Annual Construction Stormwater Monitoring Report

Seattle-Tacoma International Airport

For the Period July 1, 2022 through June 30, 2023

September 29, 2023

Prepared by

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Port of Seattle

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Section 1: Introduction

The Port of Seattle (Port) National Pollutant Discharge Elimination System (NPDES) permit WA0024651 is broken down into three sections: Part 1: Industrial Wastewater, Part 2: Industrial Stormwater and Part 3: Construction Stormwater. NPDES Permit Part 1 Special Condition S2.F requires an annual summary of construction stormwater monitoring results. The twelve-month period is defined as July 1, 2022 through June 30, 2023. This report provides a summary of the number of projects, active outfalls, number of construction stormwater events and permit compliance results during this period.

1.1 Background

The Port operates and maintains the Seattle-Tacoma International Airport (SEA). SEA routinely undergoes facility upgrades to improve outdated infrastructure and to increase facility and operational capacity to accommodate the increased number of passengers and meet other needs of the airline industry. Many of these upgrades involve ground disturbing activities requiring construction stormwater runoff monitoring in accordance with Part 3 Special Condition S1. The monitoring results summarized in this report document permit compliance.

Section 2: Construction Stormwater Monitoring Requirements

The Port develops and submits a site-specific construction stormwater monitoring plan prior to construction activities for any project that disturbs one (1) or more acres. The monitoring plan provides a brief project description, identifies construction stormwater outfalls, stormwater treatment processes (if applicable), reporting requirements and non-compliance notification contacts and procedures. Monitoring continues until a site stabilization notification is submitted to Ecology.

Construction stormwater monitoring is defined under Part 3, Special Condition 3S2 is broken into three categories:

- Non-Chemically Treated Discharge Monitoring
- Continuous Chemical Treatment Monitoring
- Batch Treatment Monitoring.

Port personnel work with project and construction management teams to identify the appropriate form of treatment for each site and how the site will be monitored to meet permit requirements. Each category of treatment has specific monitoring frequencies and effluent limitations. **Table 1** provides a summary of active construction projects in the reporting period and the form of treatment used at each.

Table 1 - Project Summary and Treatment Type Utilized

Project	July	August	September	October	November	December	January	February	March	April	May	June
Logistics Site	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem
Widen Arrivals Bridge Demolition	Inactive	Inactive	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Inactive	Inactive	Inactive	Inactive	Inactive
2022 Airfield Improvement Project	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive
Concourse A Delta Lounge Project	Inactive	Inactive	Inactive	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem	Non-Chem/ Chem
ARFF Culvert Replacement Project	Chem	Chem	Chem	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive
2023 Airfield Improvement Project Contract 1	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Chem	Chem	Chem
2023 Airfield Improvement Project Contract 2	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Non-Chem	Non-Chem	Non-Chem	Non-Chem	Non-Chem

Project Specific Treatment used:

Non-Chem: Non-Chemically Treated Discharge
Chem: Chemically Treated Discharge

A construction outfall grid was developed to determine the location of potential construction stormwater discharges so that they would be identified in the Airport's NPDES permit. These locations discharge into the three (3) receiving waters surrounding SEA. These grids or boxes reflect the associated authorized outfalls referenced in Part III, Special Condition 3S1.A Table III. The Port has the potential to utilize 62 construction outfalls identified in the NPDES permit. Each outfall can have a non-chemical construction stormwater discharge, batch-treated chemical stormwater discharge and/or a continuous flow chemical treated stormwater discharge.

