Port of Portland

P.O. Box 3529
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Portland International Airport
Stormwater Pollution Control Plan
File No. 107220

Site Address:
7200 NE Airport Way
Portland, Oregon 97218

Prepared by:
Blake Hamalainen, Port of Portland

May 20, 2022

Standard Industrial Classification (SIC) Codes

Portland International Airport is a facility with a primary function is air transportation. The primary SIC code is ***4581 Airports, Flying Fields and Airport Terminal Services***. Secondary SIC codes include, 451, ***Air Transportation Scheduled (4512) and Air Courier Services (4513).***

Certification

The signer below is duly authorized to sign all reports, updates and revision requirements of the National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit. In signing the Stormwater Pollution Control Plan (SWPCP), the authorized facility representative is attesting that the information contained in the plan is true and accurate. The authorized person's signature is required for all facilities covered by General Stormwater Permits, regardless of the number of employees or acreage of disturbance on the site.

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the 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.

6/7/2022

Signature Date

Stan Jones
Senior Manager, Mixed Media

STORMWATER POLLUTION CONTROL PLAN (SWPCP)
For

Site Name: Portland International Airport
Site Operator: Port of Portland

DEQ File Number: 107220
EPA Number: ORR00440291

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Table of Contents

List of Tables ..... *iv*

List of Figures ..... *v*

List of Appendices ..... *v*

Acronyms ..... *v*

Section 1: Introduction 1-1

1.1 Plan Organization 1-2
1.2 Plan Purpose 1-2
1.3 Definitions 1-3
1.4 Information Sources 1-5
1.5 SWPCP Revisions 1-5
1.6 Co-Permittee Responsibilities 1-6

Section 2: Site Description 2-1

2.1 Location 2-1
2.2 Facility Details 2-1
2.3 Site Map 2-1
2.4 Receiving Waters 2-5
2.5 Drainage Area Descriptions and Industrial Activities 2-5
2.6 Significant Materials 2-24
2.6.1 Known or Discovered Significant Materials from Previous Operations 2-24
2.7 Industrial Activities Conducted On-Site 2-25
2.7.1 Fueling (Co-permittee) 2-26
2.7.2 Aircraft, Equipment, Vehicle, and Building Maintenance (Co-permittee) 2-27
2.7.3 Airport Maintenance and Operations (Port) 2-27
2.7.4 Material Storage and Handling (Port and Co-permittee) 2-29
2.7.5 Food Services (Co-permittee) 2-29
2.7.6 Garbage and Recycling Storage (Port and Co-permittee) 2-29
2.7.7 Fire Station Operations and Training (Port) 2-30
2.7.8 Aircraft, Vehicle and Equipment Washing (Co-permittee) 2-30
2.7.9 Rental Car Fueling, Maintenance and Washing (Co-permittee) 2-31
2.7.10 Aircraft and Ground Service Equipment Painting (Co-permittee) 2-31
2.8 Stormwater Monitoring Locations 2-31
2.8.1 Demonstrating Substantially Similar Discharge Points 2-33
2.9 Underground Injection Control Rules and Regulations 2-33

Section 3: Site Controls 3-1

3.1 Stormwater Best Management Practices 3-1

3.1.1 Minimize Exposure 3-1
3.1.2 Oil and Grease 3-3
3.1.3 Waste Chemicals and Material Disposal: 3-3
3.1.4 Erosion and Sediment Control:....3-4
3.1.5 Debris Control:....3-5
3.1.6 Dust Generation and Vehicle Tracking: 3-6
3.1.7 Housekeeping:....3-6
3.1.8 Vehicle and Equipment Maintenance 3-7
3.1.9 Spill Prevention and Response: 3-8
3.1.10 Preventative Maintenance: 3-9
3.1.11 3-10
3.1.12 Recycling and Waste....3-10
3.1.13 Employee Education:....3-10
3.1.14 Non-Stormwater Discharges: 3-11
3.1.15 Schedule E Industry sector specific requirements include: 3-11

Section 4: Procedures and Schedules....4-1

4.1 Spill Prevention and Response Procedures....4-1
4.2 Monthly Inspections....4-1
4.2.1 Inspection Areas....4-2
4.3 Cleaning and Repair Program....4-2
4.4 Employee Education Schedule 4-3
4.5 Record Keeping and Reporting Procedures....4-3

Section 5: Monitoring Requirements....5-1

5.1 General 5-1
5.2 Water Quality Standards 5-1
5.3 Response to Benchmark Exceedance 5-1
5.3.1 Tier I Corrective Action Response....5-1
5.3.2 Tier II Corrective Actions 5-2

Section 6: Recordkeeping and Reporting Requirements....6-1

List of Tables

Table 1-1 PDX Permits 1-2
Table 2-1 Drainage Basin Area in Acres....2-6
Table 2-2 Significant Materials and Potential Source Descriptions....2-25
Table 2-3 Monitoring Points 2-32
Table 3-1 Preventative Maintenance Schedule for Site Controls....3-10
Table 3-2 Waste and Recycling Collection Pick-up Schedule 3-10

List of Figures

Figure 1 General Location Map.....2-3
Figure 2 Site Map.....2-11

List of Appendices

A Current 1200-Z Discharge Permit
B Co-Permittee List, Application Form and Annual Verification Form
C Stormwater Inspection Procedures and Forms
D Record of Revisions
E Illicit Discharge Detection and Elimination Procedures
F Spill Response Plan
G Non-Airfield Deicing Best Management Practices

