

POLLUTION CONTROL HEARINGS BOARD
FOR THE STATE OF WASHINGTON

PUGET SOUNDKEEPER ALLIANCE,

Appellant,

V.

DEPARTMENT OF ECOLOGY,

Respondent.

[illegible]

PCHB NO.

NOTICE OF APPEAL

Puget Sound Nutrient National Discharge Elimination System General Permit

1. Identity of Appealing Parties and Representatives

The appealing party is:

Puget Soundkeeper Alliance
130 Nickerson St #107
Seattle, WA 98109
(206) 297-7002

The representatives of the appealing party are:

Marisa C. Ordonia
Janette K. Brimmer
Earthjustice
810 3rd Avenue, Suite 610
Seattle, WA 98104
(206) 504-3459
mordonia@earthjustice.org
jbrimmer@earthjustice.org

2. Identification of Other Parties

The respondent in this appeal is the Washington State Department of Ecology.

1 **3. Decision Under Appeal**

2 This is an appeal of the Puget Sound Nutrient General Permit, a National Pollutant
3 Discharge Elimination Systems and State Waste Discharge General Permit, issued December 1,
4 2021. A copy of the permit is attached.

5 **4. Short and Plain Statement Showing Grounds for Appeal**

6 The Puget Sound Nutrient General Permit (“Nutrient Permit”) is contrary to law because
7 it is inconsistent with the requirements and intent of the Federal Clean Water Act and its
8 governing regulations promulgated by the U.S. Environmental Protection Agency (“EPA”) and
9 the Washington State Water Pollution Control Act and its governing regulations promulgated by
10 the Washington State Department of Ecology (“Ecology”).

11 **5. Statement of Facts and Preliminary Identification of Issues**

12 A. Statement of Facts and Background

13 Many, if not most, of the nation’s marine ecosystems are polluted by excess nutrients;
14 both nitrogen and phosphorus. EPA, *Nutrient Criteria Technical Guidance Manual: Estuarine*
15 *and Coastal Waters* [EPA Nutrient Guidance] at xvii and 1-1 (Oct. 2001). Furthermore, at least
16 two-thirds of U.S. estuaries and marine coastal waters have been assessed as seriously degraded
17 by chronic nutrient pollution (National Research Council 2000, Bricker et al. 2008). Nutrient
18 pollution can cause an increase in harmful algal growth, which in turn can result in reduced or
19 depleted levels of oxygen, an imbalanced ecosystem, significant public health risks, loss of
20 critical habitat for beneficial aquatic life, greatly reduced biodiversity, and a general decline in
21 fish and aquatic life – at the population and individual organism scale. EPA Nutrient Guidance
22 at 1-1 and 1-5, Burkholder and Glibert 2013 and references therein. Harmful algal “blooms”
23 (outbreaks)—driven by these excess, anthropogenic nutrient loadings—have long been linked to
24 major fish kills, significantly affecting local recreational, commercial, and tribal fisheries.

1 Burkholder 1998, EPA Nutrient Guidance at 4. Blooms of some cyanobacterial species produce
2 toxins that can cause disease and death of beneficial aquatic life and humans. Chorus and
3 Bartram 1999, EPA Nutrient Guidance at 1-1. Depletion of dissolved oxygen can cause stress
4 and death in bottom-dwelling organisms such as sessile, ecologically, and commercially
5 important marine shellfish. *Id.*; *see also*, Ecology, *South Puget Sound Dissolved Oxygen Study*
6 *Interim Data Report* (Dec. 2008) at 13; Ecology, *Puget Sound and Straits Dissolved Oxygen*
7 *Assessment* (2014) at 11. Nutrient pollution-driven oxygen depletion in the Sound is killing
8 forage fish that are important to salmon, including Chinook salmon listed as threatened under the
9 Endangered Species Act. Ecology has also noted that nutrient pollution increases Puget Sound’s
10 sensitivity to the effects of ocean acidification.

11 Chronic nutrient pollution and a related array of impacts are present in Puget Sound. *Id.*¹
12 As acknowledged by Ecology on its own website and in the Nutrient Permit Fact Sheet,
13 “[d]ischarges of excess nutrients, particularly nitrogen, to Puget Sound from domestic
14 wastewater treatment plants (WWTPs) are significantly contributing to low oxygen levels in
15 Puget Sound.” Nutrient Permit Fact Sheet; *see also*, Khangoankar, T. et al., *Analysis of Hypoxia*
16 *and Sensitivity to Nutrient Pollution in Salish Sea*, Jour. of Geophysical Research (2018).²
17 According to Ecology, approximately 20 percent of Puget Sound is currently not meeting water
18 quality standards for dissolved oxygen for 120+ days, one third of the year or more. Information
19

20 ¹ *See also* University of Washington, Puget Sound Institute,
21 <https://www.eopugetsound.org/magazine/is/nutrients> and
22 <https://www.pugetsoundinstitute.org/2017/10/puget-sounds-growing-nutrient-problem/>.

23 ² More recent indications of Puget Sound being out of balance from excess nutrients (nitrogen
24 and phosphorus), which has been exacerbated by warming trends and other impacts of climate
change, can be seen in the “Blob’s” extreme adverse impacts on aquatic ecosystems in the
northeastern Pacific Ocean (NOAA 2019), explosions of jellyfish populations, and ocean
acidification interfering with shellfish being able to form shells. [https://crosscut.com/
environment/2020/12/outdated-sewage-treatment-suffocating-fish-puget-sound](https://crosscut.com/environment/2020/12/outdated-sewage-treatment-suffocating-fish-puget-sound).

1 from the EPA confirms that dissolved oxygen standards are not being met in Puget Sound and
2 that those conditions are trending worse, not better. [https://www.epa.gov/salish-sea/marine-](https://www.epa.gov/salish-sea/marine-water-quality)
3 [water-quality](https://www.epa.gov/salish-sea/marine-water-quality).

4 About 70 percent of the anthropogenic nitrogen inputs to Puget Sound are contributed by
5 the wastewater treatment point sources identified as targeted permittees by the permit at issue
6 here; this nutrient pollution has been identified as the major source of water quality degradation
7 to the Sound. Bounding Scenarios Report, Publication No. 19-03-001, Jan. 2019. *See also*
8 Ecology Response to Comments at 26 (“the existing DO impairments within the Washington
9 Waters of the Salish Sea require nitrogen reduction from domestic POTWs (and other sources) in
10 order to meet surface water quality standards.”). Ecology’s Salish Sea Model (the “Model”)
11 clearly demonstrates that WWTPs are contributing to, and potentially outright causing, those
12 impairments of water quality standards. The Puget Sound region (human population more than
13 4.5 million) is predicted to sustain a 40 percent increase (1.8 million more) by 2050 (Ott 2020).
14 The Nutrient Permit purports to cover the pollution discharges from 58 publicly owned domestic
15 wastewater treatment plants into the Sound. The total discharge of these wastewater plants is
16 estimated to contribute tens of millions of pounds per year of highly bioavailable total inorganic
17 nitrogen (TIN)—just one of many pollutants in the effluents—to the already-nutrient-degraded
18 Sound. Nutrient Permit Fact Sheet 2021.³ Indeed, Ecology notes in the Permit’s response to
19 comments that “population growth will make the duration and extent of [the Sound’s] existing
20 impairments worsen.” Nutrient Permit Response to Comments at 14.

23 ³ Unfortunately, the Nutrient Permit does not address at all organic nitrogen or phosphorus and
24 therefore falls short of addressing the full suite of nutrient pollutants and problems they cause to
Puget Sound.

1 The Nutrient Permit includes no effluent limits for nutrients (technology-based, water
2 quality-based, numeric, or narrative) that Ecology acknowledges are necessary to control nutrient
3 pollution to the Sound in a manner protective of water quality.⁴ The lack of real, enforceable
4 limits in the Nutrient Permit means the Nutrient Permit will not limit ongoing pollution, will not
5 prevent the pollution loadings from increasing, and will not begin to mitigate or reverse the
6 ongoing damages to the Sound and its communities caused by excess nutrients; rather, this
7 permit will allow the problems to continue and worsen.

8 First, the Nutrient Permit makes no findings regarding “all known, available and
9 reasonable methods of prevention, control and treatment” (“AKART”) for the removal of
10 nutrient pollutants from discharges by wastewater treatment plants into Puget Sound. Ecology’s
11 statements in the Nutrient Permit and the Fact Sheet show the agency is aware that technology
12 limiting nitrogen discharges to 3 mg/L and phosphorus in the range of 0.05 to 0.3 mg/L is
13 known, reasonable, and in use (for decades) by wastewater dischargers elsewhere. *See, e.g.,*
14 Permit S.4.E.5.e; *see also* Biological Nutrient Removal Processes and Costs, EPA Fact Sheet,
15 June 2007.⁵ Rather than setting AKART, Ecology assigns to each of the polluters themselves
16 the task of determining what constitutes AKART for the treatment and limitation of nutrient
17 discharges from wastewater treatment plants. Moreover, the Nutrient Permit gives the polluters
18 the full five years of the Permit to study and plan for what the pollutant dischargers think
19 AKART might be. Further, Ecology provides an “incentive” program whereby dischargers
20 would be able to avoid AKART entirely by keeping loading limits below 10 mg/L and the
21 Permit’s action levels. This approach is taken without justification or a scientific basis and

22 ⁴ A copy of the Nutrient Permit is attached to this Notice of Appeal.

23 ⁵ EPA’s fact sheet on biological nitrogen removal notes that some facilities may be able to
24 achieve nitrogen concentrations below 3 mg/L due to site-specific conditions.

1 results in an illegally issued permit that doesn't require AKART (regardless of water quality
2 outcome).

3 Second, the Nutrient Permit discusses "optimization," but requires only small dischargers
4 to actually implement their Nitrogen Optimization Plan, while allowing moderate and dominant
5 loaders to merely "evaluate operational strategies for maximizing nitrogen removal from the
6 existing treatment plant to stay below the calculated action level." *Compare* Nutrient Permit
7 S4.C. (Dominant Loaders) and S5.C. (Moderate Loaders) *with* Nutrient Permit S6.B. (Small
8 Loaders) (small loaders "must develop, implement, and maintain a Nitrogen Optimization Plan
9 to evaluate *and implement* operational strategies for maximizing nitrogen removal from the
10 existing treatment plant during the permit term.") (emphasis added). In the plain terms of the
11 Permit, Dominant and Moderate dischargers need only to implement a plan for *evaluating*
12 optimization; Small dischargers must actually *implement* optimization. The exclusion of an
13 implementation requirement for optimization from permit sections S4 and S5 is arbitrary and
14 capricious.

15 Finally, in lieu of required effluent limits, the Nutrient Permit suggests what it calls Best
16 Management Practices ("BMPs"), but only for the purpose of polluters staying within "action
17 levels" that are set at a 99 percent upper confidence limit that polluters will not exceed. In other
18 words, Ecology set the "action level" such that polluters can keep on discharging nutrient
19 pollutants at current levels or even in some cases higher than current levels—levels that are
20 already a problem for the Sound.⁶

21
22 ⁶ See S4 in Nutrient Permit Fact Sheet and Appendix E. The "action levels" for almost all of the
23 pollutant dischargers actually increased (i.e., were weakened) between the publication of the
24 Draft Nutrient Permit for public comment and the final Nutrient Permit appealed here. That is
because Ecology weakened the monitoring requirements both in the Permit itself but also for
assessing and setting the pollutant cap and "action levels" moving from weekly to bi-weekly

Moreover, the action level is not even an actual cap on discharges (the exceedance of which would trigger permit violations); indeed, the majority of the Permit is built around managing the times when there will be exceedances of this initial action level.⁷ In the event of a specific pattern of year-to-year action level exceedances (twice consecutively or three times within the five-year permit term), the Nutrient Permit still doesn't require reductions—even to get back to action levels. With such an exceedance (again, having already occurred season after season over the course of many years) the Nutrient Permit only requires the polluter to undertake a year-long planning process to develop a short-form proposed approach for course-correction. This proposal is then submitted to Ecology for an open-ended review without any backstop. Even then, the facilities discharging above their action levels are considered “in compliance” so long as Ecology hasn't approved their corrective action plans; and Ecology has no required timeframes for undertaking that review—in law, regulation, or permit condition. Even if corrective action is eventually required by Ecology, it does not have to happen until after the end of the permit term. As written, the Nutrient Permit also allows for massive exceedances (as reductions are not tied to the level of the exceedance) that never require corrective action so long as they do not occur in consecutive years or three times total over the five-year permit term. In short, the Nutrient Permit includes no enforceable effluent limits, no caps, no reductions, and no required optimization BMPs (for Dominant and Moderate facilities – or 99 percent of all the nutrient load into the Sound).

monitoring. From that change alone, the amount of nutrient pollution Ecology proposed to allow into the Sound under the Nutrient Permit increased by over 300,000 pounds.

