

FREMONT SIPHON

sewer project



King County

Department of
Natural Resources and Parks
Wastewater Treatment Division

Project Newsletter

SUMMER 2011

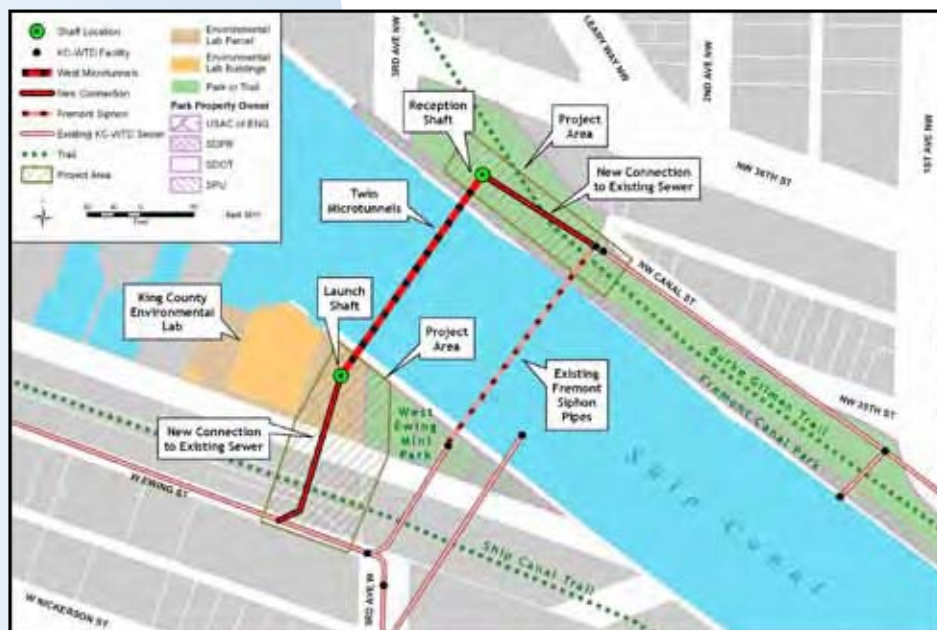
King County Recommends Replacement of the Fremont Siphon

The Fremont Siphon is a critical conveyance line that carries wastewater from the county's northeastern service area to the West Point Treatment Plant. The siphon pipelines are located under the Lake Washington Ship Canal, west of the Fremont Bridge. The siphon was installed in the early 1900s and has provided wastewater conveyance service for almost 100 years. In 2010, King County began evaluating options for rehabilitation or replacement of the Fremont Siphon to provide safe, reliable wastewater conveyance for years to come.

Project locations

King County plans to construct a launch pit on the county's property adjacent to the Queen Anne neighborhood. A retrieval pit will be built on the Fremont side of the Ship Canal, resulting in temporary access restrictions to a portion of Canal Park.

Connections from the new siphon to the existing North Interceptor conveyance pipes will require street work in both Fremont and Queen Anne. Both the Burke Gilman Trail and the Ship Canal Trail will be affected during construction.



Fremont Siphon pipeline replacement microtunnel crossings

After investigating a range of project alternatives in 2010, King County is planning to replace the existing Fremont Siphon with a new crossing under the Lake Washington Ship Canal. Two microtunnels will be established just west of

the existing siphon, and will be connected to the North Interceptor conveyance pipelines on the north and south sides of the canal. The new siphon pipes will be designed to operate with the same capacity as the existing system. Odor control options will be considered during the design phase. The County will still retain the existing space in the Fremont Tunnel for Wastewater Treatment Division uses.

King County protects public health and the environment by conveying and treating the region's wastewater at two award-winning treatment plants, South Plant in Renton and West Point in Seattle's Discovery Park



An approved traffic control plan will be in place before construction begins



We will work with bicyclists and Seattle Department of Transportation to plan detours for the Burke

Gilman and Ship Canal Trails during construction



Fremont community meeting, 2010

Next steps

- Summer 2011 Preliminary design begins
- 2011 – 2014 Project design, environmental review and permitting



What did we hear from the community?

King County conducted a range of public outreach activities during fall 2010, including a newsletter mailing, briefings for organizations and agencies, a community meeting, and a business survey. A more detailed summary can be found on our project web page or obtained by mail upon request.