The *NPDES Construction Monitoring Outfall Areas Map* (**Figure 1**) provides a reference for all potential construction stormwater outfall locations at SEA

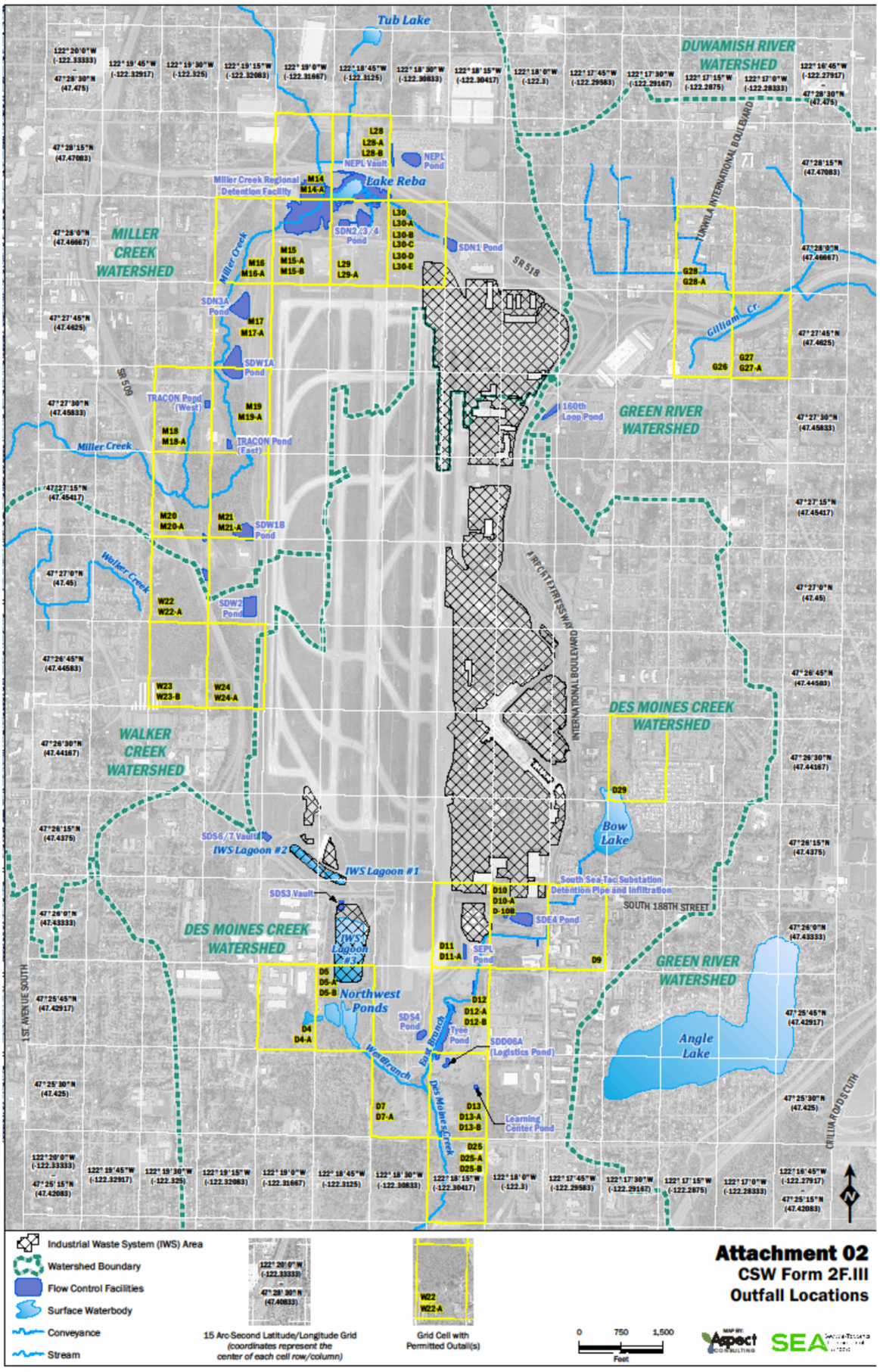
The Port and Ecology track each outfall under three (3) possible operating conditions:

- Non-operational
- Inactive
- Active

A *non-operational* outfall has never been activated as a construction stormwater outfall during the current permit cycle. An *inactive* outfall has previously been active but during a particular month(s) there was no construction activity discharging to that outfall. An *active* outfall receives stormwater from a construction site with ground disturbing activity. The Port provides an outfall summary to Ecology along with the monthly Discharge Monitoring Report (DMR) submittal to track operating outfall status. The DMRs summarize the monitoring results from all active outfalls.

