

# TRIBUTARY TRIBUNE

## Filling Out Permit Applications

**E**rrors and omissions in filling out a Wastewater Discharge Permit Application are common. While Source Control staff tries to work with our customers, it is ultimately your responsibility to submit a complete, correctly filled out application.

### General Tips

- Avoid leaving blank spaces; enter “not applicable” or “unknown” as appropriate. For example, if you leave the part on Waste Minimization Practices (Section D) blank, you are strongly implying that you do nothing to minimize waste and your permit conditions will be set accordingly.
- Avoid handwriting; print or type entries.
- Include a check made payable to the City of San Jose for the correct fee, based on Section L of your permit.
- Submit your application before your current permit expires, or late fees will apply.
- Make sure you are filling out the most recent version of the permit application (download current version at: [www.sanjoseca.gov/esd/water-pollution-prevention/eforms.htm](http://www.sanjoseca.gov/esd/water-pollution-prevention/eforms.htm)).

### Site Verification

In addition to the personnel involved in production or wastewater treatment, the person filing out the application must be knowledgeable of all aspects of the business. The same applies to the site contact meeting the City Inspector for the detailed permit inspection.

Be prepared to verify important details of your application when the City Inspector inspects the site. This inspection could include verifying the chemical inventory and wastestream plumbing, and other aspects of the facility not directly related to wastewater treatment and/or generation. Be prepared to allow the City Inspector access to any and all parts of your facility.

### Filling Out Section A

Sign under “Certified by” only if you are in a position of authority at the facility. If you have also prepared the application, sign under “Prepared by” as well, or have the person who prepared the application sign it.

### Filling Out Section C

Use the latest 12 months of water data, or explain the basis of the alternate flow data. Remember, all wastestreams discharged to the sanitary must be accounted for in this section, including mop water, groundwater, etc., whether or not they go through your sample box. Your incoming and outgoing water estimates should roughly balance.

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[www.sanjoseca.gov/esd](http://www.sanjoseca.gov/esd)

The **Tributary Tribune** serves the cities of San José, Santa Clara, Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including Campbell, Los Gatos, Monte Sereno, Saratoga), County Sanitation Districts 2-3, Sunol & Burbank Sanitary Districts

## Filling Out Section E

You must submit an accurate site plan or map. Such maps could be incorporated into your permit and must show the following:

- A general layout of the facility
- The location of City water meters and water lines
- The sanitary sewer laterals and the street(s) to which they are discharged
- The location of the sample point(s)

**D. ENVIRONMENTAL CONTROL PERMITS**  
List all other environmental control permits issued to this facility.

Name of Permit	Details
City of San Jose - Environmental Health Division	
City of San Jose - Hazardous Waste Generator Permit	
San Jose Air Quality Management District - Permit to Operate	
Statewide Air Quality Control District (AQCD) Permit	
Local Hazardous Materials Storage Permit (San Jose)	
California Materials Storage Permit (San Jose)	
Hazardous Waste Generator Registration	
Other:	

**E. BUILDING AND PLUMBING LAYOUT - FLOW DIAGRAMS**  
At overall provider level at 8.5 X 11 scale.

(1) **Plumbing Layout:** On a separate sheet, show a scale of the building and plumbing layout of your facility. Identify the location of sewer stacks, connection points to main sanitary sewer, wastewater process components, city water meters and incoming water lines, storm drains, influent/effluent flow meters and any recycling ponds. Identify street location, and 11' of clearance.

(2) **Pretreatment System:** On a separate sheet, identify your pretreatment system(s), if applicable. Show the routing of process waters from each wastewater generating process to the treatment system that will address a 100% reduction in flow of pollutants. Identify media, adsorbents or precipitation system, if applicable, used in a gravity separation. Provide a list of treatment chemistry used. Show the flow of treated water from the treatment system to the sanitary sewer. Include all recycling equipment, pH monitors, flow meters, pump meters, sample points, etc.