⁷ Ecology itself acknowledges, on page 54 of Ecology's Response to Comments, that the action levels are not BMPs.

1 The failure to require effluent limits in the Nutrient Permit violates state and federal law
2 requirements for National Pollutant Discharge Elimination System permits.

3 Despite Ecology's repeated acknowledgment that both nitrogen and phosphorus pollution
4 degrade surface waters including the Sound, the Nutrient Permit fails to consider any wastewater
5 treatment plant effluent limits for phosphorus and fails to include organic nitrogen in either
6 controls or monitoring. Overall, the Nutrient Permit fails to adequately require monitoring for
7 pollutants: none for phosphorus or organic nitrogen, and even for TIN, Ecology's main target
8 among effluent constituents, the Nutrient Permit requires only monthly sampling for evaluation
9 on an annual and seasonal basis. To protect the Sound from continued chronic degradation by
10 the effluents, monitoring frequency should be weekly for the important nutrient parameters TKN,
11 ammonia, nitrate+nitrite, and total phosphorus (note: TN = TKN + nitrate+nitrite). The target
12 should be set as a weekly maximum, applicable year-round. Monitoring in the Nutrient Permit
13 falls short of what is required to understand and control for damaging nutrient pollution to the
14 Sound.

15 B. Preliminary Statement of Issues on Appeal.

16 1) The Nutrient Permit's failure to impose numeric or other sufficiently specific,
17 protective, and enforceable effluent limits on all dischargers of nutrient pollution
18 to Puget Sound violates the requirements to impose AKART on all pollution
19 discharges under Washington law, RCW 90.48.010; 90.48.520; 90.54.020; WAC
20 173-226-070; and *Wash. State Dairy Fed'n v. Washington*, 18 Wn. App. 2d 259,
21 274-79, 490 P.3d 290 (2021).

22 2) The Nutrient Permit's failure to impose numeric or other sufficiently specific,
23 protective, and enforceable effluent limits on all dischargers of nutrient pollution
24 to Puget Sound violates the requirements of Washington law RCW 90.48.520;

WAC 173-201A-510(1) and WAC 173-226-070(2), (3), and (6), and *Wash. State Dairy Fed'n*, 18 Wn. App. 2d at *296-97, to include limits as necessary to ensure discharges authorized by the Nutrient Permit do not cause or contribute to a violation of a water quality standard.

- 3) The Nutrient Permit's failure to impose numeric or other sufficiently specific, protective, and enforceable effluent limits on all dischargers of nutrient pollution to Puget Sound violate the Clean Water Act and applicable federal regulations 40 C.F.R. §§ 122.4(a) and (d) to include limits as necessary to ensure discharges authorized by the Nutrient Permit do not cause or contribute to a violation of a water quality standard.
- 4) The Nutrient Permit's failure to impose numeric effluent limits of 3 mg/L nitrogen and 0.3 mg/L phosphorus for at least all dominant and moderate dischargers of nutrient pollution to Puget Sound violates the requirements of 40 C.F.R. §§ 122.44(a) and 122.45(d) and RCW 90.48.010; 90.48.520; 90.54.020 and WAC 173-226-070.
- 5) Ecology's failure to determine and require AKART in the Nutrient Permit allows impermissible self-regulation contrary to the requirements of the Clean Water Act, *Env't'l Def. Ctr. Inc. v. EPA*, 344 F.3d 832, 855-56 (9th Cir. 2003); *Puget Soundkeeper All. v. Ecology*, PCHB Nos. 07-021 et al., 2008 WL 5510413 at *30, ¶ 29.
- 6) The Nutrient Permit fails to ensure that the discharges authorized by it will not further degrade Puget Sound in violation of the Clean Water Act and 40 C.F.R. § 131.12 and WAC 173-201A-300, -310.

1 7) The Nutrient Permit’s BMPs are not effluent limitations under 40 C.F.R. § 122.2
2 because they do not impose “any restriction...on quantities, discharge rates, and
3 concentrations of pollutants which are discharged from point sources into waters
4 of the United States, the waters of the contiguous zone, or the ocean.”

5 8) The Nutrient Permit’s purported BMPs do not qualify as adequately protective
6 effluent limitations under 40 C.F.R. § 122.44(k)(3), and fail to meet a technology-
7 based AKART standard, WAC 173-226-070(1), because the BMPs will not
8 “prevent or reduce the pollution of the waters of the state,” WAC 173-226-030(3),
9 and do not include limits necessary to ensure that discharges authorized by the
10 Nutrient Permit will not cause or contribute to a violation of a water quality
11 standard. *See* RCW 90.48.520; WAC 173-201A-510(1); and *Wash. State Dairy*
12 *Fed’n*, 18 Wn. App. 2d at *289-90.

13 9) The Nutrient Permit fails to require adequate assessment of compliance by
14 requiring only seasonal or monthly monitoring and by requiring less than weekly
15 monitoring for phosphorus, total nitrogen, and organic nitrogen.

16 **6. Relief Requested**

17 Appellant requests that the Board order the Department of Ecology to modify the
18 Nutrient Permit to comply with applicable legal requirements, to correct defects, to impose
19 stringent numeric effluent limits on nitrogen and phosphorus that meet AKART and that ensure
20 discharges do not cause or contribute to violations of water quality standards, and to impose
21 weekly monitoring requirements for all nutrient pollutants. The permit should otherwise remain
22 in force and in effect during this remand period.

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Respectfully submitted this 22nd day of December 2021.

MARISA C. ORDONIA, WSB #48081
mordonia@earthjustice.org
JANETTE K. BRIMMER, WSB #41271
jbrimmer@earthjustice.org
Earthjustice
810 Third Avenue, Suite 610
Seattle, WA 98104
(206) 343-7340 | Phone

Attorneys for Puget Soundkeeper Alliance

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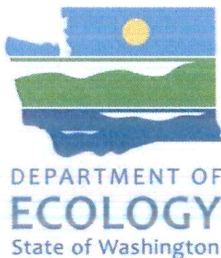
PUGET SOUND NUTRIENT GENERAL PERMIT


A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND STATE WASTE DISCHARGE GENERAL PERMIT

State of Washington
Department of Ecology
Olympia, Washington

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge nutrients in accordance with the conditions, which follow.





Vincent McGowan, P.E.
Water Quality Program Manager
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1. Summary of Permit Report Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S2.A.1	Permit Application (Notice of Intent)	Once	For new Permittees: No later than 90 days following permit issuance
S4.C	Nitrogen Optimization Report for Dominant Loaders	Annually	March 31, 2023
S4.D	Corrective Action Engineering Report	As necessary	
S4.E	Nutrient Reduction Evaluation for Dominant Loaders	1/permit cycle	December 31, 2025
S5.C	Nitrogen Optimization Report for Moderate Loaders	Annually	March 31, 2023
S5.D	Corrective Action Engineering Report	As necessary	
S5.E	Nutrient Reduction Evaluation for Moderate Loaders	1/permit cycle	December 31, 2025
S6.B	Nitrogen Optimization Report for Small Loaders	1/permit cycle	March 31, 2026
S5.D	AKART Evaluation for Small Loaders	1/permit cycle	December 31, 2025
S9.A	Discharge Monitoring Reports (DMRs)	Monthly	Within 15 days of applicable monitoring period
G2	Notice of Change in Authorization	As necessary	As necessary
G7	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
G20	Reporting Anticipated Non-Compliance	As necessary	As necessary

Table 2. Summary of Required On-Site Documentation

Permit Condition(s)	Document Title
S9.B.3	Original Sampling Records (Field notes, as applicable and Laboratory Reports)
S9.G.1.a	Copy of Permit Coverage Letter
S9.G.1.b	Copy of Puget Sound Nutrient General Permit
S9.G.1.c	Copies of Discharge Monitoring Reports
S9.G.1.d	Copies of attachment to the Annual or Single NOP Reports (as applicable)
S9.G.1.e	Copy of the Nutrient Reduction Evaluation or AKART Analysis (as applicable)

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SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. COVERAGE AREA AND ELIGIBLE DISCHARGES

This Puget Sound Nutrient General Permit (PSNGP) applies to the 58 publically owned **domestic wastewater** treatment plants (WWTPs) discharging into **Washington Waters of the Salish Sea**, except for federal and Tribal lands and waters as specified in Special Condition S1.D. Table 3 identifies the WWTPs covered by this permit along with their individual **NPDES** permit number for reference. This proposed permit assigns a category to each WWTP based on their percentage of the **total inorganic nitrogen (TIN)** load currently discharged to Washington Waters of the Salish Sea. Special Condition S4 lists permit conditions and limits for the WWTPs with the **dominant (D) TIN loads**. Special Condition S5 lists the conditions and limits for the WWTPs with **moderate (M) loads**. Special Condition S6 lists the conditions and limits for the WWTPs with **small (S) loads**.

Table 3. List of Domestic WWTPs Discharging to Puget Sound

Wastewater Treatment Plant	Individual NPDES Permit Number	Category
Alderwood Sewage Treatment Plant (STP)	WA0020826	S
Anacortes WWTP	WA0020257	M
Bainbridge Island WWTP	WA0020907	S
Birch Bay Sewage Treatment Plant (STP)	WA0029556	M
Boston Harbor STP	WA0040291	S
Bremerton WWTP	WA0029289	M
Clallam Bay WWTP	WA0024431	S
Clallam Bay Corrections Center WWTP	WA0039845	S
Coupeville WWTP	WA0029378	S
Eastsound Orcas Village WWTP	WA0030911	S
Eastsound Sewer and Water District WWTP	WA0030571	S
Edmonds STP	WA0024058	M
Everett STP	WA0024490	D
Fisherman Bay STP	WA0030589	S
Friday Harbor STP	WA0023582	S
Gig Harbor WWTP	WA0023957	S
Hartstene Pointe STP	WA0038377	S
King County, Brightwater WWTP	WA0032247	D

Wastewater Treatment Plant	Individual NPDES Permit Number	Category
King County, South WWTP	WA0029581	D
King County, Vashon WWTP	WA0022527	S
King County, West Point WWTP	WA0029181	D
Kitsap County, Central Kitsap WWTP	WA0030520	M
Kitsap County, Kingston WWTP	WA0032077	S
Kitsap County, Manchester WWTP	WA0023701	S
Kitsap County Sewer District #7 Water Reclamation Facility (WRF)	WA0030317	S
La Conner STP	WA0022446	S
Lake Stevens Sewer District WWTP	WA0020893	M
Lakota WWTP	WA0022624	M
Langley WWTP	WA0020702	S
Lighthouse Point WRF/Blaine STP	WA0022641	M
LOTT Budd Inlet WRF	WA0037061	M
Lynnwood STP	WA0024031	M
Marysville STP	WA0022497	M
McNeil Island Special Commitment Center WWTP	WA0040002	S
Midway Sewer District WWTP	WA0020958	M
Miller Creek WWTP	WA0022764	M
Mt Vernon WWTP	WA0024074	M
Mukilteo Water and Wastewater District WWTP	WA0023396	S
Oak Harbor STP	WA0020567	S
Penn Cove WWTP	WA0029386	S
Pierce County Chambers Creek Regional WWTP	WA0039624	D
Port Angeles WWTP	WA0023973	M
Port Orchard WWTP (South Kitsap WRF)	WA0020346	M
Port Townsend STP	WA0037052	S
Post Point WWTP (Bellingham STP)	WA0023744	D
Redondo WWTP	WA0023451	M
Rustlewood WWTP	WA0038075	S
Salmon Creek WWTP	WA0022772	M

Wastewater Treatment Plant	Individual NPDES Permit Number	Category
Sekiu WWTP	WA0024449	S
Sequim WRF	WA0022349	S
Shelton WWTP	WA0023345	S
Skagit County Sewer District 2 Big Lake WWTP	WA0030597	S
Snohomish STP	WA0029548	M
Stanwood STP	WA0020290	S
Tacoma Central No. 1 WWTP	WA0037087	D
Tacoma North No. 3 WWTP	WA0037214	M
Tamoshan STP	WA0037290	S
WA Parks Larrabee WWTP	WA0023787	S

B. LIMITS ON COVERAGE

Coverage under this General Permit does not include discharges from WWTPs not listed in Table 3. Coverage under this General Permit also excludes all discharges from non-WWTP outfalls.