We learned that the community supported the new pipeline crossing alternatives over rehabilitation options. People voiced concerns for the project team to consider during both the selection process and project design, including:

- Maintaining street access and parking
- Construction work hours and noise
- Traffic detours for vehicles and bicyclists
- Odor from existing infrastructure

We were given helpful suggestions on the best ways to keep neighbors informed, and learned more about how people live, work, study and recreate in the project areas.

What happens during project design?

The Fremont Siphon Project will begin design in summer 2011. During this phase, the county's project team will develop the recommended project proposal and perform an environmental review under the State Environmental Policy Act (SEPA).

Later, permits will be acquired for the project and contract specifications will be developed based on project design and permit conditions.

As project elements are developed throughout the design phase, we will provide updates and information on project details including construction techniques, duration, and site restoration. We will use a variety of methods to keep in touch with you, get feedback, answer questions, and address concerns:

- Presentations to community groups and organizations—we are available for briefings upon request
- Community meetings—watch for a meeting notice in fall 2011
- Meeting one-on-one with neighbors
- Web, newsletter and flier updates
- Participation in community events

How microtunneling works

Microtunneling is a remotely-controlled pipe construction method in which pipe is pushed through the ground by hydraulic jacks, with a machine in front of the pipe that removes soil as the pipe moves forward. The excavated soil is mixed with a fluid and the resulting mixture is pumped up to the ground surface where the soil and fluid are separated and reused or recycled. This method allows installation of pipes without having to excavate an open trench in difficult locations like the Lake Washington Ship Canal. King County has carried out over a dozen microtunneling projects.



Pipe sections are inserted into the growing tunnel through the launch pit

Two excavated pits are needed to launch the microtunnel machine at the beginning, and to retrieve it when tunneling is complete. The highest level of construction activity is at the launch pit, where pipe sections are added and soils are conveyed from the tunnel for processing.



A slurry separation plant is used to separate tunnel soils from fluid used for excavation

King County's sewer inspection truck is a hit at the Fremont Fair!

King County Wastewater Treatment Division's sewer inspection truck provided Fremont Fair attendees with an opportunity to see the equipment we use to inspect our conveyance system, up close and personal. Over 400 people visited the truck and the remotely controlled cameras that crawl through sewer pipes as the "eyes" of our inspection team. The WTD team talked to visitors about sewer systems in the Fremont, Ballard, and Queen Anne areas, showed videos and explained how we collect information and data to plan maintenance, repair and replacement of over 350 miles of pipelines that convey wastewater for about 1.5 million people in a 420-square-mile service area. Visitors also learned about the Fremont Siphon project and how they can help protect water quality by being "stewards of the sewers".



Checking out the sewer camera robot



Facilities Inspector Steve Foss walks a visitor through the data collection process

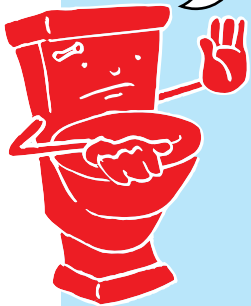


King County's sewer inspection truck

DON'T FLUSH TROUBLE!

These items belong in the TRASH CAN!

STOP!
Is it flushable?



Grease



Cleaning wipes



Hair



Disposable diapers, nursing pads & baby wipes



Condoms



Facial wipes



Tampons and pads

Is it flushable?

The label might say "flushable," but disposable wipes and other products are clogging our sewer lines and damaging pumps and other equipment.

Not only are these problems expensive to fix, they can also cause raw sewage overflows into homes, businesses and local waterways. So, think trash, not toilets!

To learn more, including how to get rid of things you no longer want or need, visit us on the Web at <http://www.kingcounty.gov/wtd> or call the Wastewater Treatment Division at 206-684-1280 or 711 TTY.

Use the trash can, NOT the toilet!





**Department of
Natural Resources and Parks**
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King County decides to replace the Fremont Siphon!

Alternative Formats
206-684-1207 (voice) or 711 (TTY)



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For more information
Visit the project Web page at [www.kingcounty.gov/
environment/wtd/Construction/Seattle/FremontSiphon.aspx](http://www.kingcounty.gov/environment/wtd/Construction/Seattle/FremontSiphon.aspx)
Email or phone Monica Van der Vieren at
monica.vandervieren@kingcounty.gov or 206-263-7301.

King County has extensive experience working on sewer construction projects in densely populated urban areas, in parks, and along waterways. We're committed to working closely with residents, businesses, recreational users, and commuters in the Fremont and Queen Anne project areas throughout project design and construction.



Keeping the community up to date