

# Industrial Pretreatment Newsletter

Published for industries regulated by the King County Industrial Waste Program (KCIW)



**King County**

Department of  
Natural Resources and Parks  
Wastewater Treatment Division  
**Industrial Waste Program**

Fall 2016

*KCIW works with companies to make sure their wastewater is treated properly.  
This protects communities, the environment, and the economy.*

## How to report data below detection limits – new process

Self-monitoring is an important part of King County Industrial Waste's efforts to keep our waterways clean. Some facilities have self-monitoring requirements in their permit or authorization. They are required to complete a [self-monitoring form](#) to report their data to King County.

### Help us help you:

To ensure KCIW can efficiently process the data you submit in your [self-monitoring form](#), please do the following:

1) Report data in the correct corresponding column.

✓ Example: Lead, should be reported in the "Lead, Pb" column.

2) Please ask your laboratory to provide the method detection limit in their reports and include them in the form you submit to KCIW.

3) If data is not detected, report the method detection limit with a less than ( < ) sign.

*Note: some laboratories use other terms such as "practicable quantitation limit" to describe the method detection limit.*

✓ Example, if the detection limit is 2, you would report "<2". Do not use "Not Detected" or "ND" without a value.



### Excerpt from a self-reporting form.

All units are mg/l unless otherwise noted.															Note: For cyanide, circle test performed - amenable or total ▼														
Sample Date (circle)	Sample Type C (Composite) G (grab) BC (batch)	pH		Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Mercury, Hg	Nickel, Ni	Silver, Ag	Zinc, Zn	Cyanide (CN) Amenable (A) or Total (T)	Nonpolar Fats, Oils, & Grease (Average of 3 grabs)	Daily Flow (GPD) Industrial															
		Min	Max																										
1																													
2																													
3																													

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## These changes will help KCIW in the following ways:

- Ensure the lab's analytical methods are sufficiently sensitive. (If methods are not sensitive enough, a lab may fail to detect a parameter that is over the discharge limit.)
- Improve ability to monitor and analyze data using graphs.
- Streamline data entry.

## How does KCIW use self-monitoring data?

KCIW uses the self-monitoring data to make permitting decisions. The data also help KCIW provide technical assistance to industrial users and to recommend changes in the sampling process during a permit renewal process.

## Focus on Fats, Oils and Grease - FOG

Fats, oils and grease (FOG) can wreak havoc in the sewer system. In this newsletter, learn about:

- KCIW's new customer procedure for measuring free-floating polar FOG
- Change in FOG samples
- Saving money on lab fees
- How businesses help protect sewers by controlling free-floating polar FOG (FF-FOG)

## Measuring Free Floating Polar FOG

King County's customer [procedure for measuring \(FF-FOG\)](#) is now available online.

Free-floating polar fats, oils, and grease float in water at normal sewer temperatures. FF-FOG can block sewer lines, creating major and expensive problems for home and business owners, sewer line operators, as well as wastewater treatment plants. To reduce the impacts of FF-FOG on the sewer system, King County Industrial Waste requires some food processing businesses to measure the FF-FOG in their industrial wastewater before they discharge it.

To measure FF-FOG, businesses use a specially calibrated Nalgene flask (see photo) to collect a sample of their wastewater. After a settling period, they then measure the amount of FF-FOG. King County has [documented the procedure](#) for measuring and reporting FF-FOG and now has a customer specific version online. Businesses must follow the KC procedure, use the exact flask detailed in the procedure and report their data to KCIW. King County can provide an approved flask to the business if requested. If a sample contains too much FF-FOG, according to the guidelines, the business may not release that wastewater into the sewer system.

By keeping FF-FOG out of the sewer, businesses meet requirements that protect the system and reduce the chance of sewer backups into their own businesses.

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Nalgene flask used to sample and measure FF-FOG.