This permit does not cover the following discharges:

1. Discharges from facilities located on “Indian Country” as defined in 18 U.S.C. §1151, except portions of the Puyallup Reservation as noted below. Indian Country includes:
 - a. All land within any Indian Reservation, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation. This includes all federal, tribal, and Indian and non-Indian privately owned land within the reservation.
 - b. All off-reservation Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.
 - c. All off-reservation federal trust lands held for Native American Tribes.

Puyallup Exception: Following the *Puyallup Tribes of Indians Land Settlement Act of 1989*, 25 U.S.C. §1773, the permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.
2. Discharges from activities operated by any department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government of the United States, or another entity, such as a private contractor, performing industrial activity for any such department, agency, or instrumentality.

3. Discharges from any industrial or privately owned domestic wastewater treatment plant into Washington waters of the Salish Sea.
4. Discharges from domestic WWTPs entering tributary watersheds to Washington waters of the Salish Sea, upstream of Ecology ambient monitoring stations.

S2. APPLICATION FOR COVERAGE

A. OBTAINING PERMIT COVERAGE

1. The **owner/operator** seeking coverage under this permit must apply for permit coverage within the following time limits.
 - a. Existing facilities are WWTPs in operation prior to the effective date of this permit, January 1, 2022 and are identified in Table 3.
 - b. The owner/operator of an existing domestic wastewater treatment plant must submit a complete application for coverage no later than ninety (90) **days** after the issuance date of this permit. Upon submittal of a complete application for coverage (also called a **Notice of Intent** or NOI) **Ecology** will issue a decision on permit coverage pursuant to Special Condition S2.C.

B. HOW TO APPLY FOR PERMIT COVERAGE

The owner/operator seeking coverage under this permit must do the following:

1. Submit to Ecology, a complete application for coverage using the permit specific Notice of Intent through Ecology's Water Quality Permitting Portal: <https://secureaccess.wa.gov/ecy/wqwebportal>. The **applicant** must submit this application for coverage electronically. For more information about the WQWebPortal, visit Ecology's [WQWebPortal guidance webpage](#)².
2. A responsible person, as defined in General Condition G2, must sign the signature page of the NOI and submit it to Ecology.
3. Public Notice
 - a. Public notice of the application for coverage is not required for the facilities subject to this general permit because they are all existing facilities.
 - b. The owner/operator of an existing facility with coverage under the Puget Sound Nutrient General Permit (**Permittee**) wanting to modify their permit coverage must comply with public notice requirements specified in Special Condition S2.D.2.

C. PERMIT COVERAGE EFFECTIVE DATE

Permit coverage begins on the day Ecology issues the coverage letter to the applicant.

² <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance>

D. MODIFICATION OF PERMIT COVERAGE

A permittee requesting a reduction in monitoring, or a change in action level, or otherwise requesting a modification of permit coverage, must submit a complete Modification of Coverage Form to Ecology. The Permittee must:

1. Apply for modification of coverage at least 60 days prior to the change necessitating the coverage modification.
2. Complete the public notice requirements in WAC 173-226-130(5) as part of a complete application for modification of coverage.
3. Comply with **SEPA** as part of a complete application for modification of coverage if undergoing a significant process change driven by a corrective action.

S3. COMPLIANCE WITH STANDARDS

- A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), or human health-based criteria in the Federal water quality criteria applicable to Washington (40 CFR Part 135.45). This permit does not authorize discharge in violation of water quality standards.
- B. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other **site**-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully comply with all permit conditions, including planning, **optimization**, corrective actions (as necessary), sampling, monitoring, reporting, waste management, and recordkeeping conditions.

S4. NARRATIVE EFFLUENT LIMITS FOR WWTPS WITH DOMINANT TIN LOADS

A. APPLICABILITY AND NARRATIVE EFFLUENT LIMITS

Beginning on the effective date, each of the Permittees with dominant TIN loads listed in Table 5 may discharge TIN from the WWTP through the designated **outfall(s)** described in its individual NPDES permit. See Table 3 in Section S1.A for the load category assignment.

All discharges and activities authorized by this permit must comply with the terms and conditions of this permit. Each Permittee listed in Table 5 must comply with the facility specific or bubbled **action levels** and narrative effluent limits listed in Table 4, which constitute the suite of **best management practices** (BMPs) required for a water quality based effluent limit under 40 CFR 122.44(k).

Table 4. Narrative Effluent Limits for Dominant TIN Loaders

Parameter	Narrative Effluent Limit
Monitoring	Monitor and report per the requirements in S7.A.
Nitrogen Optimization Plan	Optimize treatment performance to stay below the action level. Submit Optimization Report annually per the requirements in S4.C
Nutrient Reduction Evaluation	Submit Nutrient Reduction Evaluation per the requirements in S4.E

B. TIN ACTION LEVELS

If the action level listed in Table 5 for individual WWTPs or the bubbled action levels listed for single jurisdictions in Table 6 are exceeded, the Permittee must employ corrective actions identified in S4.D.

The annual Action Level is the sum of monthly nutrient loads measured over one year. Ecology will assess this total once per year based on the Permittee's Annual Report.

Table 5. Dominant WWTPs and Total Inorganic Nitrogen Action Levels

Wastewater Treatment Plant	Individual NPDES Permit Number	Action Level, TIN lbs/year	Outfall Number
Everett STP	WA0024490	1,530,000	100/015
King County Brightwater WWTP ¹	WA0032247	1,810,000	001
King County South WWTP ¹	WA0029581	7,340,000	001
King County West Point WWTP ¹	WA0029181	6,670,000	001
Pierce County Chambers Creek Regional WWTP	WA0039624	1,880,000	001
Post Point WWTP (Bellingham STP)	WA0023744	993,000	001
Tacoma Central No. 1 WWTP ⁴	WA0037087	2,410,000	001

Table 6. Bubbled Action Levels for Corrective Action Assessment

Jurisdiction	Bubbled Action Level, TIN lbs/year
King County	15,820,000

C. NITROGEN OPTIMIZATION PLAN AND REPORT

Each Permittee listed in Table 5 must develop, implement and maintain a Nitrogen Optimization Plan to evaluate operational strategies for maximizing nitrogen removal from the existing treatment plant to stay below the calculated action level. Each Permittee must document their actions taken, any action level exceedances, and apply an adaptive management approach at the WWTP. Permittees will quantify results with required monitoring under this Permit.

The Permittee must begin the actions described in this section immediately upon permit coverage. Documentation of Nitrogen Optimization Plan implementation must be submitted annually through the Annual Report (S9- Reporting Requirements). See Appendix C for Annual Report questions that satisfy the Nitrogen Optimization Plan requirements.

The Nitrogen Optimization Plan submitted by each Permittee in Table 5 must include the following components:

1. Treatment Process Performance Assessment

Assess the nitrogen removal potential of the current treatment process and identify viable optimization strategies prior to implementation.

- a. *Treatment Assessment* Develop a method to evaluate potential optimization approaches for the existing treatment process. Use the evaluation to:
 - i. Determine current (pre-optimization) process performance to determine the existing TIN removal performance for the WWTP.
 - ii. Create a list of potential optimization strategies capable of meeting the action level at the WWTP prior to starting optimization. Update the assessment and list of options as necessary with each Annual Report.
- b. *Identify and evaluate optimization strategies.* From the list developed in S4.C.1.a.ii, identify viable optimization strategies for each WWTP owned and operated by the Permittee. Prioritize and update this list as necessary to continuously maintain a working set of strategies for meeting the action level with the existing treatment processes.

The Permittee may exclude any optimization strategy from the initial list created in S4.C.a.ii that was considered but found to exceed a reasonable implementation cost or timeframe. Documentation must include an explanation of the rationale and financial criteria used in the exclusion determination. If the Permittee finds no viable optimization strategies exist

for their current treatment processes, they must immediately proceed to the identification of a corrective action under S4.D.

- c. *Initial Selection.* **As soon as possible and no later than July 1, 2022**, select at least one optimization strategy for implementation.

Document the expected performance (i.e., % TIN removal or a calculated reduction in effluent load or concentration) for the initial optimization strategy prior to implementation.

2. Optimization Implementation

All Permittees in Table 5 must document implementation of the selected optimization strategy (from S4.C.1.c) during the first reporting period in the first Annual Report due March 31, 2023. Permittees must document implementation during every reporting period thereafter. The documentation must include:

- a. *Strategy Implementation.* Describe how the permittee implemented the selected strategy during each reporting period, following permit coverage. Including:
 - i. Initial implementation costs
 - ii. Length of time for full implementation, including start date.
 - iii. Any adaptive management applied to refine implementation during the reporting period.
 - iv. Anticipated and unanticipated challenges.
 - v. Any impacts to the overall treatment performance as a result of process changes.
- b. *Discharge Evaluation.* By March 31 each year beginning in 2023, each Permittee in Table 5 must review effluent data collected during the previous calendar year to determine whether TIN loads are increasing.
 - i. Using all accredited monitoring data, determine facility's annual average TIN concentration and load from the reporting period. **If the annual TIN load exceeds the Action Level in Table 5 (or the applicable bubbled Action Level in Table 6) take the corrective actions in S4.D.**
 - ii. Determine the treatment plant's TIN removal rate observed during the reporting period.

3. Influent Nitrogen Reduction Measures/Source Control

Permittees in Table 5 must investigate opportunities to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources and submit documentation with the Annual Report. The investigation must:

- a. Review non-residential sources of nitrogen and identify any possible pretreatment opportunities.
- b. Identify potential strategies for reducing TIN from new multi-family/dense residential developments and commercial buildings.

D. ACTION LEVEL EXCEEDANCE CORRECTIVE ACTIONS

Permittees in Table 5 must evaluate whether or not they exceeded the facility specific action level or the bubbled action level (as applicable) and, if they did, implement corrective actions while continuing optimization.

1. If the Permittee determines in the Annual Report that they have exceeded their action level, they must:
 - a. Identify possible factors that caused the action level exceedance.
 - b. Identify whether modifications to the optimization strategy can improve performance.
 - c. Assess whether a different strategy or combination of strategies may provide better overall process improvements.
 - d. Document changes made to the optimization strategy, if any, while completing corrective action requirements.
 - i. Provide a detailed description of the modified or new optimization strategy selected from the list developed in S4.C.1.b. Include an implementation schedule for any changes and, as necessary, use the treatment process assessment developed to evaluate anticipated results.
 - ii. If the Permittee proposes no changes to the optimization strategy, they must provide reasons for not making changes.
2. With the next Annual Report, submit for review a proposed approach to reduce the annual effluent load by at least 10% below the action level listed in Table 5 for individual plants or Table 6 for multiple plants under a bubbled action level. This must be an abbreviated engineering report or technical memo, unless Ecology has previously approved a design document with the proposed solution. The proposed approach must utilize solutions that can be implemented as soon as possible. This may include influent load reduction strategies identified in S4.C.3.

The engineering document must include:

- i. Brief summary of the treatment alternatives considered and why the proposed approach was selected. Include cost estimates for operation and maintenance;
- ii. The basic design information, including influent characterization;
- iii. A description of the proposed treatment approach and operation, including updates to the WWTP's process flow diagram;

- iv. Anticipated results from the proposed approach including expected effluent quality;
 - v. Certification by a licensed professional engineer.
- a. If a Permittee exceeds an action level two years in a row, or for a third year during the permit term, the Permittee must begin to reduce nitrogen loads by implementing the proposed approach submitted per S4.D.2 following Ecology's written approval of the proposed approach and implementation schedule.
 - b. Submit an update to the Permittee's Operation and Maintenance Manual no later than 6 months following implementation.

E. NUTRIENT REDUCTION EVALUATION

1. All permittees in Table 5, except for those who meet the exclusions listed in this paragraph, must prepare and submit an approvable Nutrient Reduction Evaluation (NRE) to Ecology for review by December 31, 2025. Permittees with multiple plants may submit a combined report. This combined report must include an evaluation for all plants owned and operated by the jurisdiction. Permittees that maintain an annual TIN average of < 10 mg/L and meet their action level throughout the permit term must submit a truncated NRE that satisfies S4.E.3-S4.E.5. Permittees that meet their action level throughout the permit term, maintain an annual average of < 10 mg/L TIN and a seasonal average of < 3 mg/L do not have to submit the NRE.
2. The NRE must include an all known, available and reasonable treatment (**AKART**) analysis for purposes of evaluating reasonable treatment alternatives capable of reducing total inorganic nitrogen (TIN). It must present an alternative representing the greatest TIN reduction that is reasonably feasible on an annual basis.
3. In addition, the NRE must assess other site-specific main stream treatment plant upgrades, the applicability of side stream treatment opportunities, alternative effluent management options (e.g., disposal to ground, reclaimed water beneficial uses), the viability of satellite treatment, and other nutrient reduction opportunities that could achieve a final effluent concentration of 3 mg/L TIN (or equivalent load reduction) on seasonal average (April – October) basis.

