

Reauthorization Addendum to the Fact Sheet for NPDES Permit WA0024651

Public Notice of Draft: May 12, 2021

1. Facility General Information

Port of Seattle
Seattle-Tacoma International Airport
P.O. Box 68727
Seattle, Washington 98168

Effective Date of Previous Permit: January 1, 2016

Expiration Date of Previous Permit: December 31, 2020

2. Application and Compliance Review

Seattle-Tacoma International Airport (STIA) submitted an application to Ecology on June 30, 2020 for permit reissuance, and Ecology accepted it as complete on September 8, 2020. Ecology reviewed inspection reports and assessed compliance of the facility's discharge with the terms and conditions in the previous permit. Ecology has sufficiently reviewed the application, discharge monitoring reports, and other facility information in enough detail to ensure that:

- Seattle-Tacoma International Airport has complied with the terms, conditions, and requirements of the expired permit except for occasional discharge violations listed below. The permit covers an extensive system of stormwater and wastewater. The violations were adequately addressed.
- The discharge meets applicable effluent standards and limits, water quality standards, and other legally applicable requirements.
- Ecology has up-to date information on the Seattle-Tacoma International Airport waste treatment practices and the nature, content, volume, and frequency of its discharge.
- The receiving water body impairment status has not changed.
- Since the issuance of the current permit, Ecology has not received any additional information, which indicates that environmental impacts from the discharge warrant a complete renewal of the permit. Therefore, Ecology chose to reauthorize this permit.

3. Summary of Compliance with previous permit issued

Seattle-Tacoma International Airport has largely complied with the effluent limits and permit conditions throughout the duration of the permit issued on December 22, 2015. Ecology assessed compliance based on its review of the facility's information in the Ecology Permitting

and Reporting Information System (PARIS), discharge monitoring reports (DMRs) and on inspections.

STIA permit coverage area encompasses approximately 1600 acres and is separated into three categories discharging through a total of 27 outfalls: (Part I) industrial wastewater, (Part II) industrial stormwater and (Part III) construction stormwater. Monthly monitoring for industrial wastewater and construction stormwater is required for a combined 96 parameters at 14 outfalls, more frequently than monthly during rainy weather. Quarterly monitoring for industrial stormwater is required for a combined 117 parameters at 13 outfalls. Acute and chronic toxicity testing at Outfall 1 (Part I industrial wastewater), once in the summer and once in the winter, has demonstrated no toxicity in the effluent. Acute toxicity testing of Part II industrial stormwater at representative outfalls to each surface water, once in the summer and once in the winter, as well as in-stream sub-lethal toxicity testing near all Part II outfalls, including additional testing during periods of runoff concurrent with de-icing activities, has demonstrated no toxicity in the discharges.

- **Part I, Industrial Wastewater consists of 3 wastewater types, only two of which are authorized for discharge under this NPDES and State Waste Discharge permit.**
 - **Treated industrial wastewater** (Outfall 1) primarily runoff from deicing and fueling operations is treated onsite with storage lagoons and Dissolved Air Flotation (DAF) and discharged to Puget Sound through a deep water outfall shared with the Midway Sewer District's domestic wastewater treatment plant. These discharges are authorized under this permit.
 - High-strength glycol-contaminated runoff from deicing activities is discharged to King County's sanitary sewer system for treatment at the King County South Wastewater Treatment Plant under discharge permit No. 7810-02 from King County Industrial Waste.
 - Discharges to the Midway Sewer District's sanitary sewer collection system from cooling tower blowdown, boiler room blowdown and the bus maintenance bus wash facility. These discharges are authorized under this permit.

Violations of Part I permit limits during the period January 2016 through August 2020 are described below:

In October 2017, STIA reported discharge monitoring data exceeding their permitted monthly average BOD₅ limit of 25 with an average discharge of 27.9 mg/L and a single day maximum (October 19) result of 145 mg/L. Calculated mass of BOD₅ based on these concentrations equates to a discharge of 3091 lbs, exceeding the mass limit of 1480 lbs for the month. The single day (October 19) discharge was determined to be an anomalous BOD₅ test. This test varied significantly from daily BOD₅ tests results days before and after, as well as varying from direct TOC readings that STIA measures constantly and use as a surrogate for BOD₅, a test that takes 5 days in the lab. The high

value was reported as required by the permit as an apparent violation, and STIA provided supporting information to document that it was an anomalous BOD₅ test result.

On June 1, 2020, Outfall 1 exceeded the permitted TSS limit of 33 mg/L with a discharge of 36 mg/L.

The cooling tower (monitoring point MTBD, discharges to Midway Sewer) had a sensor malfunction that resulted in an overflow on April 23rd and April 24th, 2020. The overflow exceeded the daily maximum flow on April 23rd and April 24th and led to a monthly average flow limit violation as well. The Airport has installed a high level alarm to prevent this from happening in the future.