## KCIW has restrictions for two kinds of FOG:

- "Polar FOG" is of animal origin and congeals or sticks together in clumps, which can create clogs in the sewer.
- "Non-polar FOG" is of petroleum or mineral origin. It can harm the biological phase of sewage treatment where microbes are used to break down wastes.

## FOG Split Samples no longer available

KCIW will discontinue offering FOG samples as split samples on January 1, 2017. Facilities can still ask for a portion of King County's sample (or a "split sample") for other parameters such as metals and organics. Splits are no longer available for FOG – here's why:

- It's technically challenging to split FOG samples
- Splitting could impact the quality of KCIW's compliance sample
- Splitting FOG samples is not recommended by EPA

**Questions?**  
*Ask your investigator or  
KCIW's sampling team.*

## How to Save Money on Laboratory Fees when Sampling for Non-Polar FOG

*KCIW follows current federal protocols for composite non polar FOG samples and analyzes them for total FOG using the N-Hexane Extractable Material (HEM) FOG method.*

*King County analyzes for non-polar fog only when HEM results are greater than 100 mg/L. King County uses the Silica Gel Treatment (SGT) method to test for non-polar FOG.*



### 1) Ask your Lab to composite the grab samples you take

If your Discharge Permit or Authorization requires you to self-monitor for nonpolar FOG, your facility's laboratory is **authorized, but not required** to composite the individual samples. While you are required to take three grab samples, you may be able to save money by asking your laboratory to use a composite method when they analyze the samples.

If you want to use this method, be sure to:

- Collect and store the three grab samples you collect in separate containers until they get to the laboratory.
- Have these samples blended at and by the laboratory performing your oil and grease analysis.

### 2) A test for total FOG might be all you need

Total FOG is a combination of polar and non-polar FOG. King County's local limit for non-polar FOG is 100 milligrams per liter (mg/L). If your facility's total FOG is below this limit, then your non-polar FOG meets requirements.

***Ask your laboratory if analyzing a composite for total FOG rather than non-polar FOG would be a cost saving option for your facility.***

Keep in mind that if the total FOG result is greater than King County's discharge limit, you will still be required to have your laboratory determine the non-polar FOG result, which requires an additional step.

You may report the Total FOG value in the column indicated for non-polar FOG.

### Definitions

#### Grab sample:

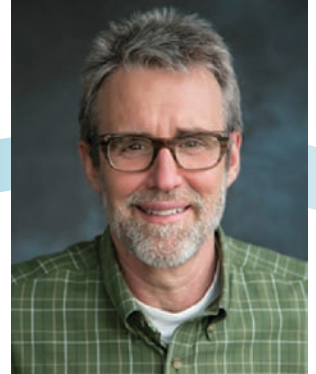
*An individual sample collected at a specific time.*

#### Composite:

*Portions of several grabs blended together for analysis.*

# UPDATES

## *Mark Isaacson, New King County Wastewater Treatment Division Director*



In October 2016, Mark Isaacson was appointed the Director of the Wastewater Treatment Division (WTD) in the Department of Natural Resources and Parks.

As the director of the King County Water and Lands Resources Division for 11 years, Mark gained experience leading environmental programs with large capital and operating budgets, and established a very stable organization with multiple revenue streams.

Mark has a Master of Public Administration degree from the University of Washington and a Bachelor of Environmental Studies degree from the University of California at Santa Barbara.

### *KCIW uses the Lean method to become more efficient*

King County has been using Lean techniques to deliver more value to our customers by eliminating waste in our work processes. With Lean problem solving we plan, measure, and adjust our work to continuously improve and to more effectively deliver services.



In March 2016, KCIW launched a new, simpler general authorization process for small construction projects. KCIW is happy to report that since March, 40 permits have been issued in less than 1 week! Read more about the new process on page 4 of the [Summer 2016 Newsletter](#).