4. The analysis must be sufficiently complete that an engineering report may be developed for the preferred AKART alternative as well as the preferred alternatives to reach 3 mg/L TIN seasonally, without substantial alterations of concept or basic considerations. The final report must contain appropriate requirements as described in the following guidance (or most recent version):
 - a. [The Criteria for Sewage Works Design \(ECY Publication No. 98-37, 2019\)](#)³
 - b. [Reclaimed Water Facilities Manual: The Purple Book \(ECY Publication No. 15-10-024, 2019\)](#)⁴
5. The analysis conducted for the NRE must include the following elements:
 - a. Wastewater Characterization
 - i. Current flowrates and growth trends within the sewer service area.
 - ii. Current influent and effluent quality.
 - b. Treatment Technology Analysis
 - i. Description of current treatment processes, including any modifications made for optimization or due to corrective actions.
 - ii. Description of site limitations, constraints, or other treatment implementation challenges that exist.
 - iii. Identification and screening of potential treatment technologies for meeting two different levels of treatment:
 1. AKART for nitrogen removal (annual basis), and
 2. 3 mg/L TIN (or equivalent load), as a seasonal average April - October
 - c. Economic Evaluation
 - i. Develop capital, operation and maintenance costs and 20 year net present value using the real discount rate in the most current [Appendix C to Office of Management and Budget Circular No. A-94](#)⁵ for each technology alternative evaluated.
 - ii. Provide cost per pound of nitrogen removed.
 - iii. Provide details on basis for current wastewater utility rate structure, including:
 1. How utilities allocate and recover costs from customers.

³ <https://apps.ecology.wa.gov/publications/summarypages/9837.html>

⁴ <https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html>

⁵ https://www.whitehouse.gov/wp-content/uploads/2020/12/2020_Appendix-C.pdf

2. How frequently rate structures are reviewed.
 3. The last time rates were adjusted and the reason for that adjustment.
- iv. Provide impact to current rate structure for each alternative assessed.
- d. Environmental Justice (EJ) Review
 - i. Evaluate the demographics within the sewer service area to identify communities of color, Tribes, indigenous communities, and low income populations.
 - ii. Identify areas within service area that exceed the median household income.
 - iii. Include an affordability assessment to identify how much overburdened communities identified in S4.E.5.d.i can afford to pay for the wastewater utility.
 - iv. Propose alternative rate structures or measures that can be taken to prevent adverse effects of rate increases on populations with economic hardship identified in S4.E.5.d.i.
 - v. Provide information on how recreational and commercial opportunities may be improved for communities identified in S4.E.5.d.i as a result of the treatment improvements identified.
 - e. Selection of the most reasonable treatment alternative based on the AKART assessment; and the selected alternative for achieving an effluent concentration of 3 mg/L TIN (or equivalent load reduction) based on an April – October seasonal average.
 - f. Viable implementation timelines that include funding, design, and construction for meeting both the AKART and seasonal average 3 mg/L TIN preferred alternatives.

S5. NARRATIVE EFFLUENT LIMITS FOR WWTPS WITH MODERATE TIN LOADS

A. APPLICABILITY AND NARRATIVE EFFLUENT LIMITS

Beginning on the effective date, each of the Permittees with moderate TIN loads listed in Table 8 may discharge TIN from the WWTP through the designated **outfall(s)** described in its individual NPDES permit. See Table 3 in Section S1.A for the load category assignment.

All discharges and activities authorized by this permit must comply with the terms and conditions of this permit. Each Permittee listed in Table 8 must comply with the facility specific or bubbled **action levels** and narrative effluent limits listed in Table 7, which constitute the suite of **best management practices** (BMPs) required for a water quality based effluent limit under 40 CFR 122.44(k).

Table 7. Narrative Effluent Limits for Moderate TIN Loaders

Parameter	Narrative Effluent Limit
Monitoring	Monitor and report per the requirements in S7.B.
Nitrogen Optimization Plan	Optimize treatment performance to stay below the action level. Submit Optimization Report annually per the requirements in S5.C
Nutrient Reduction Evaluation	Submit Nutrient Reduction Evaluation per the requirements in S5.E

B. TIN ACTION LEVELS

If the action level listed in Table 8 for individual WWTPs or the bubbled action levels listed for single jurisdictions in Table 9 are exceeded, the Permittee must employ corrective actions identified in S5.D.

The annual Action Level is the sum of monthly nutrient loads measured over one year. Ecology will assess this total once per year based on the Permittee's Annual Report.

Table 8. Moderate WWTPs and Total Inorganic Nitrogen Action Levels

Wastewater Treatment Plant	Individual NPDES Permit Number	Action Level, TIN lbs/year	Outfall Number
Anacortes WWTP	WA0020257	167,000	001
Birch Bay Sewage Treatment Plant (STP)	WA0029556	66,400	001
Blaine STP (Lighthouse Point WRF)	WA0022641	18,200	001
Bremerton WWTP	WA0029289	602,000	001
Kitsap County Central Kitsap WWTP	WA0030520	306,000	001
Edmonds STP	WA0024058	432,000	001
Lake Stevens Sewer District WWTP	WA0020893	127,000	002
Lakota WWTP ¹	WA0022624	597,000	001

Wastewater Treatment Plant	Individual NPDES Permit Number	Action Level, TIN lbs/year	Outfall Number
LOTT Budd Inlet WWTF	WA0037061	338,000	001
Lynnwood STP	WA0024031	340,000	001
Marysville STP	WA0022497	592,000	100/001
Midway Sewer District WWTP	WA0020958	625,500	001
Miller Creek WWTP ²	WA0022764	297,000	001
Mt Vernon WWTP	WA0024074	396,000	004
Port Angeles WWTP	WA0023973	177,000	001/002
Port Orchard WWTP (South Kitsap WRF)	WA0020346	215,000	001
Redondo WWTP ¹	WA0023451	249,000	001
Salmon Creek WWTP ²	WA0022772	199,000	001
Snohomish STP	WA0029548	83,600	001
Tacoma North No. 3 WWTP	WA0037214	339,000	001

Table 9. Bubbled Action Levels for Corrective Action Assessment

Jurisdiction	Bubbled Action Level, TIN lbs/year
Lakehaven Water and Sewer District ¹	846,000
Southwest Suburban Sewer District ²	496,000

C. NITROGEN OPTIMIZATION PLAN AND REPORT

Each Permittee listed in Table 8 must develop, implement and maintain a Nitrogen Optimization Plan to evaluate operational strategies for maximizing nitrogen removal from the existing treatment plant to stay below the calculated action level. Each Permittee must document their actions taken, any action level exceedances, and apply an adaptive management approach at the WWTP. Permittees will quantify results with required monitoring under this Permit.

The Permittee must begin the actions described in this section immediately upon permit coverage. Documentation of Nitrogen Optimization Plan implementation must be submitted annually through the Annual Report (S9- Reporting Requirements). See Appendix D for annual report questions that satisfy the Nitrogen Optimization Plan requirements.

The Nitrogen Optimization Plan submitted by each Permittee in Table 8 must include the following components:

1. Treatment Process Performance Assessment

Assess the nitrogen removal potential of the current treatment process and identify viable optimization strategies prior to implementation.

- a. *Treatment Assessment.* Develop a method to evaluate potential optimization approaches for the existing treatment process. Use the evaluation to:
 - i. Evaluate current (pre-optimization) process performance to determine the existing TIN removal performance for the WWTP.
 - ii. Create a list of potential optimization strategies capable of meeting the action level at the WWTP prior to starting optimization. Update the assessment and list of options as necessary with each Annual Report.
- b. *Identify and evaluate optimization strategies.* From the list developed in S5.C.1.a.ii, identify viable optimization strategies for each WWTP owned and operated by the Permittee. Prioritize and update this list as necessary to continuously maintain a working set of strategies for meeting the action level with the existing treatment processes.

The Permittee may exclude any optimization strategy from the initial list created in S5.C.a.ii that was considered but found to exceed a reasonable implementation cost or timeframe. Documentation must include an explanation of the rationale and financial criteria used in the exclusion determination. If the Permittee finds no viable optimization strategies exist for their current treatment processes, they must immediately proceed to the identification of a corrective action under S5.D.

- c. *Initial Selection.* **As soon as possible and no later than July 1, 2022** select at least one optimization strategy for implementation.

Document the expected performance (i.e., % TIN removal or a calculated reduction in effluent load or concentration) for the initial optimization strategy prior to implementation.

2. Optimization Implementation

All Permittees in Table 8 must document implementation of the selected optimization strategy (from S5.C.1.c) during the first reporting period in the first Annual Report due March 31, 2023. Permittees must document implementation during every reporting period thereafter. The documentation must include:

- a. *Strategy Implementation.* Describe how the permittee implemented the selected strategy during each reporting period, following permit coverage. Including:
 - i. Initial implementation costs
 - ii. Length of time for full implementation, including start date.

- iii. Any adaptive management applied to refine implementation during the reporting period.
 - iv. Anticipated and unanticipated challenges.
 - v. Any impacts to the overall treatment performance as a result of process changes.
 - b. *Discharge Evaluation.* By March 31 each year beginning in 2023, each Permittee in Table 8 must review effluent data collected during the previous calendar year to determine whether TIN loads are increasing.
 - i. Using all accredited monitoring data, determine facility's annual average TIN concentration and load from the reporting period. **If the annual TIN load exceeds the Action Level in Table 8 (or the applicable bubbled Action Level in Table 9) take the corrective actions in S5.D.**
 - ii. Determine the treatment plant's TIN removal rate observed during the reporting period.
3. Influent Nitrogen Reduction Measures/Source Control
- Permittees in Table 8 must investigate opportunities to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources and submit documentation with the Annual Report. The investigation must:
- a. Review non-residential sources of nitrogen and identify any possible pretreatment opportunities.
 - b. Identify potential strategies for reducing TIN from new multi-family/dense residential developments and commercial buildings.

D. ACTION LEVEL EXCEEDANCE CORRECTIVE ACTIONS

Permittees in Table 8 must evaluate whether or not they exceeded the facility specific action level or the bubbled action level (as applicable) and, if they did, implement corrective actions while continuing optimization.

- 1. If the Permittee determines in the Annual Report that they have exceeded their action level, they must:
 - a. Identify possible factors that caused the action level exceedance.
 - b. Identify whether modifications to the optimization strategy can improve performance.
 - c. Assess whether a different strategy or combination of strategies may provide better overall process improvements.
 - d. Document changes made to the optimization strategy, if any, while completing corrective action requirements.

- i. Provide a detailed description of the modified or new optimization strategy selected from the list developed in S5.C.1.b. Include an implementation schedule for any changes and, as necessary, use the treatment process assessment developed to evaluate anticipated results.
 - ii. If the Permittee proposes no changes to the optimization strategy, they must provide reasons for not making changes.
- 2. With the next Annual Report, submit for review a proposed approach to reduce the annual effluent load below the action level listed in either Table 8 or Table 9 (as applicable for those jurisdictions) for the duration of the permit term. This must be an abbreviated engineering report or technical memo, unless Ecology has previously approved a design document with the proposed solution. The proposed approach must utilize solutions that can be implemented as soon as possible. This may include influent load reduction strategies identified in S5.C.3.

The engineering document must include:

- i. Brief summary of the treatment alternatives considered and why the proposed approach was selected. Include cost estimates for operation and maintenance;
 - ii. The basic design information, including influent characterization;
 - iii. A description of the proposed treatment approach and operation, including updates to the WWTP's process flow diagram;
 - iv. Anticipated results from the proposed approach including expected effluent quality;
 - v. Certification by a licensed professional engineer.
- b. If a Permittee exceeds an action level two years in a row, or for a third year during the permit term, the Permittee must begin to reduce nitrogen loads by implementing the proposed approach submitted per S5.D.2 following Ecology's written approval of the proposed approach and implementation schedule.
- c. Submit an update to the Permittee's Operation and Maintenance Manual no later than 6 months following implementation.

