



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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December 16, 2019

Susan Poulsom, P.E., Manager
NPDES Permits Unit
United States Environmental Protection Agency - Region 10
1200 Sixth Avenue, Suite 155, OWW
Seattle, WA 98101

**RE: Clean Water Act Section 401 Final Certification for
EPA National Pollutant Discharge Elimination System
Permit No. WA0023256 – Suquamish Wastewater Treatment Plant**

Dear Susan Poulsom:

This letter is in response to the U.S. Environmental Protection Agency's (EPA) letter, dated September 17, 2019, requesting Washington State Department of Ecology (Ecology) provide a Clean Water Act Section 401 Certification for the National Pollutant Discharge Elimination System (NPDES) Permit (WA0023256) for Suquamish Wastewater Treatment Plant.

With this Section 401 Water Quality Certification, Ecology certifies NPDES Permit No. WA0023256 (Permit) with conditions as found in Order No. 16892. The Enclosed Order may be appealed by following the procedures described in the Order.

If you have any questions or would like to discuss these matters further, please contact Eleanor Ott, P.E. at eleanor.ott@ecy.wa.gov or (360) 407-6433.

Sincerely,

Heather R. Bartlett
Water Quality Program Manager

Enclosure

cc: Kai Shum, Permit Writer, Region 10 EPA
Loree' Randall, Department of Ecology, SEA Program
Vincent McGowan, P.E., Program Development Services Section Manager, Department of Ecology, Water Quality Program
ecyrefedpermits@ecy.wa.gov

By Certified Mail: 9489 0090 0027 6066 2468 53



IN THE MATTER OF GRANTING A) ORDER # 16892
WATER QUALITY)
CERTIFICATION TO)
U.S. Environmental Protection Agency)
in accordance with 33 U.S.C. 1341)
(FWPCA § 401), RCW 90.48.120, RCW)
90.48.260 and Chapter 173-201A WAC)
)

TO: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
ATTN: Susan Poulsom
1200 Sixth Ave, Suite 155, OWW
Seattle, WA 98101

On September 17, 2019, the U.S. Environmental Protection Agency (EPA) requested a Section 401 Water Quality Certification for the NPDES permit authorizing discharges to a water of the state (defined in RCW 90.48) from the Suquamish Wastewater Treatment Plant (WWTP). This Order and 401 Certification (Certification) imposes additional conditions, beyond the conditions of the draft NPDES permit, on the Applicant or Permittee.

The draft NPDES permit covers the discharge of pollutants from the Suquamish WWTP to Port Madison, Puget Sound.

This Certification is based on the terms and conditions contained in the proposed draft NPDES permit. If EPA issues a final NPDES permit that contains any changes from the draft NPDES permit that do not include requirements outlined in this Certification, Ecology reserves the right to either modify or revoke this Certification. In accordance with 40 CFR 124.53(e)(3), Ecology has determined that no condition in the draft NPDES permit may be made less stringent without violating requirements in Washington State law. Ecology reserves the right to modify or revoke this Certification if there is no longer reasonable assurance that there will be compliance with 33 U.S.C §§ 1311, 1312, 1313, 1316 and 1317 due to changes in the operation of the facility, changes in the characteristics of the waters into which discharges occur, changes in water quality criteria applicable to those waters, or changes to applicable effluent limits or other requirements.

AUTHORITIES:

In exercising authority under 33 U.S.C. § 1341, 16 U.S.C. § 1456, RCW 90.48.120, and RCW 90.48.260, Ecology has examined EPA's request for CWA 401 certification of the draft permit pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. §1311, 1312, 1313, 1316, and 1317 (FWPCA §301, 302, 303, 306 and 307);

2. Conformance with the state water quality standards contained in Chapter 173-201A WAC and authorized by 33 U.S.C. §1313 and by Chapter 90.48 RCW, and with other applicable state laws; and
3. Conformance with the provision of using all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.
4. Conformance with Washington's prohibition on discharges that cause or tend to cause pollution of waters of the state of Washington. RCW 90.48.080

WATER QUALITY CERTIFICATION CONDITIONS:

With this Certification and through issuance of this Order, Ecology certifies that it has reasonable assurance that the activity as proposed and conditioned by this Certification will be conducted in a manner that will not violate applicable water quality standards and other appropriate requirements of state law. In view of the foregoing and in accordance with 33 U.S.C. §1341, RCW 90.48.120, RCW 90.48.260 Chapter 173-200 WAC and Chapter 173-201A WAC, water quality certification is granted to the Applicant subject to the conditions within this Order and NPDES Permit No. WA0023256.

