



# Puget Sound Nutrient Reduction Plan

## Our nutrient pollution problem

Nutrient pollution is causing water quality problems in Puget Sound. Excess nutrients from humans causes a domino effect in the ecosystem by fueling excessive algae growth, which reduces the amount of oxygen in the water when it dies and decomposes.

This is a serious problem for aquatic life and the health of Puget Sound. Fortunately, there is a solution to this problem. We can reduce the amount of excess nutrients that goes into Puget Sound. By investing in our communities and the critical wastewater infrastructure they rely on, we can provide a cleaner, healthier future for Puget Sound.

## Solutions for Puget Sound

We are working to address all human sources of excess nutrients in Puget Sound. Our new draft plan, the Puget Sound Nutrient Reduction Plan, details the problem, the science, and the solutions to get to a healthier Puget Sound. The plan outlines how we will get to cleaner water by 2050. We are taking comments on the plan and have opportunities to learn more this summer, both online and in person.

**We are accepting comments from 8 a.m. on June 12 until 11:59 p.m. on Aug. 27, 2025. Draft materials and information on how to comment is on our webpage [ecology.wa.gov/reducingnutrients](https://ecology.wa.gov/reducingnutrients).**

We welcome feedback on the targets set by the plan, ideas on other reduction scenarios that could meet state water quality goals, the milestones in the plan, how model outputs are evaluated and used, and any other innovative ideas to address impairments and meet water quality standards.

### Join us to learn more:

We invite you to join our next Nutrient Forum from 1 – 4 p.m. on June 24, 2025, where we will discuss the Reduction Plan and provide updates on our work.

- [Register on Zoom](#) for this meeting.

### In-person workshops

We plan to hold workshops over the summer to discuss the information and strategies outlined by the plan. To stay up-to-date on these workshops and future forum meetings, join the [Nutrient Forum email list](#).

## Understanding the science

Ecology uses monitoring data and modeling to support the Puget Sound nutrients work. The Salish Sea Model uses nutrient data to estimate dissolved oxygen levels across Washington waters of the Salish Sea and can simulate how dissolved oxygen levels will change with different amount of nutrients coming into the Sound. This tool allows us to evaluate the human impact on dissolved oxygen levels, and how different nutrient

reduction strategies will improve these levels. Model results were then used to guide and inform our nutrient management strategy to improve water quality.

Our previous reports detailed the model scenarios we ran to estimate the amount of excess nutrients coming from different sources (called nutrient loads), understand human contributions to those loads, and understand the impact of those loads on dissolved oxygen levels throughout the Sound. Our latest technical report, Optimization Scenario Phase 2, builds off past reports and details the results of 10 refined nutrient reduction scenarios, and the resulting improvement to oxygen levels in Puget Sound.

Results of our latest modeling report demonstrate that to restore water quality in Puget Sound, wastewater treatment plants and watersheds draining to Puget Sound will need to significantly reduce their nitrogen loading in the coming years. You can read [the latest report](#) and [learn more on our webpage](#).

### Wastewater treatment plants

Investing in wastewater treatment plants is a critical part of reducing nutrient pollution in Puget Sound. The largest source, contributing well over half of the excess nitrogen, is treated human waste discharged to Puget Sound from wastewater treatment plants. We are moving forward with requiring these facilities to add nutrient control technologies to reduce nitrogen discharges. We will also address nutrients coming from surrounding watersheds.

Ecology established the Puget Sound Nutrient General Permit for the 58 municipal wastewater treatment facilities that discharge to Puget Sound. We are in the process of updating the permit requirements, so that facilities can opt into the general permit or choose to have nutrient reduction requirements added to their individual water quality permits. The community benefits of the general permit include:

- Ability for communities with multiple facilities to prioritize investments and share the nutrient load across their facilities
- Potential for participation in a nutrient trading program in future years
- Efficient permitting, which means faster results in reducing nutrient pollution

To learn about the permit, visit [ecology.wa.gov/nutrientpermit](https://ecology.wa.gov/nutrientpermit).

In addition to the community wastewater treatment plants, there are industrial facilities and federally-permitted facilities that will need to reduce their nitrogen discharges.

### How does the draft plan relate to permit limits

This draft plan does not have permit limits in it. The modeling done to help understand the benefits of different nutrient reduction efforts does not directly equate to permit limits for wastewater treatment plants and industrial dischargers in Puget Sound. Instead, the plan sets basin wide targets that we would then use to translate into numeric water quality-based effluent limits in permits. This work happens through the administrative process associated with developing and issuing permits, which includes public comment.

To help with the process of how what is modeled could be translated into future permit requirements, we have drafted [Preliminary Considerations for the Development and Implementation of Water Quality Based Effluent Limitations](#) and are establishing a technical advisory committee.

The Technical Advisory Committee will help guide our approach to developing and implementing nitrogen limits in future permit updates. For questions about the committee or to express interest in joining the committee, please contact William Weaver at [William.Weaver@ecy.wa.gov](mailto:William.Weaver@ecy.wa.gov) or 360-870-7424.

## Watershed sources of nutrient pollution

Nutrient pollution also enters Puget Sound from the region's many streams and rivers, often referred to as watershed sources. Human sources of excess nutrients in watersheds include wastewater treatment plants and other facilities that discharge to rivers, agricultural activities, onsite sewage systems, road runoff, and industrial wastewater. To address these sources, we will work on individualized solutions for Puget Sound watersheds following completion of the Puget Sound Nutrient Reduction Plan.

There are effective solutions to reduce nutrient pollution that can happen now. We work with conservation districts, local governments, and other partners to tackle excess nutrients. We fund projects, support the successful septic loan program, and provide technical assistance to landowners and businesses. In 2025, we are also working on Washington's plan for addressing nonpoint pollution and the remaining eight chapters of the Voluntary Clean Water Guidance for Agriculture to support best management practices that address nutrient pollution. For more information on our nonpoint work and engagement opportunities, visit our [nonpoint pollution webpage](#).

## Stay involved

To restore healthy oxygen levels for Puget Sound, the region must plan strategic investments, focusing on where we can make the biggest reductions in human-caused nutrient pollution. These investments will improve the health of Puget Sound and its fisheries, and many communities will have more resilient wastewater infrastructure and healthier watersheds for decades to come. When all of us take action to reduce nutrient pollution, Washington's iconic estuary can thrive and the region will share and enjoy the benefits it provides.

Visit [ecology.wa.gov/ReducingNutrients](https://ecology.wa.gov/ReducingNutrients) to join our email list.

### Unhealthy Puget Sound

- Low dissolved oxygen
- Acidified water
- Low biodiversity
- Non-nutritious food web
- Nuisance algae
- Less healthy food for salmon and orcas



### Healthy Puget Sound

- Natural dissolved oxygen levels
- High Biodiversity
- Nutrient balance
- Nutritious food web
- Healthy nearshore habitats
- Thriving fisheries



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To request an ADA accommodation, contact Ecology by phone at 360-407-6600 or email at [whitney.ashborn@ecy.wa.gov](mailto:whitney.ashborn@ecy.wa.gov), or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.