E. NUTRIENT REDUCTION EVALUATION

1. Permittees in Table 8, except for those who meet the exclusions listed in this paragraph, must prepare and submit an approvable Nutrient Reduction Evaluation (NRE) to Ecology for review by December 31, 2025. Permittees with multiple plants may submit a combined report. This combined report must include an evaluation for all plants owned and operated by the jurisdiction. Permittees that maintain an annual TIN average of < 10 mg/L and meet their action level throughout the permit term must submit a truncated NRE that satisfies S5.E.3-S5.E.5. Permittees that meet their action level throughout the permit term, maintain an annual average of < 10 mg/L TIN and a seasonal average of < 3 mg/L do not have to submit the NRE.
2. The NRE must include an all known, available and reasonable treatment (**AKART**) analysis for purposes of evaluating reasonable treatment alternatives capable of reducing total inorganic nitrogen (TIN). It must present an alternative representing the greatest TIN reduction that is reasonably feasible on an annual basis.
3. In addition, the NRE must assess other site- specific main stream treatment plant upgrades, the applicability of side stream treatment opportunities, alternative effluent management options (e.g., disposal to ground, reclaimed water beneficial uses), the viability of satellite treatment, and other nutrient reduction opportunities that could achieve a final effluent concentration of 3 mg/L TIN (or equivalent load reduction) on seasonal average (April – October) basis.
4. The analysis must be sufficiently complete that an engineering report may be developed for the preferred AKART alternative as well as the preferred alternatives to reach 3 mg/L TIN seasonally, without substantial alterations of concept or basic considerations. The final report must contain appropriate requirements as described in the following guidance (or most recent version):
 - a. [The Criteria for Sewage Works Design \(ECY Publication No. 98-37, 2019\)](https://apps.ecology.wa.gov/publications/summarypages/9837.html)⁶
 - b. [Reclaimed Water Facilities Manual: The Purple Book \(ECY Publication No. 15-10-024, 2019\)](https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html)⁷
5. The analysis conducted for the NRE must include the following elements:
 - a. Wastewater Characterization
 - i. Current flowrates and growth trends within the sewer service area.
 - ii. Current influent and effluent quality.
 - b. Treatment Technology Analysis

⁶ <https://apps.ecology.wa.gov/publications/summarypages/9837.html>

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html>

- i. Description of current treatment processes, including any modifications made for optimization or due to corrective actions.
- ii. Description of site limitations, constraints, or other treatment implementation challenges that exist.
- iii. Identification and screening of potential treatment technologies for meeting two different levels of treatment:
 - 1. AKART for nitrogen removal (annual basis), and
 - 2. 3 mg/L TIN (or equivalent load), as a seasonal average (April through October)
- c. Economic Evaluation
 - i. Develop capital, operation and maintenance costs and 20 year net present value using the real discount rate in the most current [Appendix C to Office of Management and Budget Circular No. A-94](#)⁸ for each technology alternative evaluated.
 - ii. Provide cost per pound of nitrogen removed.
 - iii. Provide details on basis for current wastewater utility rate structure, including:
 - 1. How utilities allocate and recover costs from customers.
 - 2. How frequently rate structures are reviewed.
 - 3. The last time rates were adjusted and the reason for that adjustment.
 - iv. Provide impact to current rate structure for each alternative assessed.
- d. Environmental Justice (EJ) Review
 - i. Evaluate the demographics within the sewer service area to identify communities of color, Tribes, indigenous communities, and low income populations.
 - ii. Identify areas within service area that exceed the median household income.
 - iii. Include an affordability assessment to identify how much overburdened communities identified in S5.E.5.d.i can afford to pay for the wastewater utility.
 - iv. Propose alternative rate structures or measures that can be taken to prevent adverse effects of rate increases on populations with economic hardship identified in S5.E.5.d.i.

⁸ https://www.whitehouse.gov/wp-content/uploads/2020/12/2020_Appendix-C.pdf

- v. Provide information on how recreational and commercial opportunities may be improved for communities identified in S5.E.5.d.i as a result of the treatment improvements identified.
- e. Selection of the most reasonable treatment alternative based on the AKART assessment; and the selected alternative for achieving an effluent concentration of 3 mg/L TIN (or equivalent load reduction) based on an April through October seasonal average.
- f. Viable implementation timelines that include funding, design, and construction for meeting both the AKART and seasonal average 3 mg/L TIN preferred alternatives.

S6. NARRATIVE EFFLUENT LIMITS FOR WWTPS WITH SMALL TIN LOADS

A. APPLICABILITY AND NARRATIVE EFFLUENT LIMITS

Beginning on the effective date, each of the Permittees with small TIN loads listed in Table 11 may discharge total inorganic nitrogen from the WWTP through each facility's designated outfall. See Table 3 in Section S1.A for the load category assignment.

All discharges and activities authorized by this permit must comply with the terms and conditions of this permit. Each Permittee listed in Table 11 must comply with the narrative effluent limits listed in Table 10 which constitute the suite of BMPs required for a narrative water quality based effluent limit under 40 CFR 122.44(k).

Table 10. Narrative Effluent Limits for WWTPs with Small TIN Loads

Parameter	Narrative Effluent Limit
Monitoring	Monitor and report per the requirements in S7.C.
Nitrogen Optimization Plan	Submit one Optimization Report per the requirements in S6.B
AKART Analysis	Submit an AKART Analysis per the requirements in S6.C

Table 11. Permittees with Small TIN Loads

Wastewater Treatment Plant	Individual NPDES Permit Number	Outfall Number
Alderwood STP	WA0020826	001
Bainbridge Island WWTP	WA0020907	001
Boston Harbor STP	WA0040291	001
Clallam Bay STP	WA0024431	001
Clallam Bay Corrections Center STP	WA0039845	001
Coupeville STP	WA0029378	001
Eastsound Orcas Village WWTP	WA0030911	001
Eastsound Sewer and Water District WWTP	WA0030571	001
Fisherman Bay STP	WA0030589	001
Friday Harbor STP	WA0023582	001
Gig Harbor WWTP	WA0023957	001
Hartstene Pointe STP	WA0038377	001
King County Vashon WWTP	WA0022527	001
Kitsap County Kingston WWTP	WA0032077	001
Kitsap County Manchester WWTP	WA0023701	001
Kitsap County Sewer District #7 Water Reclamation Facility (WRF)	WA0030317	001
La Conner STP	WA0022446	001
Langley WWTP	WA0020702	001
McNeil Island Special Commitment Center WWTP	WA0040002	001
Mukilteo Water and Wastewater District WWTP	WA0023396	001
Oak Harbor STP	WA0020567	003
Penn Cove WWTP	WA0029386	001
Port Townsend STP	WA0037052	001
Rustlewood STP	WA0038075	001
Sekiu WWTP	WA0024449	001
Sequim WRF	WA0022349	001
Shelton WWTP	WA0023345	001

Wastewater Treatment Plant	Individual NPDES Permit Number	Outfall Number
Skagit County Sewer District 2 Big Lake WWTP	WA0030597	001
Stanwood STP	WA0020290	001
Tamoshan STP	WA0037290	001
WA Parks Larrabee WWTP	WA0023787	001

B. NITROGEN OPTIMIZATION PLAN AND REPORT

Each Permittee listed in Table 11 must develop, implement, and maintain a Nitrogen Optimization Plan to evaluate and implement operational strategies for maximizing nitrogen removal from the existing treatment plant during the permit term. Permittees must document their actions taken and apply an adaptive management approach at the WWTP. Permittees will quantify results with required monitoring under this Permit.

The Permittee must begin the actions described in this section immediately upon permit coverage. Documentation of Nitrogen Optimization Plan implementation must be submitted through the Single Report (S9- Reporting Requirements). See Appendix E for report questions that satisfy the Nitrogen Optimization Plan requirements. This report must be submitted by March 31, 2026.

The Nitrogen Optimization Plan submitted by each Permittee in Table 11 must include the following components:

1. Treatment Process Performance Assessment

Each Permittee listed in Table 11 must assess the nitrogen removal potential of the current treatment process and have the ability to evaluate optimization strategies prior to implementation.

- a. *Evaluation.* Each Permittee in Table 11 must develop a treatment process assessment method for purposes of evaluating optimization approaches during the permit term.
 - i. Evaluate current (pre-optimization) process performance. Determine the empirical TIN removal rate for the WWTP.
 - ii. Develop an initial assessment approach to evaluate possible optimization strategies at the WWTP prior to and after implementation.
 - iii. Determine the optimization goal for the WWTP. Develop and document a prioritized list of optimization strategies capable of achieving the optimization goal for each WWTP owned and operated by the Permittee. Update this list as necessary to continuously maintain a selection of strategies for achieving each optimization goal identified.

- iv. The Permittee may exclude from the initial selection any optimization strategy considered but found to exceed a reasonable implementation cost or timeframe. Documentation must include an explanation of the rationale and financial criteria used for the exclusion determination.
- b. *Initial Selection.* **By December 31, 2022** identify the optimization strategy selected for implementation.

Document the expected % TIN removal (or the expected reduction in effluent load) for the optimization strategy prior to implementation.

2. Optimization Implementation

Permittees in Table 11 must document implementation of the selected optimization strategy (from S6.B.1.b) as it is applied to the existing treatment process during the reporting period. Permittees must document adaptive management applied to optimization strategies following initial implementation through the permit term.

- a. *Strategy Implementation.* Describe how the selected strategy was implemented during the reporting period, following permit coverage. Including:
 - i. Initial implementation costs.
 - ii. Length of time for full implementation, including start date.
 - iii. Anticipated and unanticipated challenges.
 - iv. Any impacts to the overall treatment performance as a result of process changes.
- b. *Load Evaluation.* Each Permittee listed in Table 11 must review effluent data collected during the reporting period to determine whether TIN loads are increasing.
 - i. Using all accredited monitoring data, determine the facility's annual average TIN concentration and load for each year during the reporting period.
 - ii. Determine the treatment plant's TIN removal rate at the end of each year. Compare the removal rate with the pre-optimization rate identified in S6.B.1.a.i.
- c. *Strategy Assessment.* Quantify the results of the implemented strategy and compare to the performance metric identified in S6.B.1.b.

If the TIN loading increased, apply adaptive management, re-evaluate the optimization strategies and the resulting performance to identify the reason. Select a new optimization strategy for implementation and/or revise implementation for better performance. Document any updates to the implementation schedule and overall plan.

3. Influent Nitrogen Reduction Measures/Source Control

Permittees in Table 11 must investigate opportunities to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources and submit documentation with the Annual Report. The investigation must:

- a. Review non-residential sources of nitrogen and identify any possible pretreatment opportunities.
- b. Identify strategies for reducing TIN from new multi-family/dense residential developments and commercial buildings.

C. AKART ANALYSIS

1. Permittees in Table 11, except for those who meet the exclusions listed in this paragraph, must prepare and submit an approvable all known, available and reasonable treatment (AKART) analysis to Ecology for purposes of evaluating reasonable treatment alternatives capable of reducing total inorganic nitrogen (TIN). Permittees must submit this report by December 31, 2025. Permittees that maintain an annual TIN average of < 10 mg/L and do not document an increase in load through their DMRs do not have to submit this analysis.
2. The analysis must contain appropriate requirements as described in the following guidance (or the most recent version):
 - a. [The Criteria for Sewage Works Design \(ECY Publication No. 98-37, 2019\)](https://apps.ecology.wa.gov/publications/documents/9837.pdf)⁹
 - b. [Reclaimed Water Facilities Manual: The Purple Book \(ECY Publication No. 15-10-024, 2019\)](https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html)¹⁰
3. The AKART analysis must include the following elements:
 - a. Wastewater Characterization
 - i. Current volumes, flowrates and growth trends
 - ii. Current influent and effluent quality
 - b. Treatment Technology Analysis
 - i. Description of current treatment processes
 - ii. Identification and screening of potential treatment technologies for TIN reduction that achieves AKART for nitrogen removal
 - c. Economic Evaluation

⁹ <https://apps.ecology.wa.gov/publications/documents/9837.pdf>

¹⁰ <https://apps.ecology.wa.gov/publications/SummaryPages/1510024.html>

- i. Develop capital, operation and maintenance costs and 20 year net present value using the real discount rate in the most current [Appendix C to Office of Management and Budget Circular No. A-94](#)¹¹ for each technology alternative evaluated.
- ii. Provide cost per pound of nitrogen removed
- iii. Provide details on basis for current wastewater utility rate structure, including:
 - 1. How utilities allocate and recover costs from customers.
 - 2. How frequently rate structures are reviewed.
 - 3. The last time rates were adjusted and the reason for that adjustment.
- iv. Provide impact to current rate structure for each alternative assessed.
- d. Environmental Justice (EJ) Review
 - i. Evaluate the demographics within the sewer service area to identify communities of color, Tribes, indigenous communities, and low income populations.
 - ii. Identify areas within the service area that exceed the median household income.
 - iii. Include an affordability assessment to identify how much overburdened communities identified in S6.C.3.d.i can afford to pay for the wastewater utility.
 - iv. Propose alternative rate structures or measures that can be taken to prevent adverse effects of rate increases on populations with economic hardship identified in S6.C.3.d.i.
 - v. Provide information on how recreation and commercial opportunities may be improved for communities identified in S6.C.3.d.i as a result of the treatment improvements identified.
- e. Selection of most reasonable treatment alternative.
- f. Attainable implementation schedule that includes funding, design and construction of infrastructure improvement capable of achieving and maintaining AKART.

