



Fact Sheet Addendum for Proposal of Additional Conditions Related to PFAS and Nutrient Optimization/Reduction

The U.S. Environmental Protection Agency (EPA)
Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES)
Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act
(CWA) to:

**Gooseberry Point Wastewater Treatment Plant
Lummi Tribal Sewer and Water District (LTSWD)**
2156 Lummi View Drive
Bellingham WA 98226

Public Notice Start Date: May 16, 2023
Public Notice Expiration Date: June 15, 2023

Technical Contact: Sally Goodman
206-553-0782
800-424-4372, ext. 0782 (within Alaska, Idaho, Oregon, and Washington)
goodman.sally@epa.gov

EPA Re-Proposes to Reissue NPDES Permit

EPA proposes to reissue the NPDES permit for the facility referenced above. This is the second public comment period on the draft permit. EPA is seeking comment on the new conditions that have been added to the draft permit since the previous comment period. Accordingly, EPA is only seeking comment on the following proposed changes:

- Addition of per- and polyfluoroalkyl substances (PFAS) monitoring requirements
- Addition of Nitrogen Optimization Plan and Report requirements
- Addition of Nitrogen Reduction Evaluation requirements
- Changes to monitoring frequency for certain nutrient parameters

This Fact Sheet includes:

- Information on public comment, public hearing, and appeal procedures
- Information supporting the addition of permit conditions related to PFAS monitoring, a Nitrogen Optimization Plan and Report, Nitrogen Reduction Evaluation, and changes to nutrient monitoring frequency.

Public Comment

Pursuant to 40 CFR 124.14(c), EPA is only accepting comments on aspects of the draft permit that are different from those in the draft permit that was issued for public comment on June 16, 2021. These are the proposed additional conditions related to PFAS monitoring, nutrient optimization, and nitrogen reduction evaluation requirements. Comments submitted previously on the first public comment period need not be resubmitted.

EPA requests that all comments or requests for a public hearing be submitted via email to Sally Goodman (goodman.sally@epa.gov). If you are unable to submit comments via email, please call 206-553-0782. Persons wishing to comment on, or request a public hearing for, the re-proposed draft permit for this facility may do so by the expiration date of the public comment period. A request for a public hearing must state the nature of the issues to be raised as well as the requester's name, address, and telephone number. All comments and requests for public hearings must be submitted to EPA as described above.

After the Public Notice expires, EPA will make a final decision regarding permit issuance based on all comments received during both comment periods. The permit will become effective no less than 30 days after the issuance date unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR § 124.19.

Documents are Available for Review

The draft and re-proposed permits, the fact sheets, and other information can be found online at: <https://www.epa.gov/npdes-permits/npdes-permit-lummi-gooseberry-point-wastewater-treatment-plant-washington>.

I. Description of EPA's Re-Proposal

A. Background

On June 16, 2021, EPA issued a draft permit for the Gooseberry Point Wastewater Treatment Plant (WWTP) for public review, with a comment deadline of August 2, 2021. Since the initial comment period, EPA has determined that certain changes are necessary.

On December 1, 2021, the Washington Department of Ecology (Ecology) issued the Puget Sound Nutrient General Permit (PSNGP), which applies nutrient requirements to all State-permitted WWTPs discharging to Puget Sound. The PSNGP puts the WWTPs on a path to control and significantly reduce nitrogen discharges. Excess nitrogen is the main pollutant causing low dissolved oxygen levels in Puget Sound. Accordingly, to ensure that all WWTPs discharging to Puget Sound have the same nutrient reduction requirements, EPA has determined that additional nutrient conditions are warranted for the Gooseberry Point WWTP.

Additionally, since the initial public notice of this draft permit, EPA has developed its strategy to protect communities and the environment from per- and polyfluoroalkyl substances (PFAS) in the nation's waters. As a result, PFAS monitoring requirements are being added to NPDES permits nationally.¹ As such, EPA is adding the PFAS monitoring requirements to the draft permit.

B. Facility & Receiving Water Information

The initial Fact Sheet, published on June 16, 2021, contains information about the WWTP and the receiving waters to which the WWTP discharges. No changes have been made since that time.

C. Permit Changes Subject to the Re-Proposal

The following sections describe the changes made to the draft permit that are subject to the re-proposal.

1. *PFAS Monitoring Requirement*

PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Discharges of PFAS above certain levels may cause adverse effects to human health effects or aquatic life.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, EPA is adding PFAS monitoring requirements to the draft permit. Section I.B of the draft permit requires that the permittee conduct quarterly influent,

¹ EPA, "Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs." December 2022. Available at: https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf.

effluent, and sludge sampling for PFAS chemicals for two years. The monitoring requirements for PFAS chemicals are deferred until the third and fourth years of the permit term (beginning during the first complete quarter of the third year). This will give the permittee time to plan for this new monitoring requirement (e.g., to obtain funding, train employees, and find a suitable contract laboratory).

The purpose of these monitoring and reporting requirements is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits. EPA is authorized to require this monitoring and reporting pursuant to CWA section 308(a).

EPA notes that there is currently not an analytical method approved in 40 CFR Part 136 for PFAS. As stated in 40 CFR 122.44(i)(1)(iv)(B), in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. Therefore, the permit specifies that until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Draft Method 1633.

