

Focus on: Water Quality Trading in Puget Sound

Why is Ecology considering trading in Puget Sound?

Many parts of Puget Sound are experiencing low dissolved oxygen (oxygen) levels, below the thresholds needed to sustain marine life. This is due in large part to nutrient discharges from wastewater treatment plants (WWTPs) in the Puget Sound area. To address the largest source of these discharges, Ecology issued the Puget Sound Nutrient General Permit in December 2021. The permit applies to the 58 domestic WWTPs that discharge to Puget Sound and limits the amount of nitrogen they can release.

To restore water quality in Puget Sound, the permit will require WWTPs to significantly reduce their nitrogen contribution in the coming years. For most facilities, this means making significant investments in facility infrastructure. We are considering trading as a potentially cost-effective option to improve water quality while reducing communities' financial burden.

Water quality trading 101

Other states in the U.S. are using water quality trading programs as a market-based approach to help meet water quality goals. We are considering a trading program for facilities under the Puget Sound Nutrient General Permit.

A trading program assigns pollution reduction activities, such as removing nutrients from WWTP discharge, an improvement value or credit, which can be traded on a local market. **Credits** are simply a tool to count pollution reduction (e.g. pounds of nitrogen removed), not dollar costs. Facilitating economic exchanges of credits can be an effective approach to reduce pollution, especially when there are multiple sources of the same pollutant within a large estuary, like Puget Sound.

The purpose of trading is to protect water quality, not financial gain. Trading may be more economically effective for both trade partners. For buyers, the benefits occur when the credit cost is less than the price to implement pollution reduction. For sellers, the economic benefit comes when they sell credits to offset the cost of their investments in nutrient control technologies.

To participate in trading, facilities must meet these pollution levels:

- **To buy credits** facilities must meet a **Minimum Control Level** or minimum pollution level
- **To sell credits** facilities must have cleaner water than the **Baseline** pollution level

Also, trading programs need measures to ensure that trades do not result in local water quality issues and to protect water quality in the event a trade fails.



Recommendations for a Nutrient Credit Trading Program in Puget Sound

In 2023, Ecology provided the legislature with recommendations on how to develop and implement a nutrient credit trading program for Puget Sound Nutrient General Permit WWTPs.

Summary of recommendations

Limit trading eligibility to Puget Sound Nutrient General Permit permittees. This ensures trades will help improve Puget Sound health and would allow for simple accounting of credits. Ecology could consider expanding trading eligibility in the future if water quality modeling can support it.

Develop trade ratios and geographic boundaries to reduce risk and uncertainty. Trade ratios make sure that a credit buyer's water quality is the same or better than if they were to meet their pollution limits through onsite treatment. Both trade ratios and geographic boundaries mitigate risks and uncertainties related to facility performance, potential impact on oxygen limited areas, and prevent localized water quality problems.

Restrict trading within the same basin or between only certain basins. The next Salish Sea Model runs (results expected in 2024) will help inform how to define where trading could occur. This is necessary to prevent localized water quality problems and will require oversight by Ecology, and collaboration with municipalities.

Ecology oversees program but permittees negotiate trades. Ecology would develop trading policy and provide technical resource documents, such as draft trade agreement language. However, allowing permittees to negotiate trades is preferred due to the predicted small market for trading and to allow for flexibility in trade negotiations.

Establish procedures for determining permit compliance. Ecology would need to establish procedures for how trades are structured to ensure transparency and accountability around permit limits.

Ecology verifies credit generation, before trades occur. Verification before exchange of credits will avoid potential water quality problems due to calculation errors. Ecology would need staff and a database to track and verify credits and exchanges.

Next Steps

In the event of broad support of a trading program in Puget Sound, we recommend the following next steps:

Conduct a market feasibility analysis. A market feasibility analysis is a study of environmental, economic, and infrastructure variables within a trading area to determine the potential supply and demand of credits.

Establish numeric effluent limits in the next General Permit. The limits would help us determine where to set minimum control levels and baselines for dischargers.

Develop a Tribal engagement plan and a stakeholder engagement plan. We envision working with Tribes, community members, technical experts, and interest groups in developing the program.

Learn More

- Puget Sound Nutrient General Permit webpage: ecology.wa.gov/nutrient-permit
- Strategy to reduce nutrients in Puget Sound webpage: ecology.wa.gov/ReducingNutrients
- Puget Sound Nutrient Credit Trading Recommendations for Program Implementation: <https://apps.ecology.wa.gov/publications/SummaryPages/2310007.html>



Jeremy Reiman
jeremy.reiman@ecy.wa.gov
360-819-0197



To request an ADA accommodation, contact Ecology by phone at 360-407-6600 or email at jeremy.reiman@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-