¹¹ https://www.whitehouse.gov/wp-content/uploads/2020/12/2020_Appendix-C.pdf

S7. MONITORING SCHEDULES AND SAMPLING REQUIREMENTS

A. MONITORING REQUIREMENTS FOR DOMINANT LOADERS

Each permittee listed in Table 5 must monitor influent and effluent in accordance with the following schedule and requirements specified in Table 12 and 13, respectively. Influent and effluent monitoring locations must be representative. Permittees may use the monitoring locations identified in their individual NPDES permit. If a Permittee conducts additional sampling of required parameters during the month, they must report all results on the monthly DMR.

Table 12. Influent Sampling Requirements for Dominant Loaders

Wastewater influent means the raw sewage flow from the collection system into the treatment facility. Sample the wastewater entering the headworks of the treatment plant excluding any side-stream returns from inside the plant, if possible.

The Permittee must collect total ammonia, nitrate plus nitrite, and TKN samples during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^k	Laboratory Quantitation Level ^l	Sample Type
CBOD ₅	mg/L	2/week ^b	SM5210-B	2 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	2/week ^b	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	1/month ^c	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
Total Kjeldahl Nitrogen (TKN)	mg/L as N	1/month ^c	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e

Table 13. Effluent Sampling Requirements for Dominant Loaders

Final wastewater effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The total ammonia, TKN, and nitrate plus nitrite samples must be taken during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^k	Laboratory Quantitation Level ^l	Sample Type
Flow ^f	MGD	2/week ^b	--	--	Metered/recorded
CBOD ₅ ^a	mg/L	2/week ^b	SM5210-B	2 mg/L	24-hour composite ^e
Total Organic Carbon	mg/L	1/quarter ^d	SM5310-B/C/D	1 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	2/week ^b	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	2/week ^b	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
TKN	mg/L as N	1/month ^c	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e
Total Inorganic Nitrogen	mg/L as N	2/week ^b	--	--	Calculated ^g
Total Inorganic Nitrogen	Lbs/day	2/week ^b	--	--	Calculated ^h
Average Monthly Total Inorganic Nitrogen	Lbs	1/month ^c	--	--	Calculated ⁱ
Annual Total Inorganic Nitrogen, year to date	Lbs	1/month ^c	--	--	Calculated ^j

Table 14. Footnotes for Influent and Effluent Monitoring Tables 12 and 13

Footnote	Information
a	Take effluent samples for the CBOD ₅ analysis before or after the disinfection process. If taken after disinfection and chlorine is used, dechlorinate and reseed the sample.
b	2/week means two (2) times during each week
c	1/month means one (1) time during each month
d	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on <u>1/1/22 4/1/22 7/1/22 10/1/22</u> and submit results by <u>4/15/22, 7/15/22, 10/15/22, 1/15/22</u> .
e	24-hour <i>composite</i> means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
f	Report daily flows only on days when collecting total ammonia and nitrate plus nitrite samples.
g	TIN (mg/L) as N = Total Ammonia (mg/L as N) + Nitrate plus Nitrite (mg/L as N)
h	Calculate mass concurrently with the respective concentration of a sample, using the following formula: Concentration (in mg/L) X daily flow (in MGD) X Conversion Factor (8.34) = lbs/day
i	Calculate the monthly average total inorganic nitrogen load (lbs as N) using the following equation: Monthly average TIN load (lbs as N) $= ((\sum \text{Calculated TIN loads } (\frac{\text{lbs}}{\text{day}} \text{ as N})) / \text{number of samples}) \times \text{number of days in the calendar month}$
j	Calculate the annual total inorganic nitrogen, year to date using the following calculation: $\text{Annual TIN load (lbs as N)} = \sum \text{Monthly average TIN loads, to date}$
k	Or other equivalent EPA-approved method with the same or lower quantitation level
l	The Permittee must ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternative method from 40 CFR Part 136 is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method it must report the test method and QL on the discharge monitoring report. If the permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific method detection level (MDL) and QL on the DMR. The permittee must also upload the QA/QC documentation from the lab on the QL development.

B. MONITORING REQUIREMENTS FOR MODERATE LOADERS

Each permittee listed in Table 8 must monitor influent and effluent in accordance with the following schedule and requirements specified in Table 15 and 16, respectively. Influent and effluent monitoring locations must be representative. Permittees may use the monitoring locations identified in their individual NPDES permit. If a Permittee conducts additional sampling of required parameters during the month, they must report all results on the monthly DMR.

Table 15. Influent Sampling Requirements for Moderate Loaders

Wastewater influent means the raw sewage flow from the collection system into the treatment facility. Sample the wastewater entering the headworks of the treatment plant excluding any side-stream returns from inside the plant, if possible.

The Permittee must collect total ammonia, nitrate plus nitrite, and TKN samples during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^k	Laboratory Quantitation Level ^l	Sample Type
CBOD ₅	mg/L	1/week ^b	SM5210-B	2 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	1/week ^b	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	1/month ^c	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
Total Kjeldahl Nitrogen (TKN)	mg/L as N	1/month ^c	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e

Table 16. Effluent Sampling Requirements for Moderate Loaders

Final wastewater effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The total ammonia, TKN, and nitrate plus nitrite samples must be taken during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^k	Laboratory Quantitation Level ^l	Sample Type
Flow ^f	MGD	1/week ^b	--	--	Metered/recorded
CBOD ₅ ^a	mg/L	1/week ^b	SM5210-B	2 mg/L	24-hour composite ^e
Total Organic Carbon	mg/L	1/quarter ^c	SM5310-B/C/D	1 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	1/week ^b	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	1/week ^b	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
TKN	mg/L as N	1/month ^c	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e
Total Inorganic Nitrogen	mg/L as N	1/week ^b	--	--	Calculated ^g
Total Inorganic Nitrogen	Lbs/day	1/week ^b	--	--	Calculated ^h
Average Monthly Total Inorganic Nitrogen	Lbs	1/month ^c	--	--	Calculated ⁱ
Annual Total Inorganic Nitrogen, year to date	Lbs	1/month ^c	--	--	Calculated ^j

Table 17. Footnotes for Influent and Effluent Monitoring Tables 15 and 16

Footnote	Information
a	Take effluent samples for the CBOD ₅ analysis before or after the disinfection process. If taken after disinfection and chlorine is used, dechlorinate and reseed the sample.
b	1/week means one (1) times during each week
c	1/month means one (1) time during each month
d	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on <u>1/1/22 4/1/22 7/1/22 10/1/22</u> and submit results by <u>4/15/22, 7/15/22, 10/15/22, 1/15/22</u> .
e	24-hour <i>composite</i> means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
f	Report daily flows only on days when collecting total ammonia and nitrate plus nitrite samples.
g	TIN (mg/L) as N = Total Ammonia (mg/L as N) + Nitrate plus Nitrite (mg/L as N)
h	Calculate mass concurrently with the respective concentration of a sample, using the following formula: Concentration (in mg/L) X daily flow (in MGD) X Conversion Factor (8.34) = lbs/day
i	Calculate the monthly average total inorganic nitrogen load (lbs as N) using the following equation: Monthly average TIN load (lbs as N) $= ((\sum \text{Calculated TIN loads } (\frac{\text{lbs}}{\text{day}} \text{ as N})) / \text{number of samples}) \times \text{number of days in the calendar month}$
j	Calculate the annual total inorganic nitrogen, year to date using the following calculation: $\text{Annual TIN load (lbs as N)} = \sum \text{Monthly average TIN loads, to date}$
k	Or other equivalent EPA-approved method with the same or lower quantitation level
l	The Permittee must ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternative method from 40 CFR Part 136 is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method it must report the test method and QL on the discharge monitoring report. If the permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific method detection level (MDL) and QL on the DMR. The permittee must also upload the QA/QC documentation from the lab on the QL development.

C. MONITORING REQUIREMENTS FOR SMALL LOADERS

Each permittee listed in Table 11 must monitor influent and effluent in accordance with the following schedule and requirements specified in Table 18 and 19, respectively. Influent and effluent monitoring locations must be representative. Permittees may use the monitoring locations identified in their individual NPDES permit. If a Permittee conducts additional sampling of required parameters during the month, they must report all results on the monthly DMR.

Table 18. Influent Sampling Requirements for Small Loaders

Wastewater influent means the raw sewage flow from the collection system into the treatment facility. Sample the wastewater entering the headworks of the treatment plant excluding any side-stream returns from inside the plant, if possible.

The Permittee must collect total ammonia, nitrate plus nitrite, and TKN samples during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^j	Laboratory Quantitation Level ^k	Sample Type
CBOD ₅	mg/L	2/month ^c	SM5210-B	2 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	2/month ^c	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	1/month ^b	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
Total Kjeldahl Nitrogen (TKN)	mg/L as N	1/month ^b	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e

Table 19. Effluent Sampling Requirements for Small Loaders

Final wastewater effluent means wastewater exiting the last treatment process or operation. Typically, this is after or at the exit from the chlorine contact chamber or other disinfection process. The total ammonia, TKN, and nitrate plus nitrite samples must be taken during the same sampling event.

Parameter	Units & Specifications	Minimum Sampling or Calculation Frequency	Analytical Method ^k	Laboratory Quantitation Level ^l	Sample Type
Flow ^f	MGD	2/month ^c	--	--	Metered/recorded
CBOD ₅ ^a	mg/L	2/month ^c	SM5210-B	2 mg/L	24-hour composite ^e
Total Organic Carbon	mg/L	1/quarter ^d	SM5310-B/C/D	1 mg/L	24-hour composite ^e
Total Ammonia	mg/L as N	2/month ^c	SM4500-NH ₃ -B/C/D/E/F/G/H	0.02 mg/L	24-hour composite ^e
Nitrate plus Nitrite Nitrogen	mg/L as N	2/month ^c	SM4500-NO ₃ -E/F/H	0.1 mg/L	24-hour composite ^e
TKN	mg/L as N	1/month ^b	SM4500-N _{org} -B/C and SM4500-NH ₃ -B/C/D/E/F/G/H	0.3 mg/L	24-hour composite ^e
Total Inorganic Nitrogen	mg/L as N	2/month ^c	--	--	Calculated ^g
Total Inorganic Nitrogen	Lbs/day	2/month ^c	--	--	Calculated ^h
Average Monthly Total Inorganic Nitrogen	Lbs	1/month ^b	--	--	Calculated ⁱ
Annual Total Inorganic Nitrogen, year to date	Lbs	1/month ^b	--	--	Calculated ^j

Table 20. Footnotes for Influent and Effluent Monitoring Tables 18 and 19

Footnote	Information
a	Take effluent samples for the CBOD ₅ analysis before or after the disinfection process. If taken after disinfection and chlorine is used, dechlorinate and reseed the sample.
b	1/month means one (1) time during each month
c	2/month means two (2) times during each month and on a rotational basis throughout the days of the week, except weekends and holidays.
d	Quarterly sampling periods are January through March, April through June, July through September, and October through December. The Permittee must begin quarterly monitoring for the quarter beginning on <u>1/1/22</u> , <u>4/1/22</u> , <u>7/1/22</u> , <u>10/1/22</u> and submit results by <u>4/15/22</u> , <u>7/15/22</u> , <u>10/15/22</u> , <u>1/15/22</u> .
e	24-hour composite means a series of individual samples collected over a 24-hour period into a single container, and analyzed as one sample.
f	Report daily flows only on days when collecting total ammonia and nitrate plus nitrite samples.
g	TIN (mg/L) as N = Total Ammonia (mg/L as N) + Nitrate plus Nitrite (mg/L as N)
h	Calculate mass concurrently with the respective concentration of a sample, using the following formula: Concentration (in mg/L) X daily flow (in MGD) X Conversion Factor (8.34) = lbs/day
i	Calculate the monthly average total inorganic nitrogen load (lbs as N) using the following equation: Monthly average TIN load (lbs as N) $= ((\sum \text{Calculated TIN loads } (\frac{\text{lbs}}{\text{day}} \text{ as N})) / \text{number of samples}) \times \text{number of days in the calendar month}$
j	Calculate the annual total inorganic nitrogen, year to date using the following calculation: $\text{Annual TIN load (lbs as N)} = \sum \text{Monthly average TIN loads, to date}$
k	Or other equivalent EPA-approved method with the same or lower quantitation level
l	The Permittee must ensure laboratory results comply with the quantitation level (QL) specified in the table. However, if an alternative method from 40 CFR Part 136 is sufficient to produce measurable results in the sample, the Permittee may use that method for analysis. If the Permittee uses an alternative method it must report the test method and QL on the discharge monitoring report. If the permittee is unable to obtain the required QL due to matrix effects, the Permittee must report the matrix-specific method detection level (MDL) and QL on the DMR. The permittee must also upload the QA/QC documentation from the lab on the QL development.