The Port may also discharge construction stormwater to the Industrial Waste Treatment Plant (IWTP). All stormwater sent to the IWTP is treated and discharged per NPDES permit Part I, Special Conditions S1.A Table 1-1 & S2.A.1 Table S2-1.

Figure 1 - Construction Stormwater Outfall Map



2.1 Non-Chemically Treated Discharge Monitoring

Non-chemically treated discharge monitoring is triggered when conventional erosion and sediment control BMPs are utilized to meet water quality standards.

A non-chemically treated discharge monitoring event is triggered when the airport receives 0.5 inches or greater of rain in a 24-hour period. The 24-hour period is defined as being from 8:00am to 8:00am to ensure safety of field samplers and, if necessary, allows for Best Management Practice (BMP) adjustments or repairs to be completed that working day. The Port NPDES permit requires non-chemical treatment discharges be monitored upstream and downstream of the outfall. The upstream monitoring location is approximately five (5) feet upstream of the discharge and the downstream monitoring location is determined by Ecology's RivPlum Model and is no greater than 100 feet downstream or at the nearest accessible point. **Table 2** summarizes the Non-chemically treated discharge monitoring parameters and effluent limitations.

Table 2 - Non-Chemically Treated Discharge Monitoring Parameters & Effluent Limits

Monitoring Parameter	Effluent Limit
Turbidity[(a)]	5 NTU or 10% increase above background
pH	6.5 to 8.5[(b)]
Total Petroleum Hydrocarbons	5 mg/L[(c)]
Flow	Report

Footnotes:

(a) If background turbidity is 50 NTU or less, then the turbidity in the receiving water shall not exceed 5 NTU above background. If background turbidity is greater than 50 NTU, then cannot have 10% increase in turbidity.

(b) With human caused variation must be within .2 units.

(c) TPH shall only be measured and sampled if visible sheen is observed.

When the Port performs work at or below the ordinary high-water mark (OHWM), applicable permits are obtained and additional monitoring requirements are triggered. The Port replaced a culvert on the Aircraft Rescue and Firefighting Road (ARFF road) at Miller Creek during this reporting period. Upstream and downstream turbidity samples were collected in accordance with the instream monitoring plan submitted to Ecology and results (not reportable on the monthly DMR) are maintained by the Port's environmental department.

2.2 Continuous Chemically Treated Discharge Monitoring

Continuous chemical treatment is used to treat runoff in those cases where site specific conditions may limit the ability of traditional erosion and sediment control BMPs to meet

water quality standards in the receiving water. Ecology defines chemical treatment methods and requirements in BMP C250, *Western Washington Stormwater Management Manual, Volume II*. The Port's NPDES permit specifies monitoring parameters and frequencies in addition to Ecology's General Use Level Designation requirements.

Five projects during the reporting period utilized a continuous chemical treatment system. The projects included site-specific monitoring plans and discharges were reported to Ecology on the monthly DMR. The Port's NPDES permit specifies monitoring parameters and frequencies. **Table 3** summarizes the Chemically treated discharge monitoring parameters and effluent limitations.

Table 3 - Chemically Treated Discharge Monitoring Parameters & Effluent Limits

Monitoring Parameter	Effluent Limit
Turbidity[(a)]	5 NTU or 10% increase above background
pH	6.5 to 8.5[(b)]
Total Petroleum Hydrocarbons	5 mg/L[(c)]
Total Dissolved Solids [(d)]	500 mg/L
Flow	Report

Footnotes:

(a) If background turbidity is 50 NTU or less, then the turbidity in the receiving water shall not exceed 5 NTU above background. If background turbidity is greater than 50 NTU, then cannot have 10% increase in turbidity.
(b) With human caused variation must be within .2 units.
(c) TPH shall only be measured and sampled if visible sheen is observed.
(d) Monitoring for TDS is only required when infiltrating water from batch plan operations.