(3) **Block Flow Diagram:** On a separate sheet, show a block flow diagram showing the flow of water, materials and chemicals from start to final discharge point for each activity that generates wastewater. Include average flow in gallons per day for each line, identify all unit processes (sludge and number flows in compliance in numbers identifying processes on the building and plumbing layout. (See Block Flow Example, Page 6)

**F. WASTEWATER CHARACTERISTICS**  
From the following list of wastewater characteristics, check those that apply to the wastewater generated in this facility prior to pretreatment. **Place check in the box.**

<input type="checkbox"/> Flammable	<input type="checkbox"/> Particles Larger Than 10"
<input type="checkbox"/> Toxic Substances	<input type="checkbox"/> Suspended Solids
<input type="checkbox"/> Acids, pH < 1.0	<input type="checkbox"/> High Biological Oxygen Demand (BOD)
<input type="checkbox"/> Alkalis, pH > 12.5	<input type="checkbox"/> Ammonia
<input type="checkbox"/> Heavy Metals	<input type="checkbox"/> Greases/Oils/Fats
<input type="checkbox"/> Solvents	<input type="checkbox"/> Temperature > 150 degrees F
<input type="checkbox"/> Flammable Liquids	<input type="checkbox"/> Other (specify):
<input type="checkbox"/> Petroleum Products	

Does your facility's production and/or discharge have seasonal variation? **YES**  **NO**  (circle one)  
If yes, describe the cause of the seasonal variation and the approximate dates when the variation occurs.

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## Filling Out Section G

You must attach an evaluation of the pretreatment system used in your facility. Your analysis must demonstrate the rationale for choosing the system, including its effectiveness, design capacity, physical size, loading rate, maintenance, etc.

**G. PRETREATMENT**  
Check the pretreatment methods used in your facility. Include a note for each pretreatment method checked, and list the facility design accordingly.

Capacity	Capacity
<input type="checkbox"/> Clarifier or Interceptor	<input type="checkbox"/> Biological Treatment
<input type="checkbox"/> pH Adjustment	<input type="checkbox"/> Air Stripping/Oxidation
<input type="checkbox"/> Ion Exchange	<input type="checkbox"/> Chemical Precipitation
<input type="checkbox"/> Greases or Oil Separation	<input type="checkbox"/> Cyclone Separation
<input type="checkbox"/> Electrolytic Recovery	<input type="checkbox"/> Oxidation Reduction
<input type="checkbox"/> Wastewater Segregation (including systems)	<input type="checkbox"/> Coagulation
<input type="checkbox"/> Filtration ( ) / Screen ( ) / Bag ( ) / Filter Press	<input type="checkbox"/> Other:
<input type="checkbox"/> Sludge Recovery	

Describe each pretreatment system checked above and evaluate the pretreatment equipment to determine whether the treatment system is adequate to ensure compliance with the Federal and local limits (e.g. design capacity, effluent rate, loading rate, etc.)  
If not, describe how you will address the deficiency. (Please attach additional sheets if necessary.)

Is your treatment system adequate to achieve compliance with Federal and local discharge limits?  
 **YES**  **NO** If yes, describe how this evaluation was done. Evaluation should address treatment capacity, operation, flow rates, loading and maintenance.

Explain how compliance is verified at each sample point.  
(e.g. In-house testing, verified outside lab, etc.)

If wastewater is treated and/or discharged in batches, complete the following for each of these wastewater:

Number of batches discharged per \_\_\_\_\_ (circle one)  
Average volume per batch \_\_\_\_\_ (circle one)  
Other comments on batch treatment, including material treated and treatment technology:

**SAMPLING AND MONITORING**  
After pretreatment (if control water meters are installed prior to mixing with other waste streams):  
 **YES**  **NO**  **Not Applicable**

If "NO" please explain:

Provide a written description of each sampling/monitoring location including the name of the room it is in, which well (North/South/East/West), and what equipment it is located near.

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## Filling Out Section H

For every wastestream not discharged to the sanitary sewer or storm drain, you must complete a SEPARATE copy of Section H of the Application. For example, if you generate treatment sludge, medical wastes and spent chemical, you will need to fill out 3 separate copies of Section H.