D. SAMPLING AND ANALYTICAL PROCEDURES

Samples and measurements taken to meet the requirements of this permit must represent the volume and nature of the monitored parameters, including **representative sampling** of any unusual discharge or discharge condition, including authorized **bypasses**, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the [Guidelines Establishing Test Procedures for the Analysis of Pollutants](#)¹² contained in [40 CFR 136](#)¹³ (or as applicable in [40 CFR subchapter N](#)¹⁴ [Parts 400-471] or [40 CFR subchapter O](#)¹⁵ [Parts 501-503]) unless otherwise specified in this permit.

E. FLOW MEASUREMENT

The Permittee must:

1. Select and use appropriate flow measurement and method consistent with accepted scientific practices.
2. Install, calibrate, and maintain these devices to ensure the accuracy of the measurements is consistent with the accepted industry standard, the manufacture's recommendation, and approved O&M manual procedures for the device and the wastestream.
3. Establish a calibration frequency for each device or instrument in the Permittee's O&M Manual that conforms to the frequency recommended by the manufacturer.
4. Maintain calibration records for at least three years.

F. LABORATORY ACCREDITATION

1. The Permittee must ensure that all monitoring data required by Ecology for permit specified parameters is prepared by a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. Flow and internal process control parameters are exempt from this requirement.

G. REQUEST FOR REDUCTION IN MONITORING

1. The Permittee may request a reduction of the sampling frequency after twelve (12) months of monitoring by demonstrating that the distribution of

¹² <https://www.ecfr.gov/cgi-bin/text-idx?SID=0e534d17f9783994a26ffee684d260c2&mc=true&node=pt40.25.136&rgn=div5>

¹³ <https://www.ecfr.gov/cgi-bin/text-idx?SID=0e534d17f9783994a26ffee684d260c2&mc=true&node=pt40.25.136&rgn=div5>

¹⁴ <https://www.ecfr.gov/cgi-bin/text-idx?SID=0e534d17f9783994a26ffee684d260c2&mc=true&tpl=/ecfrbrowse/Title40/40CISubchapN.tpl>

¹⁵ <https://www.ecfr.gov/cgi-bin/text-idx?SID=0e534d17f9783994a26ffee684d260c2&mc=true&tpl=/ecfrbrowse/Title40/40CISubchapO.tpl>

concentrations can be accurately represented with a lower sampling frequency. Ecology will review each request and at its discretion grant the request in writing when it reissues the permit coverage or by a permit coverage modification.

2. The Permittee must:
 - a. Provide a written request.
 - b. Clearly state the parameters for which it is requesting reduced monitoring.
 - c. Clearly state the justification for the reduction.

S8. DISCHARGES TO 303(D) OR TMDL WATER BODIES

If EPA approves an applicable ***Total Maximum Daily Load*** (TMDL) that includes wasteload allocations for WWTPs owned and operated by the Permittee Ecology will address any permit requirements related to the approved TMDL in the Permittee's individual permit or through a modification of this permit.

S9. REPORTING AND RECORDKEEPING REQUIREMENTS

A. DISCHARGE MONITORING REPORTS

Permittees required to conduct **water quality** sampling in accordance with Special Conditions S7, and/or G12 (Additional Monitoring) must submit the results to Ecology. Permittees must submit the monthly DMR by the 15th day of the following month.

Permittees must submit monitoring data using Ecology's WQWebDMR program.

B. MONITORING REQUIREMENTS

1. Wastewater Sampling Frequency

- a. The Permittee must sample both the influent and effluent discharge location at the frequencies listed in Condition S7.A, S7.B and S7.C.
- b. Samples must be representative of the flow and characteristics of the discharge.
- c. Sampling is not required outside of normal working hours or during unsafe conditions.

2. Wastewater Sampling Locations

Influent and effluent sampling locations must be representative. Permittees may use the compliance monitoring locations in their individual NPDES permit, prior to entry into waters of the state.

3. Wastewater Sampling Documentation

For each sample taken, the Permittee must record and retain the following information:

- a. Sample date and time
- b. Sample location
- c. Method of sampling, and method of sample preservation, if applicable
- d. Individual who performed the sampling

4. Where wastewater monitoring requirements under this Permit mirror requirements in a Permittee's individual permit, the same result may be applied to both permits.

5. Additional Monitoring by the Permittee

If the Permittee monitors any **pollutant** more frequently than required by this permit using test procedures specified by Condition S7, the Permittee must include the results of the extra monitoring in the calculation and reporting of the data submitted in the Permittee's DMR.

C. ANNUAL REPORT FOR DOMINANT LOADERS

1. No later than March 31 of each year, each Permittee listed in Table 5 must submit an Annual Report documenting optimization and the adaptive management used at their WWTP. The Permittee must submit their first annual report by March 31, 2023 for the reporting period that begins on January 1, 2022 and lasts through December 31, 2022. All subsequent Annual Reports must use the reporting period of the previous calendar year unless otherwise specified.
2. Permittees must submit Annual reports electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's website, unless otherwise directed by Ecology.
3. The Annual Report documenting the Nutrient Optimization Plan for Permittees listed in Table 5 must include the following:
 - a. Submittal of the Annual Report form as provided by Ecology pursuant to S4.C, describing the status of the requirements of this Permit during the reporting period.
 - b. Attachments to the Annual Report including summaries, descriptions, reports and other information as required, or as applicable, to meet the requirements of this Permit during the reporting period, or as a required submittal. Refer to Appendix C for Annual Report questions.
 - c. Certification and signature pursuant to G2.D and notification of any changes to authorization pursuant to G2.C.

D. ANNUAL REPORT FOR MODERATE LOADERS

1. No later than March 31 of each year, each Permittee listed in Table 8 must submit an Annual Report documenting optimization and the adaptive management used at their WWTP. The Permittee must submit their first annual report by March 31, 2023 for the reporting period that begins on January 1, 2022 and lasts through December 31, 2022. All subsequent Annual Reports must use the reporting period of the previous calendar year unless otherwise specified.
2. Permittees must submit Annual reports electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's website, unless otherwise directed by Ecology.
3. The Annual Report documenting the Nutrient Optimization Plan for Permittees listed in Table 8 must include the following:
 - a. Submittal of the Annual Report form as provided by Ecology pursuant to S5.C, describing the status of the requirements of this Permit during the reporting period.
 - b. Attachments to the Annual Report including summaries, descriptions, reports and other information as required, or as applicable, to meet the requirements of this Permit during the reporting period, or as a required submittal. Refer to Appendix D for Annual Report questions.

- c. Certification and signature pursuant to G2.D and notification of any changes to authorization pursuant to G2.C.

E. REPORTING FOR SMALL LOADERS

1. No later than March 31, 2026 each Permittee listed in Table 11 must submit an Optimization Report documenting optimization and the adaptive management used at their WWTP. The reporting period for this report will be from January 1, 2022 through December 31, 2025.
2. Permittees must submit the Nitrogen Optimization Report electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's website, unless otherwise directed by Ecology.
3. The electronic report documenting the optimization for Permittees listed in Table 11 must include the following:
 - a. Submittal of the Optimization Report form as provided by Ecology pursuant to S6.B, describing the status of the requirements of this Permit during the reporting period.
 - b. Attachments to the Optimization Report including summaries, descriptions, reports and other information as required, or as applicable, to meet the requirements of this Permit during the reporting period, or as a required submittal. Refer to Appendix E for Optimization Report questions.
 - c. Certification and signature pursuant to G2.D and notification of any changes to authorization pursuant to G2.C.

F. RECORDS RETENTION

The Permittee must retain records of all monitoring information (field notes, sampling results, etc.), optimization documents submitted with the annual or one-time report, and any other documentation of compliance with permit requirements for a minimum of five years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

G. NONCOMPLIANCE NOTIFICATION

In the event the Permittee is unable to comply with any of the terms and conditions of this permit which may cause a threat to human health or the environment, including threats resulting from unanticipated *bypass* or upset, or does not comply with the narrative effluent requirements, the Permittee must:

1. Immediately, in no case more than 24 hours of becoming aware of the circumstances, notify Ecology of the failure to comply by calling the applicable regional office phone number (find at Ecology' [Report a Spill webpage](#)¹⁶).
2. Immediately take action to prevent the discharge/**pollution**, or otherwise stop or correct the noncompliance.
3. Submit a written report to Ecology using the WQWebPortal within five (5) days of the time the Permittee becomes aware of a reportable event. The report must contain:
 - a. A description of the noncompliance and its cause
 - b. The period of noncompliance including exact dates and times
 - c. If the noncompliance has not been corrected, the anticipated time it is expected to continue
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance

Ecology may waive the written report on a case-by-case basis upon request if the Permittee has submitted a timely oral report.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Refer to Section G13 of this permit for specific information regarding non-compliance.

H. ACCESS TO PLANS AND RECORDS

1. The Permittee must retain the following permit documentation (reports and monitoring records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology:
 - a. Permit Coverage Letter
 - b. Puget Sound Nutrient General Permit
 - c. Discharge Monitoring Reports
 - d. Attachments to the Annual or Single Report as required in the Nitrogen Optimization Plan (NOP)
 - e. Nutrient Reduction Evaluation for Permittees listed in Tables 5 and 8 or AKART Analysis for Permittees listed in Table 11

S10. PERMIT FEES

The Permittee must pay permit fees assessed by Ecology. Fees for wastewater discharges covered under this permit are established by Chapter 173-224 WAC.

¹⁶ <https://ecology.wa.gov/About-us/Get-involved/Report-an-environmental-issue/Report-a-spill>

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Failure to follow the corrective action requirement after discharge of TIN at a level that exceeds the action level identified and authorized by the general permit constitutes a violation of the terms and conditions of this permit.

G2. SIGNATORY REQUIREMENTS

- A.** All permit applications must bear a certification of correctness to be signed:
1. In the case of corporations, by a responsible corporate officer;
 2. In the case of a partnership, by a general partner of a partnership;
 3. In the case of sole proprietorship, by the proprietor; or
 4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
- B.** All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described above and submitted to Ecology.
 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.
- C.** Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D.** Certification. Any person signing a document under this section must make the following certification:
- E.** "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G3. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.
- B. To have access to and copy – at reasonable times and at reasonable cost -- any records required to be kept under the terms and conditions of this permit.
- C. To inspect – at reasonable times – any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor – at reasonable times – any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the **Clean Water Act**.

G4. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

- A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.
- B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.
- C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or
- D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G5. REVOCATION OF COVERAGE UNDER THE PERMIT

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the **Director** may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

- A. Violation of any term or condition of this permit.
- B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.
- C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

- E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
- F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.
- G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G8. TRANSFER OF GENERAL PERMIT COVERAGE

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must follow the procedures listed in their individual NPDES permit when notifying Ecology.

G9. REMOVED SUBSTANCES

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, and/or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G14. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G15. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G16. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G17. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

G18. REPORTING PLANNED CHANGES

Report planned changes in a manner consistent with the individual permit.

G19. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

G20. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, or other planned changes, such as process modifications, in the permitted facility which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G21. APPEALS

- A.** The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.
- B.** The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.
- C.** The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G22. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

G23. BYPASS PROHIBITED

This permit prohibits a bypass, which is the intentional diversion of waste streams from any portion of a treatment facility.

See bypass prohibitions included in each jurisdiction's individual NPDES permit.