2.3 Batch Chemically Treated Discharge Monitoring

Batch chemical treatment is also utilized when traditional BMPs may not be adequate. The chemical treatment methods and requirements are also defined in BMP C250, *Western Washington Stormwater Management Manual, Volume II*.

The Port did not perform any batch chemical treatment during this reporting period. The Port's NPDES permit specifies monitoring parameters and frequencies. If the Port uses batch chemical treatment for future construction stormwater projects it will be identified in the site-specific monitoring plan and reported to Ecology on the monthly DMR.

Section 3: Construction Stormwater Monitoring Results Summary

This section summarizes the construction stormwater monitoring events and results. All data summarized in this section has been reported to Ecology on monthly DMRs and is included in **Tables 4 and 5**.

3.1 Non-Chemically Treated Discharge Monitoring Summary

The Port monitored twelve (12) 0.5 inch/24-hour storm events during this period. All the monitoring results were reported in the monthly DMRs. During this period there were up to seven (7) active construction stormwater outfalls. The Port discharged into Des Moines Creek and Lake Reba**. Table 4** provides a monthly summary of the number of 0.5-inch/24-hour stormwater events.

Table 4 – Summary of 0.5 Inch/24-Hour Monitoring Events

Month (July 2022 – June 2023)	Number 0.5-Inch Stormwater Events
July	0
August	0
September	0
October	1
November	4
December	7
January	0
February	0
March	2
April	1
May	1
June	0

Non-Chemically Treated Discharge Data Results (**Table 5**) provides the instream monitoring data results submitted on the DMR. Please note that **Table 5** reflects the maximum and minimum data results if there were multiple 0.5 inch/24-hour storm events during the month.

The non-chemical construction monitoring occurs in the receiving water which results in many outside sources comingling with construction discharges in the receiving water.