Here are some other ways KCIW is becoming a Leaner organization:

- To save resources and speed up processing we are:
  - ✓ No longer using bond paper letterhead
  - ✓ Printing documents double sided to save resources – Speeds up processing
- To keep our customers notified, we are now sending automated email receipts to let you know we have received your communication.
- We have also streamlined our procedures and created checklists to ensure our customers receive documents and invoices more quickly.

# How to Avoid Penalties

Late submissions are a frequent and preventable reason for violations and fines. Plan ahead. File your applications and reports on time.

## Did you know...?

- Your permit shows your specific deadlines
- You can contact King County and ask for an extension to avoid being late
- You can send your reports electronically to KCIW by emailing [info.KCIW@kingcounty.gov](mailto:info.KCIW@kingcounty.gov)

## Companies that violate clean water rules receive penalties



**King County**

Department of Natural Resources and Parks  
**Wastewater Treatment Division**

Industries must pretreat the water they use before they send it to the sewer. They have to monitor and report compliance with their permit. King County's Industrial Waste Program regulates

compliance and helps industries meet their permit requirements. Most companies in King County do an excellent job following clean water rules. King County is required to report on those who do not.

**From January to June, 2016, these companies were in "significant noncompliance" with federal rules and/or received fines.**

Company and Type of Violation	Reason for Publication
<b>Marine Vacuum Service Inc.</b> REPORTING VIOLATION: Final Notice for failure to file permit renewal application.	Significant noncompliance. Fined \$500. The report was submitted. No further action.
<b>Roosevelt Development LLLP - University Commons Construction Project</b> REPORTING VIOLATION: Final Notice for failure to file end-of-project self-monitoring report.	Fined \$500. The report was submitted. No further action.

## Other violations

In addition, King County Industrial Waste Program acted on five violations at five organizations from January to June 2016. These were not in "significant noncompliance." They did not receive fines. Where applicable, they reimbursed the county for additional monitoring costs.

Questions or information for King County?

- Email [info.KCIW@kingcounty.gov](mailto:info.KCIW@kingcounty.gov)
- Call 206-477-5300 or 711: TTY Relay
- Visit [www.kingcounty.gov/industrialwaste](http://www.kingcounty.gov/industrialwaste)

# New Information for Breweries Available Online

## Best Management Practices Coming



KCIW's [new webpage for breweries](#) explains why it's important for breweries to meet discharge limits, how to tell if they need formal authorization from KCIW to send their wastewater to the sewer, and how to get authorization.

In addition, KCIW is working with breweries to develop best management practices (BMPs) to help them meet [local discharge limits](#) and manage costs. BMPs are activities, procedures, and features that businesses can implement to minimize the amount of pollutants they discharge to the sanitary sewer and/or release to the environment.

Wastewater from breweries can contain higher concentrations of organic matter than typical household wastewater. Businesses that send concentrated waste to the sewer system pay an extra surcharge fee because it costs more to treat.

All breweries that send their wastewater to the King County sewer system must make sure their wastewater meets [local limits](#) for [food waste solids](#) and for pH. Here's why:

- Solids can settle in the pipes and restrict or block flow in sewer lines. A company or facility that discharges solids that causes a sewage backup is liable for any damages.
- Wastewater that is too acidic or too alkaline can seriously corrode the sewerage system. Balancing the pH of wastewater extends the life of the sewer system.
- Brewery waste that is high in temperature can be a concern at King County's smaller treatment plants such as the City of Carnation and Vashon.

The BMPs for breweries will offer guidance on managing and disposing of solids and unused product and managing pH. When they are complete, the BMPs will be posted on the [KCIW web page for breweries](#).

**KING COUNTY NEEDS A STRONG ECONOMY  
AND A CLEAN ENVIRONMENT.  
KCIW SUPPORTS BOTH.**

**This material is provided in alternative  
formats upon request by calling  
206-477-5300 and TTY relay: 711**

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**King County**

*Creating Resources from Wastewater*