2. Nutrient Reduction Conditions

Discharges of excess nutrients, specifically nitrogen, to Puget Sound from domestic WWTPs are contributing to existing low DO levels in Puget Sound. Through use of the Salish Sea Model, Ecology concluded that *all* domestic WWTPs that discharge to Puget Sound have reasonable potential to contribute to existing impairments. As a result of these findings, on December 1, 2021, Ecology issued the PSNGP, which provides coverage to nearly 70 domestic WWTPs that discharge nitrogen. The PSNGP and related fact sheet and response to public comments can be accessed at <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Nutrient-Permit>

Ecology's reasonable potential determination and the existing DO impairments within the Washington waters of the Salish Sea require nitrogen reduction from domestic POTWs (and other sources) in order to meet surface water quality standards. Further, the findings showed that excess nutrients discharged from domestic WWTPs in one location cumulatively contribute to DO impairments in other locations due to the exchange of water that occurs between basins.²

While the specific part of Puget Sound where the Gooseberry Point WWTP discharges is not listed as impaired for DO, data that have been collected indicate that the ambient DO sometimes falls below the criterion. Furthermore, as described above, Puget Sound as a whole has a DO impairment driven by discharges to all portions.

² Ecology, "Puget Sound Nutrient Source Reduction Project Volume 1: Model Updates and Bounding Scenarios." January 2019. Available at <https://apps.ecology.wa.gov/publications/documents/1903001.pdf>.

Consistent with the PSNGP, EPA is establishing BMPs for nitrogen reduction that are considered narrative WQBELs. As stated in 40 CFR 122.44(k)(3), BMPs may be established to control the discharge of pollutants when numeric WQBELs are infeasible. These BMPs are a Nitrogen Optimization Plan and Nutrient Reduction Evaluation, described below.

Nitrogen Optimization Plan

Consistent with the requirements in the PSNGP, the draft permit requires the permittee to assess strategies for optimizing nitrogen removal within the current treatment process. The permittee must submit a Nitrogen Optimization Plan within 12 months of the effective date of the permit identifying their initial selection of an optimization strategy for implementation. Within 48 months of the effective date of the permit, the permittee must submit a Nitrogen Optimization Report that evaluates the selected strategy for maximizing nitrogen removal from the existing treatment plant during the permit term. The Plan and Report must be submitted to EPA through NetDMR.

Nutrient Reduction Evaluation

Beyond optimization of the current process, the permittee must assess the opportunities for further reducing nitrogen loading from the facility. The CWA established a performance level, referred to as “secondary treatment,” that all POTWs are required to meet. EPA developed and promulgated “secondary treatment” regulations, which are found in 40 CFR Part 133. These technology-based effluent limits apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅, TSS, and pH. The secondary treatment regulations do not address nutrients.

The Gooseberry Point WWTP was designed and constructed to meet the secondary treatment standards. However, in light of the existing DO impairments related to nutrient over-enrichment in Puget Sound, a site-specific evaluation is now required. EPA is requiring the permittee to evaluate treatment alternatives for meeting a lower limit of technology for nitrogen removal. In the PSNGP, Ecology estimated this lower limit of technology for nitrogen removal to achieve an effluent TIN level of about 3 mg/L. This also represents the concentration that Permittees (under the PSNGP) may expect if required to meet a numeric WQBEL for TIN.³ Numerous nitrogen removal technologies are available commercially and are compatible with conventional secondary wastewater treatment technology.

The draft permit requires that the permittee complete a Nutrient Reduction Evaluation (NRE), which includes two components:

- An engineering analysis to determine what constitutes all known, available, and reasonable methods of prevention, control and treatment (AKART) for nitrogen removal at the facility. The analysis must highlight an alternative representing the greatest TIN reduction that is reasonably feasible on an annual basis.

³ Ecology, “Fact Sheet for the Puget Sound Nutrient Draft General Permit.” December 2021. Available at <https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Nutrient-Permit#issuance>.

- An assessment of specific treatment plant upgrades and alternative effluent management options (e.g. disposal to ground, reclaimed water beneficial uses), that could achieve a final effluent concentration of 3 mg/L TIN (or equivalent load reduction) on a seasonal average (April – October) basis.

Compliance with this condition requires submittal of the NRE within 48 months following the permit effective date.

3. Nutrient Monitoring Frequency

The re-proposed draft permit includes increased monitoring frequency for total ammonia, nitrate plus nitrite, CBOD₅, and TIN, as follows:

- Influent and effluent total ammonia increased to 2/month from 1/month;
- Effluent nitrate plus nitrite increased to 2/month from 1/month;
- Influent and effluent CBOD₅ increased to 2/month from 1/month;
- Effluent TIN increased to 2/month from 1/month.

The updates reflect the monitoring frequencies for small loaders in the PSNGP. The requirements allow EPA to better characterize the effluent and the facility's nutrient removal. Increased monitoring frequency for total ammonia and nitrate plus nitrite, which together compose TIN, helps to better assess the effectiveness of the WWTP's Nitrogen Optimization Plan. CBOD₅, which excludes the oxygen demand for nitrogen species, provides a more complete picture of the treatment performance and carbon removal, when coupled with BOD₅ monitoring.