Table 5 - Non-Chemically Treated Discharge Data Results

Parameter	Month	Outfalls						
		D10	D12	D13	D4	D5	D7	L29
Flow (mgd)	22-Jul	ND	IA	ND	IA	ND	IA	ND
	22-Aug	IA	IA	ND	ND	IA	IA	ND
	22-Sep	IA	IA	ND	ND	IA	IA	ND
	22-Oct	2.37	IA	0.09	0.26	IA	IA	0.09
	22-Nov	3.87	IA	0.43	1.08	IA	IA	1.79
	22-Dec	8.64	IA	0.86	0.95	IA	IA	0.55
	23-Jan	ND	IA	ND	IA	IA	IA	IA
	23-Feb	ND	IA	ND	IA	IA	IA	IA
	23-Mar	4.73	IA	0.26	IA	IA	IA	IA
	23-Apr	1.08	0.43	0.09	IA	1.51	IA	0.3
	23-May	0.3	0.13	0.09	IA	1.29	0.09	0.09
	23-Jun	ND	ND	ND	IA	ND	ND	ND
Oil and Grease Total Petroleum Hydrocarbon (mg/L)	22-Jul	ND	IA	ND	IA	ND	IA	ND
	22-Aug	IA	IA	ND	ND	IA	IA	ND
	22-Sep	IA	IA	ND	ND	IA	IA	ND
	22-Oct	No Sheen	IA	No Sheen	No Sheen	IA	IA	No Sheen
	22-Nov	No Sheen	IA	No Sheen	No Sheen	IA	IA	No Sheen
	22-Dec	No Sheen	IA	No Sheen	No Sheen	IA	IA	No Sheen
	23-Jan	ND	IA	ND	IA	IA	IA	IA
	23-Feb	ND	IA	ND	IA	IA	IA	IA
	23-Mar	No Sheen	IA	No Sheen	IA	IA	IA	IA
	23-Apr	No Sheen	No Sheen	No Sheen	IA	No Sheen	IA	No Sheen
	23-May	No Sheen	No Sheen	No Sheen	IA	No Sheen	No Sheen	No Sheen
	23-Jun	ND	ND	ND	IA	ND	ND	ND
pH [min \ max] (s.u.)	22-Jul	ND	IA	ND	IA	ND	IA	ND
	22-Aug	IA	IA	ND	ND	IA	IA	ND
	22-Sep	IA	IA	ND	ND	IA	IA	ND
	22-Oct	6.4/6.4	IA	6.4/6.4	6.4/6.4	IA	IA	6.6/6.6
	22-Nov	6.3/7.2	IA	6.3/7.2	6.2/7.0	IA	IA	6.5/6.5
	22-Dec	6.6/7.7	IA	6.6/7.9	7.0/7.0	IA	IA	6.8/6.8
	23-Jan	ND	IA	ND	IA	IA	IA	IA
	23-Feb	ND	IA	ND	IA	IA	IA	IA
	23-Mar	7.4/7.6	IA	7.3/7.6	IA	IA	IA	IA
	23-Apr	7.5/7.5	7.5/7.5	7.5/7.5	IA	7.2/7.2	IA	7.2/7.2
	23-May	7.5/7.5	7.5/7.5	7.7/7.7	IA	7.1/7.1	7.1/7.1	7.3/7.3
	23-Jun	ND	ND	ND	IA	ND	ND	ND
Turbidity Background <=50 NTU	22-Jul	ND	IA	ND	IA	ND	IA	ND
	22-Aug	IA	IA	ND	ND	IA	IA	ND
	22-Sep	IA	IA	ND	ND	IA	IA	ND
	22-Oct	1.8	IA	0.35	-2.94	IA	IA	1.5
	22-Nov	8	IA	0	1.6	IA	IA	1.4
	22-Dec	8	IA	4	0	IA	IA	0
	23-Jan	ND	IA	ND	IA	IA	IA	IA
	23-Feb	ND	IA	ND	IA	IA	IA	IA
	23-Mar	4	IA	-4	IA	IA	IA	IA
	23-Apr	2.6	0.6	-0.7	IA	-4.4	IA	-1.3
	23-May	0.2	-0.1	-0.3	IA	-2	-2	-1.4
	23-Jun	ND	ND	ND	IA	ND	ND	ND
Turbidity Background >50 NTU (%)	Background turbidity was never >50 NTU during this reporting period during qualifying events.							

Notes:

mgd = million gallons per day
mg/l = milligrams per liter
s.u. = standard units
ntu = nephelometric turbidity units
ND = No Discharge
IA = Inactive

*For months with multiple monitoring days, the max (or min) values are reported here accordingly.

The Port performs site inspections to ensure BMPs are working effectively, and unanticipated discharges are not occurring from the project site.

During this monitoring period there were monitoring results that exceeded permit limitations. All pH and turbidity exceedances identified during 0.5 inch/24-hour storm events were associated with non-Airport influences. The non-chemical construction monitoring occurs in the receiving water which results in many outside sources comingling with construction discharges in the receiving water. The Port performs site inspections to ensure BMPs are working effectively, and unanticipated discharges are not occurring from the project site. One unanticipated discharge occurred during this monitoring period and is described in section 3.1.1 below.

3.1.1 Turbidity

During the monitoring period there were two 0.5 inch/24-hour storm events where downstream turbidity exceeded background turbidity by greater than 5 NTU. Both instances appeared to be attributed to basin or stream conditions and not to Port construction activities. **Table 6** below describes each exceedance and the numeric value.

