

Focus on: Puget Sound Nutrient Strategy

Nutrient pollution is causing water quality problems in Puget Sound. Excess nitrogen coming from humans causes a domino effect in the ecosystem, threatening Puget Sound recovery. It reduces the amount of oxygen in the water, and fish need oxygen to survive.

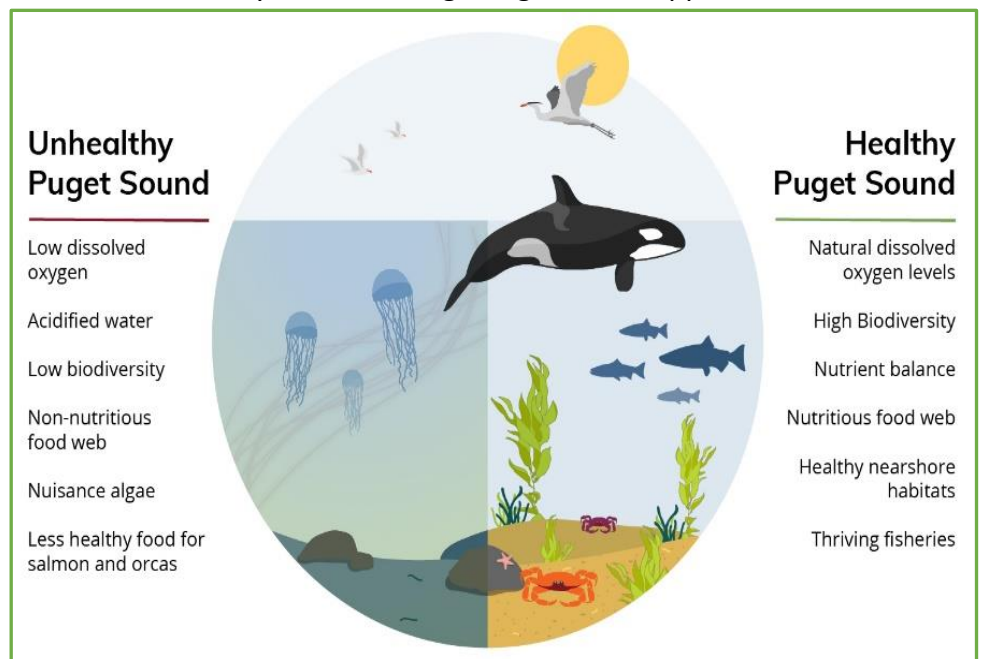
There are many human sources of nutrient pollution. The largest source, contributing well over half of the excess nitrogen, is treated human waste discharged from local wastewater treatment plants that do not have adequate nutrient control technologies. Other significant sources come from surrounding watersheds.

Our region-wide strategy

In order to restore the nutrient balance in this iconic estuary, we are taking a region-wide approach to address all human sources. This means we are:

- **Prioritizing** where the largest, fastest, and most efficient nutrient reductions are required. This is why wastewater treatment plants need upgrades to remove excess nutrients.
- **Identifying** watershed sources in more detail and evaluating their level of influence in the Salish Sea.
- **Defining** the levels of nitrogen reductions needed to meet state water quality standards.

This work includes improved regulatory requirements, federal and state funding to make improvements, technical assistance, and collaborating with communities on clean water projects.



Wastewater Treatment Plants

Our top priority is to address the largest and most concentrated sources of nitrogen pollution. We issued the Puget Sound Nutrient General Permit on Dec. 1, 2021. The permit addresses 58 municipal wastewater treatment plants that discharge the majority of the excess nitrogen entering Puget Sound.

In 2021, the state Legislature appropriated \$9 million for an optimization grant program. The program provides funding to facilities to assist with optimizing their existing operations and planning for future upgrades. Of this funding, \$1 million was set aside to provide additional technical assistance and support to small and moderate treatment plants.

In addition, under the Bipartisan Infrastructure Law, Washington state is receiving more in Clean Water State Revolving Funds over the next five years, potentially an additional \$20M per year over the current \$220M average funds available. The additional grant and loan funds will allow us to further support wastewater infrastructure projects across the state.

Facilities are reporting their nitrogen discharges and making progress with plant optimization and long-term planning requirements. The long-term upgrades are major infrastructure investments that will provide benefits for years to come. Each community will have the opportunity to determine the most efficient and effective path to achieve the required nutrient reductions for their facilities. We expect to see most nutrient control technologies fully online in 15-20 years, which is when we will see the biggest reductions. In the meantime, we expect a nitrogen discharge reduction of 5% or more through optimization of existing facilities. Learn more at ecology.wa.gov/nutrientpermit.

Watershed sources of excess nutrients

Nutrient pollution also enters Puget Sound from our region's many rivers, often referred to as watershed sources. This includes everything from wastewater treatment plants that discharge to rivers, to agricultural activities not following best management practices, onsite sewage systems, urban stormwater and certain industrial sources. There are implementable effective solutions to reduce nutrient impacts from watershed sources that we can begin implementing now.

We work with conservation districts, local governments, and other partners to tackle these nutrient sources. We provide funding for projects to address local nutrient sources, support the successful [septic loan program](#), and provide technical assistance to landowners and businesses to address nutrients and other pollution coming from their land. We continue to publish new chapters of the [Voluntary Clean Water Guidance for Agriculture](#) to make sure that the fixes we implement are effective. We will develop water cleanup plans for total nitrogen in Puget Sound watersheds following completion of the Puget Sound Nutrient Reduction Plan.

Puget Sound Nutrient Reduction Plan

Ecology established the [Puget Sound Nutrient Source Reduction Project](#) to formalize our science and planning to reduce human sources of nutrients, and set specific water quality targets to address these sources. The project brings interested parties together to better understand this complex issue. We use the Salish Sea Model to evaluate nutrient reduction scenarios, with the goal of meeting water quality standards for dissolved oxygen. A draft Nutrient Reduction Plan will be available for formal public input in 2024 and finalized in 2025.

Our progress towards releasing the Nutrient Reduction Plan and addressing watershed sources includes:

- Using the Salish Sea Model on our final nutrient reduction scenarios, with a peer-reviewed report planned for mid-2024. Our most recent modeling is found in the [Salish Sea Map](#).
- Drafting language for the Puget Sound Nutrient Reduction Plan and developing the strategy to address watershed sources of excess nutrients.
- Modernizing our watershed continuous nitrogen monitoring network and developing new watershed nutrient modeling tools in collaboration with the U.S. Geological Survey so that we better understand watershed nutrient sources and their impacts.

Stay involved

The only way to restore healthy oxygen levels for Puget Sound is to work together. By reducing human sources of nutrient pollution, Washington's iconic estuary can thrive and our region can have even greater enjoyment of all the benefits it shares with us – from shellfish and salmon to beaches and sailing.

Visit ecology.wa.gov/ReducingNutrients to join our email list for Puget Sound Nutrients and stay up-to-date on upcoming meetings and feedback opportunities.



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