Focus on: Governor's 2020 Supplemental Budget for Addressing Nutrients in Puget Sound

Learn More

About reducing nutrients and the Puget Sound Nutrient Reduction Project
www.ecology.wa.gov/psnrp

About the Salish Sea Model
www.ecology.wa.gov/salishseamodel

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What problem are we trying to solve?

Human sources of excess nutrients are causing too much plant and algae growth in Puget Sound, which ultimately depletes dissolved oxygen (oxygen). Many parts of Puget Sound have oxygen levels that fall below the concentrations needed for marine life to thrive and concentrations that are below our state's water quality criteria.

Over the last decade, Ecology and our partners have collaborated on the Salish Sea Model (Model) and the science to better understand nutrient loads and impacts to Puget Sound. In early 2019, a modeling analysis from the Puget Sound Nutrient Source Reduction Project confirmed that nutrients discharged by domestic wastewater facilities are clearly contributing to this problem, as are sources from surrounding watersheds. The Governor's 2020 budget for Orca and salmon recovery includes funding for two projects that support our efforts to understand and control excess nutrients in Puget Sound.

Nutrient Controls for Puget Sound ($535,000, 1.2 FTEs)

Discharges of excess nutrients to Puget Sound from domestic sewage treatment plants (WWTPs) are contributing to lower oxygen levels in Puget Sound. Ecology must require WWTPs to control nutrients consistent with the federal Clean Water Act and Washington's Water Pollution Control Act.

In August 2019, we made a preliminary determination that a general permit is the best tool for addressing excess nutrients from domestic WWTPs discharging to Puget Sound.

A Puget Sound Nutrients General Permit would:

- Create a single coordinated public engagement process, allowing more stakeholder collaboration during permit developmentot.
- Place WWTPs on a similar schedule rather than staggering requirements based on individual permit reissuance schedules.
- Provide a foundation for communities to work together to achieve nutrient controls across Puget Sound.

Through public comment in the fall, we received valuable feedback and general support for this approach, as well as input about other work that needs to be done to address nutrients in Puget Sound. The Governor's budget proposal includes one-time funding for Ecology staff and contractor support to develop a general permit for WWTPs discharging to Puget Sound marine and estuary waters. An engineer will lead the permit development process with coordination and facilitation support for a public and stakeholder engagement process. Funding is also included to use the Model to inform the permit and respond to comments, as well as provide other technical assistance and support from the Attorney General's Office.

The Governor's proposal to fund general permit development will implement an important step of the ongoing, longer-term nutrient reduction strategy in Puget Sound.

Puget Sound Freshwater Monitoring ($748,000, 1.2 FTEs)

Ecology has invested considerable resources over the last decade in developing the Model, a powerful computerized tool that helps evaluate and guide management actions for water quality problems in the Salish Sea (including Puget Sound).

The Model allows us to run virtual experiments to assess how water quality might change under different scenarios (changes in river flows, reduction in nutrient loading). The 2019 modeling analysis outlined the need for improved watershed loading information from rivers and streams. Collecting this new information will allow us to better assess the impacts of watershed nutrient loads, a topic our stakeholders have identified as a critical investment.

Ecology doesn't have continuous nutrient monitoring for rivers entering Puget Sound. We only have once-a-month sampling, which reflects the conditions of rivers with relatively larger uncertainty. For example, short episodic events such as storms or dam releases can significantly increase pollutant loadings from a watershed, and are not generally captured in once-a-month sampling.

The Governor's proposal funds continuous monitoring for dissolved oxygen, pH, nitrate, turbidity, temperature and conductivity, and targeted storm event sampling, including other related parameters, at the mouth of the seven largest rivers discharging to Puget Sound (Nisqually, Puyallup, Green/Duwamish, Snohomish, Stillaguamish, Skagit, and Nooksack). Expanding our data set with continuous monitoring will help us better characterize water quality and nutrient loading for major freshwater discharges to Puget Sound. We will provide the data we collect on our website.

This information is vital for assessing watershed contributions to Puget Sound. It will also help us develop effective and appropriate control strategies for nutrient sources in the watersheds within the context of a rapidly changing climate and ocean acidification.

What's next in 2020?

As our region's population grows and we experience the impacts of a changing climate, human sources of nutrients are becoming an increasingly urgent issue for Puget Sound. If the funds proposed in the Governor's budget are approved by the Legislature, we will be well positioned to support a robust public engagement process for a Puget Sound Nutrients General Permit for WWTPs, while also advancing our understanding of watershed contributions with additional monitoring.

We are continuing to address and study nutrient pollution in Puget Sound through the Puget Sound Nutrient Source Reduction Project, which includes additional research and use of the Model, and the Nutrient Forum designed for stakeholder and public involvement. New reports and additional Nutrient Forum meetings are expected in 2020.