Table 6 - Turbidity Exceedance Notification Summary

Date (Time)	Outfall	US Turbidity (NTU)	DS Turbidity (NTU)	Difference (DS - US)	Discussion
11/6/2022 (8:18 AM)	D10	3	11	8	No activities within the drainage area were causing erosion. The maximum 1-hour rainfall in the previous 24 hours was 0.19 inches at 7:50 AM on 11/6/2022. The on-site monitoring team did not see visible evidence of erosion in the channel but it's possible that with the heavy rain, some in situ solids were disturbed and resulted in increased turbidity. Turbidity at the outfall was 5 NTU.
12/26/2022 (08:58 AM)	D10	11.1	18.9	7.8	There were no construction activities within the D10 basin that would generate turbidity in the receiving water as confirmed by inspections and site logs. The airport had received snow and ice followed by heavy rain in the preceding days and the Port believes that the increased turbidity was possibly generated from the winter weather roadway sanding and heavy rainfall.

Notes:
US = Upstream DS = Downstream

There were two occurrences where downstream turbidity exceedances occurred during the ARFF Culvert Replacement project. The first was when stream diversion began and the pump was extracting upstream water at too fast of a rate. The second was when the stream was being reintroduced at the end of the project and a downstream sheet pile was being remove. In both instances, immediate action was taken to reduce the effect on the stream and the port monitored the downstream water in accordance to their permits and monitoring plan. **Table 7** below describes each exceedance and the numeric value.

Table 7 - ARFF Culvert Replacement Project Turbidity Exceedances

Date	US Turbidity (NTU)	DS Turbidity (NTU)	Difference (DS - US)	Discussion
7/11/2022 (15:10)	5.1	51	45.9	Water levels rose above the upstream berm when the contractor was switching out diversion pumps. Work halted immediately and the contractor began pumping downstream water into treatment tanks. Turbidity improved within 30 minutes.
7/13/2022 (9:10 & 9:20)	51.86	41.15	-10.71	Contractor noticed solids had been agitated in pump intake area due to too much water being pumped. Pump was shut off to allow upstream water to settle.
7/13/2022 (11:10 & 11:20)	14.87	22.44	7.57	Diversion pump back on at lower rate. Turbidity decreasing.
7/13/2022 (13:10 & 13:20)	8.48	17.09	8.61	Diversion pump back on at lower rate. Turbidity decreasing.
7/13/2022 (15:10 & 15:20)	8.44	12.75	4.31	Back in compliance.
8/29/2022 (12:00)	4.45	6.24	1.79	Before downstream sheet pile removal and stream reintroduction.
8/29/2022 (14:00)	4.86	22	17.14	After downstream sheet pile removal. Approximate flow of less than 0.1 cfs in stream. Turbidity further downstream under 156th St bridge was 2.11.
8/29/2022 (15:00)		12.4	12.4	1-hour post spike. Approximate flow of less than 0.1 cfs in stream. Turbidity further downstream under 156th St bridge was 2.21.
8/29/2022 (16:00)	4.58	13	8.42	2-hour post spike, similar downstream readings. Approximate flow of less than 0.1 cfs in stream. Turbidity further downstream under 156th St bridge was 2.28.
8/30/2022 (09:00)	3.8	4.11	0.31	Next morning, back in compliance

3.1.2 pH

There were seven (7) pH exceedances during this period. In each exceedance the upstream and downstream pH values were below the 6.5 S.U. effluent limit. The Port's discharge at the outfalls was above or equal to the upstream pH value in 6 of the 7 cases. Thus, the Port does not believe the exceedances were associated with Port activity. **Table 8** below describes each exceedance and the numeric value. The depressed pH of the creek in these instances is related to basin-wide effects of low pH rainwater on the receiving water.