**COMPLETE THIS SECTION FOR EACH TYPE OF WASTE NOT DISCHARGED TO THE SANITARY OR STORM DRAIN. USE A SEPARATE FORM FOR EACH TYPE OF WASTE. (e.g. Spent Glass Beams)**  
Do not include wastes which are sanitary landfill such as trash and garbage.

**H. NON-DISCHARGED WASTE STREAM(S)**  
Identify the waste (e.g. spent chemical, treatment sludge, medical waste, etc.) and the process that generates the waste.

Physical state of the waste (liquid, sludge, slurry, etc.):

Real characterization of waste (list hazardous ingredients and attach supporting MSDS or lab analysis):

Rate of waste generation in terms of quantity per day, week, month, or quarter:

**ON-SITE STORAGE**  
Method of Storage: \_\_\_\_\_  
Typical Volume Stored: \_\_\_\_\_ Typical Length of Time in Storage: \_\_\_\_\_  
Is Storage Site Secondary Containment? ( ) Yes ( ) No  
Are there provisions for Surface Drainage Collection? ( ) Yes ( ) No  
If you answered "yes" to either question above, please describe process for secondary contained area surface drainage collection: \_\_\_\_\_

**TRANSPORTATION**  
Name of Waste Hauler: \_\_\_\_\_ EPA No. \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: ZG: \_\_\_\_\_ Phone: \_\_\_\_\_

**DISPOSAL**  
Name of Waste Hauler: \_\_\_\_\_ EPA No. \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: ZG: \_\_\_\_\_ Phone: \_\_\_\_\_  
Method of Disposal (e.g. recycled, land disposal, incineration, etc.): \_\_\_\_\_

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If you have further questions on filling out your permit application, please call your inspector at **(408) 945-3000**.

# Update: South Bay Water Recycling (SBWR)

In 2005, the South Bay Water Recycling (SBWR) distribution system expanded to over 105 miles, providing more than 2.6 billion gallons of recycled water to over 530 customers throughout the Water Pollution Control Plant's service area. This represents a 12% increase for recycled water delivered as compared to the previous year. An important milestone for the use of recycled water, this increase equates to 5% of all potable water used in our area through the heaviest demand months (August through October).

Recently, several new power plants with industrial cooling tower operations have been added to the recycled water system, strengthening the need for reliable, 24/7 service. Toward this end, two 2.75 million gallon reservoirs have recently completed construction and will be commissioned for service shortly. Supplemental improvements to pump stations and other infrastructure have also been completed.



## Ask The Inspector

Starting with the next issue, we'd like to introduce this item, which will address at least one frequently asked question per publication.

If you would like to contribute a question or concern relating to permitting, regulations or the environment in general, please drop us an e-mail at [tributary.tribune@sanjoseca.gov](mailto:tributary.tribune@sanjoseca.gov). Anonymous questions are welcome and will be answered. Thanks and we hope to hear from you.



# Effects of Low pH on the Collection System

Most of you know that it's a standard wastewater permit condition for industrial process water discharged to have a pH higher than 6.0 and lower than 12.5. Some of you, however, may not know *why* pH control is important. This article describes the damaging effects of low pH on sewer infrastructure, the public and the environment.

## Background

pH is a measure of the hydrogen-ion concentration in an aqueous (water-based) solution. How chemical reactions will occur in water is strongly affected by pH, and vice versa. A pH of less than 7 is considered acidic, while a pH higher than 7 is considered basic.

For industrial wastewater discharges, local ordinance prohibits a pH of less than 6.0, while federal wastewater regulations prohibit a pH of less than 5.0. California state hazardous waste regulations prohibit a pH of less than 2.0 or greater than 12.5, with criminal sanctions for violators.

## Sewer Lines and Pump Stations

The corrosive effects of low pH discharges on collection system piping and equipment are a strong reason to prohibit acidic discharges into the sewer. It is common to open manholes and see sewers damaged by etching, if the IU generates acidic wastes. Sewers can also be destroyed by long-term exposure to acidic discharges, shortening the lifespan of sewer mains, pump stations and other equipment, and needlessly burdening taxpayers.

