King County
Protecting Our Waters
Doing our part on rainy days

Water Quality Assessment and Monitoring Study Update

December 2015

Water Quality Is Improving in Duwamish Estuary

The Water Quality Assessment and Monitoring Study has encouraging news about water quality in the Duwamish River Estuary. The assessment gathered and analyzed existing data from recent decades to characterize water quality impairments and to evaluate long-term trends.

The assessment found that from the 1970s to 2013, water quality has been improving in the estuary:

- Decreasing bacteria
- Increasing dissolved oxygen
- Decreasing phosphorus
- Decreasing nitrogen
- Decreasing ammonia

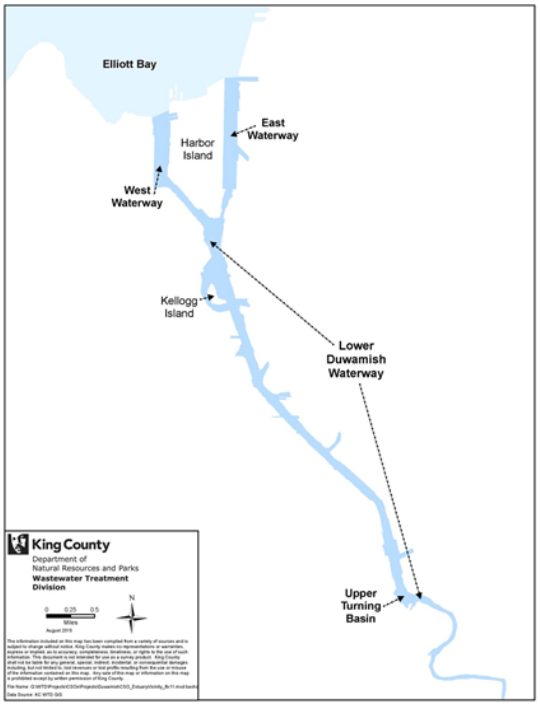
One trend that does not show improvement is water temperature; the estuary is getting warmer. There are not enough data to do a trend analysis of metals and organic compounds.

The improvements in bacteria, dissolved oxygen, and nutrient levels all occurred during a time when King County's population was increasing. These improvements are likely due to a number of factors, including CSO control, increasing stormwater management, improved agricultural practices, and effects of the Growth Management Act.

We found that concentrations of ammonia, metals, and most organic compounds in the estuary meet Washington state water quality standards for protection of aquatic life. However, bacteria, temperature, and dissolved oxygen sometimes do not meet standards. And PCBs do not meet standards designed to protect the health of people who eat certain fish in the estuary. People are advised to avoid eating these fish.

Why an assessment?

The assessment will inform King County's **Combined Sewer Overflow (CSO) Program**, now called **Protecting Our Waters.** The assessment will help ensure that investments in CSO control are well planned to optimize water quality improvements in Elliott Bay, Lake Union/Ship Canal, and the Duwamish River.



Superfund Is Addressing Sediment Quality

The assessment reviewed data from the three Superfund sites in the Duwamish Estuary. Elevated PAHs, PCBs, metals, and dioxin/furans are found in both sediments and fish tissue. Phthalates are found in sediments. Cleanup plans are either final or being developed by Environmental Protection Agency for these sites.

Next Steps

The Duwamish Area Report will be published in 2016, along with the rest of the Water Quality Assessment and Monitoring Study findings. In the meantime, you can see slides describing the draft report on the Web. Check the presentation that the Science and Technical Review Team reviewed on October 29, 2015.

Find out more on the Web at http://www.kingcounty.gov/environment/wastewater/CSO/WQstudy.aspx or by contacting **Erika Peterson at 206-477-5525 or Erika.peterson@kingcounty.gov**.