Table 8 - pH Limit Exceedance Notification Summary

Date	Outfall	pH	Discussion
10/31/2022	D10	6.4	The projects discharging to the D10 outfall did not have any low pH generating activity occurring. Drainage areas include primarily landside activities which includes airport drives. Runoff flows through a variety of BMPs before discharging. This event corresponded to wildfire smoke persistent in the area. The upstream pH was 6.4.
	D13	6.4	The projects discharging to the D13 outfall did not have any low pH generating activity occurring. The primary project activities were construction laydown, bus maintenance facility, and employee parking. All stormwater from this basin travels through a series of BMPs including multiple swales and detention pond before releasing into Des Moines Creek. This event corresponded to wildfire smoke persistent in the area. The upstream pH was 6.4.
	D4	6.4	There were no low pH generating activities within the D4 basin. This event corresponded to wildfire smoke persistent in the area. Upstream pH was 6.3.
11/6/2022	D10	6.3	There were no low pH generating activities within the D10 basin and site inspections did non find any evidence of port activities causing the low pH. Due to region wide depressed pH values and lack of pH sources, the Port believes the depressed pH value was related to basin-wide effects of low pH rainwater on the receiving water. The upstream pH was 6.1.
	D13	6.3	There were no low pH generating activities within the D13 basin. Due to region wide depressed pH values and lack of pH sources, the Port believes the depressed pH value was related to basin-wide effects of low pH rainwater on the receiving water. The upstream pH was 6.3.
	D4	6.2	There were no low pH generating activities within the D4 basin. Due to region wide depressed pH values and lack of pH sources, the Port believes the depressed pH value was related to basin-wide effects of low pH rainwater on the receiving water. The upstream pH was 6.2.
11/26/2022	D10	6.3	There were no low pH generating activities within the D10 basin and site inspections did non find any evidence of port activities causing the low pH. Due to region wide depressed pH values and lack of pH sources, the Port believes the depressed pH value was related to basin-wide effects of low pH rainwater on the receiving water. The upstream pH was 6.1.

3.1.3 Total Petroleum Hydrocarbons

The Port did not visually identify a sheen during any of the monitoring events.

3.1.4 Flow

The Port monitored flow during all monitoring events.

3.1.5 Illicit Discharge

On September 16th around 4:00pm, there was an illicit construction stormwater discharge from the Widen Arrivals Bridge Demo project. The source of the discharge was concrete residue left on the pavement during demolition that discharged from the site through improper BMP containment. Samples were collected from the discharge location, directly downstream at the nearest catch basin (approx. 42 feet), and further downstream at the SDE4/S1 outfall (approx. 1 mile from the site). The sample collected at the SDE4/S1 outfall to Des Moines Creek was in compliance with permit limits. Corrective actions were immediately taken and Ecology was notified of the illicit discharge finding. **Table 9** below summarizes the sampling results from this event.

Table 9 - 9/16/2022 Illicit Discharge Detection

Location	Turbidity	pH
Site Illicit Discharge	824	9.8
Catch basin directly downstream of site	43.8	10.8
D10 (SDE4/S1) Outfall	11.5	6.5

3.2 Continuous Chemically Treated Discharge Monitoring Summary

The Port had four (4) projects that utilized continuous chemical treatment. Treated discharges from the 2022 AIP and the 2023 AIP - Contract 1 projects were infiltrated onsite near the batch plant and reported on the L29C DMR. Treated Discharges from the ARFF Culvert Replacement project were infiltrated in pond 518 and reported on the 518C DMR. Discharges from the Concourse A Delta Lounge project were discharged to the D10C outfall and reported on the D10C DMR. **Table 10** below provides the monitoring data results submitted on the DMR.

