



Project Overview

Fall 2013

King County is currently completing design for replacing the Fremont Siphon, a wastewater conveyance system that extends from Fremont to Queen Anne in a concrete tunnel located under the Lake Washington Ship Canal. After reviewing a range of options to rehabilitate or replace the Fremont Siphon, King County proposes to install two new pipelines under the Lake Washington Ship Canal just west of the existing pipelines to replace this critical infrastructure. This option allows the County to maintain operations during construction and provide safe, reliable service for years to come. The County will retain the existing space in the Fremont Tunnel – where the current siphon is located – for Wastewater Treatment Division uses.

Why does the Fremont Siphon need to be replaced?

The Fremont Siphon was installed in the early 1900s and after providing service for almost 100 years, it has reached the end of its service life and requires replacement.

A critical conveyance line, the Fremont Siphon carries up to 220 million gallons per day from a broad service area to the West Point Treatment Plant in Discovery Park.

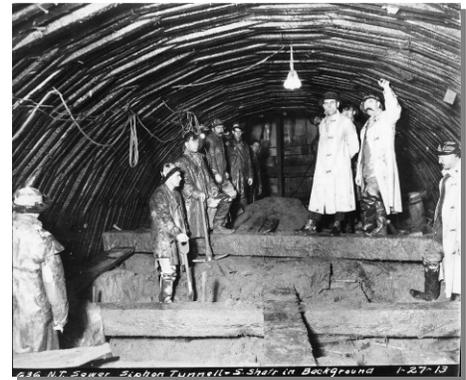
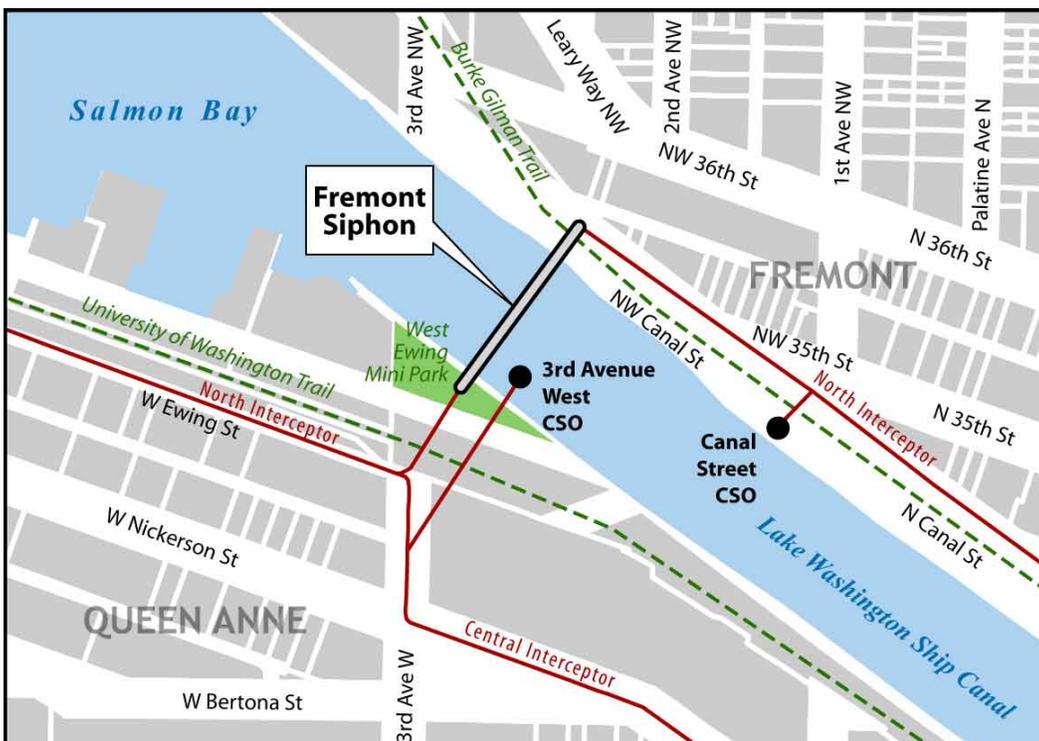


Photo courtesy of Seattle Municipal Archives



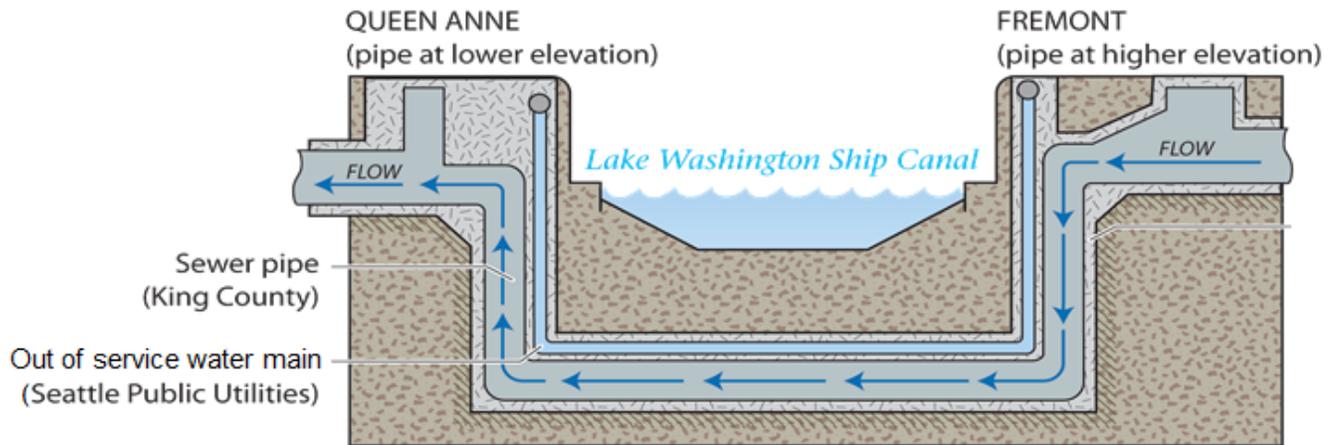
Project site map

The Fremont Siphon is located in a concrete tunnel under the Lake Washington Ship Canal, west of the Fremont Bridge.

The tunnel and 48" and 60" cast iron pipes were constructed as the North Trunk Sewer from 1907-1913.

What is a siphon and how does it work?

The Fremont Siphon is an inverted siphon. An inverted siphon is used to pass flow through a valley or under a waterway. Inverted siphons take advantage of the basic rule that water flows downhill. Wastewater is pushed through the siphon by the upstream flow that is at a higher water level than the downstream level.



Project elements

- Two microtunnels under the Ship Canal
- Access shafts located on both Queen Anne and Fremont sides of canal
- Launching shaft located on Fremont side of canal
- Connection to existing interceptor pipelines
- City of Seattle combined sewer overflow (CSO) outfall work
- Odor control facility



The Burke-Gilman Trail in the Fremont Canal Park

Project timeline

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|--------------------------------|------|--------------|------|------|
| Early design | | | | | |
| | SEPA and public comment period | | | | |
| | Final design | | | | |
| | | | Construction | | |

For more information

Visit www.kingcounty.gov and search “Fremont Siphon”

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