Certification of the Applicant's proposed final permits does not authorize the Permittee to exceed applicable state surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC) or sediment quality standards (Chapter 173-204 WAC), standards in the EPA's Revision of certain Federal water quality criteria applicable to Washington (40 CFR 131.45), and other appropriate requirements of State law.

A. General Conditions

1. For purposes of this Order, the term “Applicant” shall mean U.S. Environmental Protection Agency.
2. For purposes of this Order, the term “Permittee” shall mean Kitsap County.
3. The Applicant shall enforce the permit and ensure that the Permittee complies with the conditions of the permits at all times.
4. Nothing in this Certification waives Ecology’s authority to issue additional orders if Ecology determines that further actions are necessary to implement the water quality laws of the state. Further, Ecology retains continuing jurisdiction to make modifications hereto through supplemental orders, if additional impacts due to project construction or operation are identified (*e.g.*, violations of water quality standards, downstream erosion, etc.), or if additional conditions are necessary to further protect water quality.
5. In the event of changes or amendments to the state water quality, ground water quality, or sediment standards, or changes in or amendments to the state Water Pollution Control Act (RCW 90.48) or the federal Clean Water Act, Ecology may issue an amendment to this Certification to incorporate any such changes or amendments applicable to this project.
6. Failure of any person or entity to comply with this Certification may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Certification.

B. Water Quality

1. This Certification does not authorize exceedances of water quality standards established in WAC 173-201A. (WAC 173-201A-510(1), 173-240-080)
2. This Certification authorizes a mixing zone per WAC 173-201A-400.
3. Nutrient Control and Reduction: (RCW 90.48.080, 90.54.020(3)(b))

Nutrients discharged from wastewater treatment plants contribute to low dissolved oxygen (D.O.) levels, below state water quality criteria, in Puget Sound. Nitrogen is the limiting nutrient in Puget Sound waters, and total inorganic nitrogen (TIN) is the form of nitrogen more available for algal growth that drives eutrophication and the dissolved oxygen impairment. All wastewater discharges to Puget Sound containing inorganic nitrogen contribute to the D.O. impairment.

The Permittee’s discharge contains inorganic nitrogen, and the NPDES permit must require the Permittee to control nutrients consistent with the Clean Water Act and Washington’s Water Pollution Control Act. Water quality based effluent limits (WQBELs) are required for wastewater treatment plants discharging to surface waters when the discharge has reasonable potential to cause or contribute to an in-stream excursion above a narrative or numeric State water quality criteria (40 CFR 122.44(d)(1)(iii)).

Washington State does not have numeric criteria for nitrogen from which to derive a WQBEL, and Ecology uses D.O. as a surrogate which requires modeling

to demonstrate water quality impacts from a discharge.

The nitrogen in the Permittee’s discharge has reasonable potential to contribute to far-field water quality impacts. For this permit, implementing a discharge-specific numeric WQBEL for nitrogen is infeasible. This is due to the additional modeling scenarios necessary to quantify both the Permittee’s far-field water quality effect and the corresponding effluent limit necessary to prevent an exceedance of the D.O. standard.

40 CFR 122.44(k) states that best management practices (BMPs) to control or abate the discharge of pollutants are acceptable when numeric effluent limitations are infeasible. Ecology believes that a combination of a nutrient load cap based on current nutrient discharge levels, treatment efficiency optimization, and facility planning constitutes a suite of BMPs that complies with 40 CFR 122.44(k). EPA must reevaluate this limit in consultation with Ecology during development of the next permit iteration.

EPA provided Ecology with effluent data collected from 2016 to 2019. Ecology calculated an annual TIN load cap of 14,691 lbs, which must be included as a Permit condition. Compliance with the annual TIN cap is assessed at the end of each 12-month period following the effective date of the permit.

Optimization of treatment performance is an adaptive management strategy the Permittee can use to stay below the annual load cap. Ecology expects these facility specific operational efforts to be initiated following permit issuance. See section 4 of this certification for planning requirements related to optimization. Any major process optimization must be reflected in an update to the standard operating procedures in the Permittee’s Operation and Maintenance manual. The Permittee must alert EPA of any updates made in their plan.