Table 10 - Chemically Treated Discharge Data Results

Parameter	Month	Outfalls		
		L29C	518C	D10C
Flow (mgd)	22-Jul	0.074	0.085	IA
	22-Aug	No Discharge	0.649	IA
	22-Sep	No Discharge	No Discharge	IA
	22-Oct	0.087	IA	No Discharge
	22-Nov	0.213	IA	No Discharge
	22-Dec	No Discharge	IA	0.018
	23-Jan	IA	IA	No Discharge
	23-Feb	IA	IA	No Discharge
	23-Mar	IA	IA	0.0085
	23-Apr	No Discharge	IA	0.016
	23-May	No Discharge	IA	No Discharge
	23-Jun	No Discharge	IA	No Discharge
Oil and Grease Total Petroleum Hydrocarbon (mg/L)	22-Jul	No Sheen	No Sheen	IA
	22-Aug	No Discharge	No Sheen	IA
	22-Sep	No Discharge	No Discharge	IA
	22-Oct	No Sheen	IA	No Discharge
	22-Nov	No Sheen	IA	No Discharge
	22-Dec	No Discharge	IA	No Sheen
	23-Jan	IA	IA	No Discharge
	23-Feb	IA	IA	No Discharge
	23-Mar	IA	IA	No Sheen
	23-Apr	No Discharge	IA	No Sheen
	23-May	No Discharge	IA	No Discharge
	23-Jun	No Discharge	IA	No Discharge
pH [min \ max] (s.u.)	22-Jul	7.1/7.2	7.6/8.1	IA
	22-Aug	No Discharge	7.4/8.1	IA
	22-Sep	No Discharge	No Discharge	IA
	22-Oct	7.1/7.4	IA	No Discharge
	22-Nov	6.9/7.4	IA	No Discharge
	22-Dec	No Discharge	IA	7.7/7.7
	23-Jan	IA	IA	No Discharge
	23-Feb	IA	IA	No Discharge
	23-Mar	IA	IA	6.5/6.5
	23-Apr	No Discharge	IA	7.3/7.4
	23-May	No Discharge	IA	No Discharge
	23-Jun	No Discharge	IA	No Discharge
Turbidity Background <=50 NTU	22-Jul	2.7	1.4	IA
	22-Aug	No Discharge	2.3	IA
	22-Sep	No Discharge	No Discharge	IA
	22-Oct	2.3	IA	No Discharge
	22-Nov	3.6	IA	No Discharge
	22-Dec	No Discharge	IA	4.1
	23-Jan	IA	IA	No Discharge
	23-Feb	IA	IA	No Discharge
	23-Mar	IA	IA	2.84
	23-Apr	No Discharge	IA	4.8
	23-May	No Discharge	IA	No Discharge
	23-Jun	No Discharge	IA	No Discharge
Turbidity Background >50 NTU (%)	Background turbidity was never >50 NTU during this reporting period during qualifying events.			
Total Dissolved Solids (TDS) (mg/L)	22-Jul	244	NA	IA
	22-Aug	No Discharge	NA	IA
	22-Sep	No Discharge	No Discharge	IA
	22-Oct	134	IA	No Discharge
	22-Nov	120	IA	No Discharge
	22-Dec	No Discharge	IA	NA
	23-Jan	IA	IA	No Discharge
	23-Feb	IA	IA	No Discharge
	23-Mar	IA	IA	NA
	23-Apr	No Discharge	IA	NA
	23-May	No Discharge	IA	No Discharge
	23-Jun	No Discharge	IA	No Discharge

Notes:

mgd = million gallons per day mg/L = milligrams per liter ND = No Discharge IA = Inactive

NTU = nephelometric turbidity units s.u. = standard units NA = Not Applicable

3.2.1 Turbidity

All chemically treated construction discharges were below 5 NTUs maximum daily average. There were no exceedances during this reporting period.

3.2.2 pH

There were no pH exceedances during any chemically treated discharges during this period.

3.2.3 Total Petroleum Hydrocarbons

The Port did not visually identify a sheen from any of the chemically treated discharges during this period.

3.2.4 Flow

The Port monitored flow from all chemically treated discharges during this period.

3.2.5 Total Dissolved Solids

The Port monitored discharges from the L29C outfall for TDS during this period. There were no exceedances of TDS.

3.3 Batch Chemically Treated Discharge Monitoring Summary

The Port did not perform and batch chemical treatment during this reporting period. The Port's NPDES permit specifies monitoring parameters and frequencies. If the Port uses batch chemical treatment for future construction stormwater projects it will be identified in the site-specific monitoring plan and reported to Ecology on the monthly DMR.