On February 20, 2018, the bus wash facility (monitoring point BWBD, discharges to Midway Sewer) had a low pH of 5.36, below their permitted limit of 6.0. Airport staff checked with bus maintenance staff and there have been no changes with the facility operations, chemical dosing, or soap utilized. This is the first time the facility has had a low pH.

- **Part II, Industrial Stormwater**, covers stormwater associated with approximately 1200 acres of the stormwater drainage system. Stormwater runoff is from roads, runways, taxiways, airfield, rooftops, cargo operations, flight kitchens, and other areas associated with airport industrial activities. Stormwater runoff is treated using ponds, grass swales, and other passive stormwater treatment methods. Industrial stormwater discharges to freshwater streams, wetlands, and ponds around the airport. Violations of Part II permit limits during the period January 2016 through August 2020 are described below:

Stormwater Outfall SDN2/3/4 (discharges to Lake Reba):

- Out of fifteen monitored quarterly events, high pH (9.06) was measured during one event (4/4/17) at outfall S234, above the permitted limit of 8.5. There was no unusual activity in the runway and safety areas that are the primary subbasin for this outfall.
- One quarterly monitoring sample was missed in April-June 2019, due to complications coordinating the required toxicity sampling with laboratory staffing and organism availability. An unusually dry May and June did not produce a discharge at the outfall.

Stormwater Outfall SDS3/5 (discharges to Des Moines Creek – East Branch):

- One quarterly sample out of twenty-one monitored events (9/14/18) exceeded permit limits for copper (sample = 45.1, permit limit = 32.2) and zinc (sample = 236, permit limit = 117). This sample was taken after an unusually dry summer and an antecedent period of over 74 days between recorded flow. This long antecedent period likely was a major influencer of the high concentrations.

Airport staff have verified with operations and maintenance departments that there were not any unusual activities occurring prior to this sampling event. Aviation ENV staff coordinated with operations to access the runway and taxiways to inspect the area.

Stormwater Outfall SDD6 (discharges to Des Moines Creek – East Branch):

- Seven out of nineteen quarterly samples did not meet permit requirements for pH. Six samples (4/28/18, 10/25/18, 12/9/18, 3/11/19, 1/10/20, 4/22/20) were low, ranging from 6.05 – 6.47, and one sample (9/6/16) was high (8.93).

Stormwater Outfall SDE4 (discharges to Des Moines Creek – East Branch):

- Two quarterly samples (25.7, 45.8) (10/25/18, 9/17/17) for copper did not meet permit limits (25.6). There was an exceptionally long dry antecedent period of 93.1 days prior to the 45.8 sampling event which may have contributed to the high concentration of copper in the sample.
- One quarterly sample (124) (5/16/19) exceeded the permit limit for zinc (117). The Port initiated source tracing efforts as of June 2019 in this basin to determine if increased operations are impacting stormwater runoff water quality.
- Three out of thirty-four quarterly samples (12/9/18, 10/8/19, 1/10/20) had low pH, ranging from 6.35 to 6.46.
- One additional sample (1/31/20) had extremely low pH of 5.66. Upstream and downstream monitoring of creek water quality during this extremely low pH event did not show exceedance of downstream water quality standards for pH, with upstream pH = 6.4 and downstream pH = 7.4.

Stormwater Outfall SDN1 (discharges to Lake Reba):

- Two quarterly samples (44.3, 42.3) (6/8/18, 9/17/17) exceeded permit limits (28.5) for copper.
- One quarterly sample (317) (6/8/18) for zinc exceeded permit limits (117).
- Source tracing within this basin indicated tenant roofs were contributing high levels of copper and zinc. Since the roofs were cleaned and coatings renewed in October 2018, there have been no violations.
- Five out of seventeen quarterly samples (2/17/16, 10/19/16, 11/2/17, 12/9/18, 1/21/20) exceeded permit limits (6.5) for low pH, ranging from 6.41 to 6.49.
- **Part III, Construction Stormwater**, covers construction stormwater generated from various construction projects that usually have less than a five-year duration. STIA customizes SWPPPs for each project. Violations of Part III permit limits during the

period January 2016 through August 2020 are described below:

Construction Stormwater Outfall D5 (Northwest ponds, discharges to Des Moines Creek): Out of 77 monitored discharge events, low pH was measured during seven events at outfall D5, ranging from 6.33 to 6.46, below the permitted limit of 6.5. Three violations (5.3, 5.6, 12 NTU) of turbidity limit 5 NTU were reported in late January / early February 2020 due to a diversion of water from Tye Pond to Northwest ponds, because of a landslide at the outlet control structure of Tye Pond. The water diverted was not turbid but was stirring up sediment in Northwest ponds.

Construction Stormwater Outfall D10 (discharges to Des Moines Creek): Out of 89 monitored discharge events, low pH was measured during four events at outfall D10, ranging from 6.24 to 6.48, below the permitted limit of 6.5. High turbidity (5.6, 6.4, 26) was measured during three events at outfall D10, above permitted limit of 5 NTU. For the 26 NTU event (5.4" rainfall in 3 days), Airport staff observed scouring along an access road and were able to stop the scouring and eliminate the erosion within two hours; subsequent monitoring showed turbidity within permit limits.