## Did You Know?

### Mercury-Added Switches and Relays are Now Banned!

A new law banning the sale and distribution of certain new or refurbished mercury-added products has been passed. The tiered schedule for banned products takes effect as follows:

- July 1, 2006—Ban on the use of mercury switches and mercury relays (devices that open and close electric contacts, circuits, or gas valves)
- January 1, 2008—Ban on the use of mercury diostats (also called a Flame Sensor, a switch that controls a gas valve, typically found in ovens or oven portion of gas ranges)

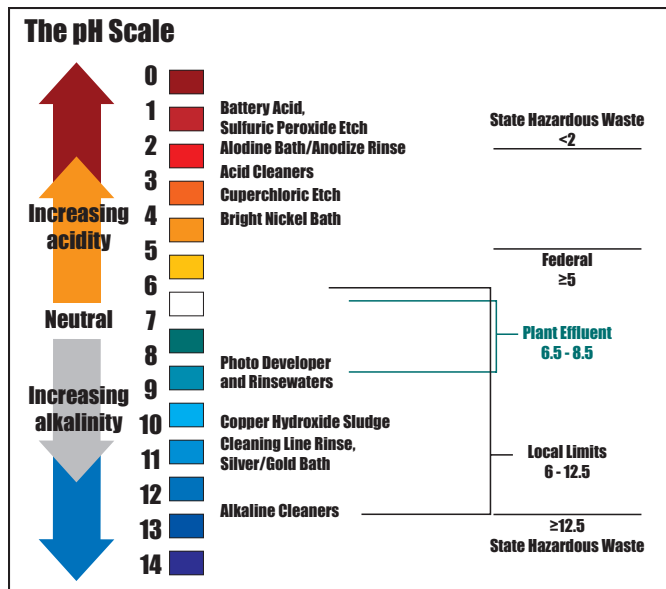
## Safety

While the safety of workers exposed to acidic water is a clear concern, a less obvious threat is the risk of gas evolution in an acidic environment. Many pollutants that stay dissolved in neutral or basic conditions will off-gas if the sewage becomes acidic. This includes dangerous levels of gases such as hydrogen sulfide and cyanide, which can generate explosive and unsafe conditions in the sewer, endangering collection system workers and the general public.

## Particulate vs. Dissolved Metals

Those of you who rely on precipitation technology know that metals (many of which are regulated pollutants) stay in particulate form in limited pH ranges. Acidic waters promote dissolution of metals that were in "solid" form, either as precipitate or as small particles. While virtually all particulate pollution is captured in Plant processes prior to discharge of treated water to the Bay, much of the dissolved pollution remains in solution. In addition, low pH can adversely impact biological processes at the Plant, causing the Plant to be

in violation of its discharge limits. Thus, regulating the pH of sewage in the collection system that leads to the Plant will help protect and nourish the health of the Bay.



For more information please download the DTSC Fact Sheet at the following link:

[www.dtsc.ca.gov/HazardousWaste/Mercury/upload/AB\\_1415\\_FS.pdf](http://www.dtsc.ca.gov/HazardousWaste/Mercury/upload/AB_1415_FS.pdf)



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[www.sanjoseca.gov/esd](http://www.sanjoseca.gov/esd)

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## IUs Contribute to Website Redesign

**M**any Environment Health and Safety managers in the Bay Area rely heavily on the Internet to get their jobs done. Whether they need to look up a regulation, download a form, or prepare a report, most tasks will depend on information found on the Internet.

How well that information is organized and intuitive to navigate contributes greatly to the experience of the end user and the likelihood of a return visit!

In April and May this year, the Watershed Protection Division undertook a research project to find out how Industrial Users would search for information on wastewater and stormwater regulations for job-related tasks.

The results of this study are now being used to redesign the Division's website with improved navigation. New topics will be added to the website and grouped using the feedback of the eight volunteer Industrial Users who participated in the study.



**IUs are asked to sort and label topics found on the Division's website, during focus group sessions.**

Watch for future articles in this newsletter announcing the launch of the newly redesigned Watershed Protection Division website. If you want to make a suggestion for the website, send an e-mail to:

[ESDWebmaster@sanjoseca.gov](mailto:ESDWebmaster@sanjoseca.gov)

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