APPENDIX A – DEFINITIONS

303(d) Listed Waters means waterbodies listed as Category 5 on Washington State’s Water Quality Assessment.

Action Level means an indicator value used to determine the effectiveness of best management practices at a WWTPs. Action levels are not water quality criteria or effluent limits by themselves but indicators of treatment optimization.

Adaptive Management means the process of incorporating new information into optimization implementation to ensure effective attainment of documented goals or the facility specific action level.

AKART means acronym for “all known, available, and reasonable methods of prevention, control, and treatment.” AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Alternative Restoration Plan means a near-term plan, or description of actions, with a schedule and milestones, that is more immediately beneficial or practicable to achieving water quality standards.

Applicant means an owner or **operator in responsible charge** seeking coverage under this permit.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State.

Bubbled action level means the sum of individual action levels for all WWTPs in the same discharger category under a single jurisdiction’s ownership.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Day means a period of 24 consecutive hours.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Composite (also Composite Sample) means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots).

Director means the Director of the Washington Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Dominant loader means domestic WWTPs discharging more than 2,000 lbs/day TIN. Cumulatively, dominant loaders constitute > 80% of the domestic point source TIN load.

Ecology means the Washington State Department of Ecology.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Greater Puget Sound Region means the marine area where human nutrient loads, from Washington Waters of the Salish Sea, contribute to waters not meeting marine DO standards. The GPS region include the Northern Bays (Bellingham, Samish, and Padilla Bays) as well as Puget Sound Proper, which are the marine waters south of the entrance of Admiralty Inlet (Whidbey Basin, Main Basin, South Sound, and Hood Canal).

Moderate loader means a domestic WWTP discharging between 100 and 2,000 lbs/day TIN. Cumulatively, moderate loaders constitute roughly 19 % of the domestic point source TIN load.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Operator means any individual who performs routine duties, onsite at a wastewater treatment plant that affect plant performance or effluent quality.

Operator in Responsible Charge means the individual who is designated by the owner as the person routinely onsite and in direct charge of the overall operation and maintenance of a wastewater treatment plant.

Optimization (also treatment optimization) means a best management practice (BMP) resulting in the refinement of WWTP operations that lead to improved effluent water quality and/or treatment efficiencies.

Outfall means the location where the site's wastewater discharges to surface water.

Overburdened community means a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW 19.405.020.

Owner means a town or city, a county, a sewer district, board of public utilities, association, municipality or other public body.

Permittee means an entity that receives notice of coverage under this general permit.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Receiving water means the water body at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the water body to which the storm system discharges. Systems designed primarily for other purposes such as for ground water drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative sample (also **representative sampling**) means a wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate **composite sample**, or a flow proportionate sample.

Salish Sea means Puget Sound, Strait of Georgia, and Strait of Juan de Fuca, including their connecting channels and adjoining waters.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Septage means, for the purposes of this permit, any liquid or semisolid removed from a septic tank, cesspool, vault toilet or similar source which concentrates wastes or to which chemicals have been added.

Site means the land where any "facility" is physically located.

Small Loader means a domestic WWTP discharging less than 100 lbs/day TIN. Cumulatively, small loaders constitute < 1% of the domestic point source TIN load.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Total Inorganic Nitrogen (TIN) means the sum of ammonia, nitrate, and nitrite. It includes dissolved and particulate fractions.

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Washington Waters of the Salish Sea means areas of the Salish Sea subject to Washington State's Water Pollution Control Act (Chapter 90.48 RCW)

Wasteload Allocation (WLA) means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Week (same as **Calendar Week**) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
DIN	Dissolved Inorganic Nitrogen
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
FR	Federal Register
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRP	Nutrient Reduction Plan
PSNF	Puget Sound Nutrient Forum
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
TBEL	Technology Based Effluent Limit
TIN	Total Inorganic Nitrogen
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WQBEL	Water Quality Based Effluent Limit
WWTP	Wastewater Treatment Plant

APPENDIX C – ANNUAL REPORT QUESTIONS FOR DOMINANT LOADERS

Permittees are required to submit annual reports online, pursuant to Special Condition S9.C.

1. Did your facility stay below the Action Level in S4.b, Table 5 or Table 6 for the jurisdiction with a bubbled action level? (S4.C.2.b.i)
 - a. Attach a document listing the contribution of each of your individual facilities to the total bubble allocation for the reporting period. (S4.C.2.b.i)
2. Did your facility stay below a 10 mg/L annual average TIN concentration? (S4.C.2.b.i) **(If Q1 = Y and Q2 = Y, then no further questions).**
3. **Attach** a document describing the assessment method applied to evaluate the existing treatment process. (S4.C.1.a)
4. What is your pre-optimization TIN removal rate, expressed as a percentage? (S4.c.1.a.i)
5. **Attach** a document explaining your initial approach for optimization. (S4.C.1.a)
6. Did you maintain and/or update your assessment approach after year 1?(S4.C.1.a.ii)
7. Do viable optimization strategies exist for your current treatment process? (S4.C.1.b)
8. Did all of the potential optimization strategies you identified and evaluated for S4.C.1.b have a reasonable implementation cost and timeframe? (S4.C.1.b)
9. ATTACH a document describing your preferred optimization strategy for implementation in 2022 (due July 1) (S4.C.1.c)
10. What is the expected performance for the selected optimization strategy? (S4.C.1.c)
11. **Attach** a document describing optimization plan implementation including start date, schedule for full implementation, initial costs, and challenges including impacts to other measures of treatment plant performance. (S4.C.2.a)
12. What TIN removal rate was observed during the reporting period? (S4.C.2.b.ii)
13. **Attach** a document describing your ongoing investigations to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources. (S4.C.3.a, S4.C.3.b)
14. **(If Q1=N and Q7 = Y) Attach** document including: factors causing the WWTP to not meet the optimization goal, whether modifications to the strategy could improve performance, and whether a different strategy or combination of strategies may be more appropriate. Also, document changes to the optimization strategy either through the selection of the new optimization strategy and new performance metric or existing implementation refinement. Revise the expected performance if electing to keep the existing strategy. Provide rationale for no changes if Permittee proposes no changes to the optimization strategy (S4.D.1.a and S4.D.1.b)
15. **(If Q1 = No and Q7 = No) Attach** abbreviated engineering report or technical memo (due 12 months after documenting action level exceedance or determination that no optimization strategies exist). (S4.D.2)

16. **(If Q1 = No in two prior years)** Did you implement the Engineering Report as planned, starting after Ecology's approval? (S4.D.2.a)
17. Did you submit the required Nutrient Reduction Evaluation on or before 12/31/2026? If no, **date** the document was or will be provided. (S4.E)
18. Did you submit discharge monitoring reports according to the required schedule? If no, **attach** a document describing/listing the missing records and corrective actions taken/or planned. (S7, S9.A)
19. Are you retaining all applicable records? If no, **attach** a document describing/listing the missing records and corrective actions taken and/or planned. (S9.F)
20. Did you follow non-compliance notification requirements? If no, **attach** a document describing the non-compliance and the corrective actions taken and/or planned. (S9.G)

APPENDIX D – ANNUAL REPORT QUESTIONS FOR MODERATE LOADERS

Permittees are required to submit annual reports online, pursuant to Special Condition S9.D.

1. Did your facility stay below the Action Level in S5.b, Table 8 or Table 9 for the jurisdiction with a bubbled action level? (S5.C.2.b.i)
 - a. Attach a document listing the contribution of each of your individual facilities to the total bubble allocation for the reporting period. (S5.C.2.b.i)
2. Did your facility stay below a 10 mg/L annual average TIN concentration? (S5.C.2.b.i) (**If Q1 =Y and Q2 = Y, then no further questions**).
3. **Attach** a document describing the assessment method applied to evaluate the existing treatment process. (S5.C.1.a)
4. What is your pre-optimization TIN removal rate, expressed as a percentage? (S5.c.1.a.i)
5. **Attach** a document explaining your initial approach for optimization. (S5.C.1.a)
6. Did you maintain and/or update your assessment approach after year 1?(S5.C.1.a.ii)
7. Do viable optimization strategies exist for your current treatment process? (S5.C.1.b)
8. Did all of the potential optimization strategies you identified and evaluated for S5.C.1.b have a reasonable implementation cost and timeframe? (S5.C.1.b)
9. ATTACH a document describing your preferred optimization strategy for implementation in 2022 (selection due July 1) (S5.C.1.c)
10. What is the expected performance for the selected optimization strategy? (S5.C.1.c)
11. **Attach** a document describing optimization plan implementation including start date, schedule for full implementation, initial costs, and challenges including impacts to other measures of treatment plant performance. (S5.C.2.a)
12. What TIN removal rate was observed during the reporting period? (S5.C.2.b.ii)
13. **Attach** a document describing your ongoing investigations to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources. (S5.C.3.a, S5.C.3.b)
14. (**If Q1=N and Q7 = Y**) **Attach** document including: factors causing the WWTP to not meet the optimization goal, whether modifications to the strategy could improve performance, and whether a different strategy or combination of strategies may be more appropriate. Also, document changes to the optimization strategy either thorough the selection of the new optimization strategy and new performance metric or existing implementation refinement. Revise the expected performance if electing to keep the existing strategy. Provide rationale for no changes if Permittee proposes no changes to the optimization strategy (S5.D.1.a and S5.D.1.b)
15. (**If Q1 = No and Q7 = No**) **Attach** abbreviated engineering report or technical memo (due 12 months after documenting action level exceedance or determination that no optimization strategies exist). (S5.D.2)

16. **(If Q1 = No in two prior years)** Did you implement the Engineering Report as planned, starting after Ecology's approval? (S5.D.2.a)
17. Did you submit the required Nutrient Reduction Evaluation on or before 12/31/2026? If no, **date** the document was or will be provided. (S5.E)
18. Did you submit discharge monitoring reports according to the required schedule? If no, **attach** a document describing/listing the missing records and corrective actions taken/or planned. (S7, S9.A)
19. Are you retaining all applicable records? If no, **attach** a document describing/listing the missing records and corrective actions taken and/or planned. (S9.F)
20. Did you follow non-compliance notification requirements? If no, **attach** a document describing the non-compliance and the corrective actions taken and/or planned. (S9.G)

APPENDIX E – ONE TIME REPORT QUESTIONS FOR SMALL LOADERS

Permittees are required to submit the single report online, pursuant to Special Condition S9.E.

1. **Attach** a document describing your initial assessment process, your optimization goal, the list of prioritized optimization strategies identified, and the strategy implemented in 2022 (S6.B.1.b). If any optimization strategies were found to not have a reasonable implementation cost or timeframe (S6.B.2.a.iv), include description of the feasibility and cost analysis that led to exclusion of any approach(es). (S6.B.1.a, S6.B.1.b)
2. Did your plant meet or exceed the pre-optimization empirical TIN removal rate in each year of this permit and also maintain or reduce TIN loads? If no, **attach** a document describing how you revised your optimization strategy in response to the evaluation in each of the prior permit years, and document your adaptive management steps, your assessment process, and the new optimization strategy or strategies you identified, and your updated optimization goal(s) and performance metric(s). (S6.B.2.b.ii, S6.B.2.c)
3. Did your facility stay below a 10 mg/L annual average TIN concentration? (S6.B.2.b.i) (**If Q2 = Y and Q3 = Y, then no further questions**)
4. What is your pre-optimization empirical TIN removal rate? (S6.B.1.a.i)
5. Did you maintain your reassessment approach after year 1? If no, **attach** a document describing assessment revisions that occurred each year over the permit term. (S6.B.1.a.ii)
6. What is your expected TIN removal with the preferred optimization strategy? (S6.B.1.b)
7. **Attach** a document describing optimization implementation including costs, time for full implementation, start date, challenges, and impacts to treatment performance. (S6.B.2.a)
8. What was the TIN removal rate observed each year during the reporting period? (S6.B.2.b.ii)
9. **Attach** a document describing your ongoing investigations to reduce influent TIN loads from septage handling practices, commercial, dense residential and industrial sources. (S6.B.3)
10. Did you submit the required AKART analysis on or before 12/31/2025? If no, **date** document was or will be provided. (S6.C)
11. Did you submit discharge monitoring reports according to the required schedule? If no, **attach** a document describing the missed monitoring activities and the corrective action taken. (S7, S9.A)
12. Are you retaining all applicable records? If no, **attach** a document describing the missing records and the corrective action taken and/or planned. (S9.F)
13. Did you follow non-compliance notification requirements? If no, **attach** a document describing the non-compliance and the corrective actions taken and/or planned. (S9.G)