcounty.gov) to determine what is needed for your facility.

## EXHIBIT H - DOCUMENTATION OF WATER BALANCE CALCULATIONS

**REQUIRED**

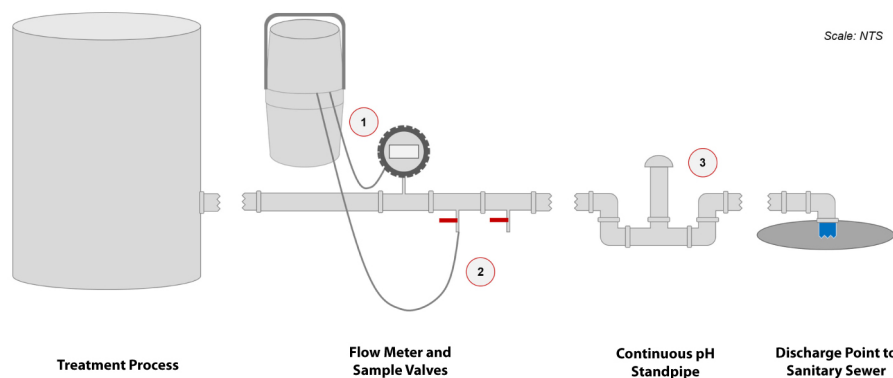
Submit a thorough documentation of the information, methods, and assumptions used to calculate your site's water balance. This documentation should include the following:

- 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 stormwater entering and leaving the site (only for industrial stormwater that you currently discharge or that you are proposing to discharge to the sanitary or combined sewer)
- Basis for determining the amount of water in raw materials and in products leaving the site
- Evaporation calculations
- Copies of your past 12 months of water bills

## EXHIBIT I – SAMPLE SITE INFORMATION

**REQUIRED**

Provide a simple description and drawing of your sample site or sites. Your sample site is your compliance point. Include a description of how samples are collected (manual composite, flow based composite, time based composite, grab). Include components such as flow meter, pH probes, etc. and how the data is recorded and stored.



- 1 If flow-proportional sampling is approved by KCIW, a 4-20 milliamp (mA) input interface cable must be used. Flow meter type may vary and must be installed according to specifications.
- 2 Must install two sample valves in order for KCIW and company to perform simultaneous sampling
- 3 Height of standpipe should be a minimum of 30 inches/76.2 centimeters with a minimum inner diameter of 3 inches/7.62 centimeters. For safety purposes, the top of the standpipe should not exceed 6 feet from the floor, if possible.

Note: This drawing represents an example site setup. Actual design may vary and must be approved by KCIW.