3. Monitoring Requirements: (WAC 173-220-210)

The Permittee must report the monthly load and the cumulative load during the annual reporting period. Results must be submitted in the discharge monitoring report. The Permit must contain the following effluent monitoring frequencies for purposes of tracking compliance with the annual TIN cap.

Parameter	Units & Specifications	Minimum Sampling Frequency	Sample Type
Final wastewater effluent			
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 and nitrate plus nitrate samples must be taken on the same calendar day.			
Flow, monthly average	MGD	Monthly	metered/recorded
Total Ammonia	mg/L as N	Monthly	Grab

Nitrate plus Nitrite Nitrogen	mg/L as N	Monthly	Grab
Total Inorganic Nitrogen ¹	mg/L as N	Monthly	Calculated
Total Inorganic Nitrogen Load ²	Lbs/day	Monthly	Calculated
Average Monthly Total Inorganic Nitrogen ³	Lbs	Monthly	Calculated
Annual Total Inorganic Nitrogen, year to date ⁴	Lbs	Monthly	Calculated

¹ Calculate the total inorganic nitrogen concentration (mg/L as N) using the following equation:

$$\text{TIN concentration (mg/L as N)} = \text{Total Ammonia (mg/L as N)} + \text{Nitrate plus Nitrite (mg/L as N)}$$

If the Permittee conducts additional total ammonia and/or nitrate plus nitrite sampling during the month, the average of the concentration results must be used in the above equation.

² Calculate the total inorganic nitrogen load (lbs/day as N) using the following equation:

$$\text{TIN load (lbs/day as N)} = \text{TIN concentration (mg/L as N)} \times \text{average monthly flow (mgd)} \times 8.34$$

³ Calculate the monthly average total inorganic nitrogen load (lbs as N) using the following equation:

$$\text{Monthly average TIN load (lbs as N)} = \text{TIN load (lbs/day as N)} \times \text{number of days in the calendar month}$$

⁴ For each discrete 12-month period, calculate the cumulative annual total inorganic nitrogen, year to date using the following calculation:

$$\text{Annual TIN load (lbs as N)} = \sum \text{Monthly average TIN loads, to date}$$

4. Planning Requirements: (WAC 173-201A-510(4)(b)(ii), 173-240-060, 173-240-080)
- a. The Permittee must submit an optimization plan identifying achievable improvements for maintaining compliance with the TIN cap no later than nine months following the permit effective date.
 - b. With the next permit application, or nine months following any exceedance of the annual TIN load cap, the Permittee must submit a nutrient reduction evaluation report individually or in collaboration with other Puget Sound Permittees identifying options and planning level costs for potential treatment upgrades. The Permittee must develop an approvable scope of work for this study in conjunction with EPA and Ecology.
 - c. The Permittee must develop a formal engineering report with selection of a preferred design alternative if Ecology develops a facility-specific numeric

WQBEL for nitrogen during the permit term. If required, this document must be submitted within 18-months of initial notification from Ecology.

C. Timing Requirements

1. This Certification is valid until the expiration date including any administrative extension or termination date of NPDES Permit No. WA0023256.

D. Notification Requirements

1. The Applicant shall enforce and the Permittee must comply with all the reporting and notification conditions of the NPDES permit, including conditions of the permit requiring the Permittee to report to Ecology.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
<p>Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503</p>	<p>Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608</p>
<p>Pollution Control Hearings Board 1111 Israel Road SW STE 301 Tumwater, WA 98501</p>	<p>Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903</p>

CONTACT INFORMATION

Please direct all questions about this Order to:

Eleanor Ott, P.E.
Department of Ecology
P.O. Box 47600
Olympia, WA 98503-7600
Phone: 360-407-6433
Email: eleanor.ott@ecy.wa.gov

MORE INFORMATION

- **Pollution Control Hearings Board Website**
<http://www.eluho.wa.gov/Board/PCHB>
- **Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice And Procedure**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 90.48 RCW – Water Pollution Control**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48>
- **Chapter 173.204 Washington Administrative Code (WAC) Sediment Management Standards**
<https://apps.leg.wa.gov/wac/default.aspx?cite=173-204>
- **Chapter 173-200 WAC Water Quality Standards for Ground Waters of the State of Washington**
<https://apps.leg.wa.gov/wac/default.aspx?cite=173-200>
- **Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington**
<https://apps.leg.wa.gov/wac/default.aspx?cite=173-201A>

SIGNATURE



Heather R. Bartlett
Water Quality Program Manager
Department of Ecology
State of Washington