Construction Stormwater Outfall D10C did not report visual sheen observations on November 15 and 16, 2017. The treatment operator did not log that visual sheen inspections were conducted. This procedure was reviewed with operators and visual sheen inspections have been corrected.

Construction Stormwater Outfall D13 (discharges to Des Moines Creek): Out of 96 monitored discharge events, low pH was measured during three events at outfall D13, ranging from 6.37 to 6.44, below the permitted limit of 6.5. High turbidity (16 NTU) was measured during one event at outfall D13, associated with a 1.7" rainfall-on-snow event. Multiple site visits by airport staff did not identify any direct discharges of turbidity.

Construction Stormwater Outfall L29 (discharges to Lake Reba): Out of 46 monitored discharge events, low pH was measured during three events at outfall L29, ranging from 6.28 to 6.46, below the permitted limit of 6.5. High turbidity (6.7 NTU) was measured during one event at outfall L29. Airport staff believe the elevated downstream turbidity was associated with elevated levels in Lake Reba mobilizing debris from the banks.

Construction Stormwater Outfall L30 (discharges to Lake Reba): Out of 36 monitored discharge events, low pH (6.46) was measured during one event at outfall L30, below the permitted limit of 6.5. High turbidity (6.8 NTU) was measured during one event at outfall L30. Site inspections did not reveal evidence of construction-related turbidity. Inspections did identify a turbid discharge from a gravel access road discharging into Lake Reba which was subsequently corrected.

In summary, from January 2016 through August 2020, STIA reported 63 discrete violations of their permit limits. Low pH accounted for 35 of these violations, which is typical of unbuffered

runoff and has been shown not to cause in-stream water quality violations in downstream monitoring. For context, 17 of 208 Part II (industrial stormwater) sampled events and 18 of 436 Part III (construction stormwater) sampled events were in violation of pH limits. Turbidity slightly exceeded standards nine times. Copper exceeded permit limits five times and zinc exceed limits three times, not specific to any one outfall or any season of the year. The Airport has diligently pursued inspections and source tracing to determine root causes of violations and most often cannot find a specific cause for these sporadic infrequent violations.

4. Effluent Characterization

Seattle-Tacoma International Airport reported the concentration of pollutants in their discharges in the permit application and in discharge monitoring reports. Due to the sheer number of outfalls and variety of monitored parameters, it is infeasible to provide a simple table with discharge data. Each violation of permit limits has been detailed above. The different effluent streams remain the same as for the last permit. Interested parties can review the STIA application and effluent characterization data online at <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-database>.

5. Permit Limits and Conditions

The reauthorized permit is virtually identical to the previous permit issued on December 22, 2015 with a few exceptions identified below. Ecology removed the completed report requirements that do not require additional or continued assessment. The proposed reauthorized permit includes:

- The discharge limits and conditions in effect at the time of expiration of the previous permit.
- Changes to the submittal dates for reports and other submittal requirements carried over from the previous permit.
- Updated links to current website locations, updated new address and phone number for Ecology's Northwest Regional Office, corrected minor typographical errors.

6. Public Process

Ecology must public notice the availability of the draft reauthorized permit at least 30 days before it reissues the permit [[Washington Administrative Code \(WAC\) 173-220-050](#)]. Ecology invites you to review and comment on its decision to reauthorize the permit (see **Appendix A-Public Involvement Information** for more detail on the Public Notice procedures).

After the public comment period has closed, Ecology will prepare a *Response to Comments* document and attach it to this fact sheet addendum. Ecology will respond to each comment

and describe the resultant changes to the permit in this document. Ecology sends a copy of the *Response to Comments* to all parties that submitted comments.

7. Permit Appeal Process

Appendix B describes the permit appeal process.

8. Recommendation for Permit Issuance

Ecology proposes to reissue this permit for 5 years.

Appendix A — Public Involvement Information

Ecology proposes to reauthorize a permit to Seattle-Tacoma International Airport. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Draft on May 12, 2021 in Seattle Times to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet.

The notice:

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed NPDES permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled [Frequently Asked Questions about Effective Public Commenting](https://apps.ecology.wa.gov/publications/SummaryPages/0307023.html) which is available on our website at <https://apps.ecology.wa.gov/publications/SummaryPages/0307023.html>

You may obtain further information from Ecology by telephone, 206-594-0167, or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
PO Box 330316
Shoreline, WA 98133-9716

The primary author of this permit and fact sheet is Robert Nolan.

Appendix B — Your Right to Appeal

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. 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\(2\)](#) (see glossary).

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

- File your appeal and a copy of this permit 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 permit 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](#).

Table 1 Address and Location Information

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

Appendix C — Response to Comments

Ecology did not receive any comments during the public notice of draft period.