Acronyms

AST	Aboveground Storage Tank
BMP	Container Distribution Center
CDS	Best Management Practice
CEG	Certified Engineering Geologist
CERCLA	Comprehensive Environmental Recovery, Cleanup, and Liability Act
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
CWA	Clean Water Act
DEQ	Oregon Department of Environmental Quality
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning Community Right to Know Act
mg/L	Milligrams per Liter
ml	Milliliter
MSDS	Material Data Safety Sheet
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rule
PDX	Portland International Airport
PE	Professional Engineer
S.U.	Standard Unit
SARA	Superfund Amendments and Reauthorization Act
SIC	Standard Industrial Classification
SPCC	Spill Prevention, Control, and Countermeasure Plan
SWPCP	Stormwater Pollution Control Plan
TMDL	Total Maximum Daily Load

Section 1: Introduction

Historically industrial stormwater associated with airport operations were regulated under the general industrial stormwater National Pollutant Discharge Elimination System (NPDES) permit (1200-COLS). Deicing discharges were regulated by an individual permit. Individual Permit No. 101647 permit, effective February 1, 2019, combines both the general stormwater and individual deicing permit into one individual permit.

This Stormwater Pollution Control Plan (SWPCP) was prepared to meet the requirements of the, General Permit 1200-Z industrial stormwater permit, which is included in the Individual Permit No. 101647 permit as Attachment A.

The Portland International Airport (PDX) SWPCP applies to the permitted area of PDX shown in Figure 2 and the discharges associated with industrial activities to the Columbia Slough and if needed to the Columbia River. This SWPCP was written to address industrial activities and best management practice requirements applicable to the Port of Portland (Port).

Stormwater at PDX discharges to the Port's Municipal Separate Storm Sewer System (MS4) then to the City of Portland's MS4. The Port is a Co-permittee with the City of Portland on the NPDES MS4 Permit, Number 101314 (MS4 Permit), issued in 2011. The MS4 Permit requires the Port to develop and implement a Stormwater Management Plan (SWMP). The primary component of the Port of Portland SWMP is a program of Best Management Practices (BMPs) to minimize pollutant discharge into surface waters to the maximum extent practicable.

The BMP components outlined in this SWPCP also meet the requirements of the Port's MS4 Permit with respect to PDX. Although not required by the1200-Z permit, the MS4 Permit requires the Port to implement an illicit discharge detection and elimination program and a program to minimize pollutants related to pesticide and fertilizer activities for all Port facilities. These two additional MS4 Permit requirements are implemented as outlined by the Port's Illicit Discharge Detection and Elimination Procedure Manual and the Program Description for Pesticide and Fertilizer Use on Port Property.

This SWPCP will be reviewed periodically to ensure the elements of the plan are effective and that the plan is in compliance with the terms of the 1200-Z permit. Revisions to the SWPCP will be made as required to reflect changing conditions (see section 1.5). SWPCP revisions will be in accordance with Schedule A.8 of the 1200-Z permit. Revisions to the plan will be tracked using the Record of Changes Form provided in Appendix D.

A current copy of the SWPCP will be kept on the Port's website https://www.portofportland.com/Environment/StormwaterManagement. A copy will be made available upon request to government agencies responsible for stormwater.

Stormwater, process water, and other waste water discharges from PDX are regulated under various other permits. The permits that regulate stormwater or other discharges from PDX to the stormwater system are listed in Table 1. The permits listed are issued to the Port or the Port and Co-permittees at PDX.

Table 1-1 PDX Permits

Permit	DEQ File Number	Activity Covered
1200-Z NPDES Permit (Issued to: Port of Portland at PDX and Co-permittees)	107220	Stormwater discharges to the Columbia Slough and the Columbia River.
Anti-icing/Deicing Waste Discharge NPDES Permit No. 101647 (Issued to: Port of Portland at PDX and Co-permittees)	107220	Discharge of anti-icing and deicing materials to the Columbia River and Columbia Slough.
1200-CA NPDES Permit (Issued to: Port of Portland)	107018	Stormwater discharges associated with construction activities that disturb one acre or more.
Municipal Separate Storm Sewer System (MS4) NPDES Permit No. 101314 (Issued to: Port of Portland and City of Portland)	108015	Stormwater discharges from MS4s within the City of Portland urban services boundary.
Waste Water Discharge Permit (Port of Portland at PDX)	Bureau of Environmental Services Permit No. 400.131	Discharge of industrial waste water to the City of Portland's sanitary sewer system.
1700-B WPCF Permit (Issued to: Port of Portland at PDX)	107220	Wash water discharges from vehicle, building and pavement cleaning activities by evaporation, seepage or irrigation.

1.1 Plan Organization

This SWPCP has been designed to follow the requirements of the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities issued by the Oregon Department of Environmental Quality (DEQ) and the United States Environmental Protection Agency (EPA). Specific requirements of the 1200-Z permit are presented in bold italics in the SWPCP and followed by the appropriate information necessary to address the requirements. The components of the 1200-Z permit and the corresponding sections of this SWPCP are listed in the accompanying SWPCP checklist.

1.2 Plan Purpose

This SWPCP is a general guidance document for use by Port personnel and Co-permittees to reduce pollutant exposure to stormwater. The SWPCP is intended to guide the Port and Co-permittees in evaluating stormwater pollution control strategies, maintaining existing stormwater collection, diversion or containment structures, and developing and implementing, when appropriate, additional stormwater pollution controls. This SWPCP addresses all regulated industrial activities at PDX that are conducted by the Port and Co-permittees. It does not address industrial activities of the Oregon Air National Guard (ORANG), which has its own 1200-Z permit. Stormwater from the ORANG discharges into the Port's MS4 system below the Port's permitted discharge. The SWPCP also does not address the sections of the Permit

101647 that address deicing activities and management for areas within the deicing collection system. The deicing system management plans are kept separately.

1.3 Definitions

The following definitions are defined by the stormwater discharge permits issued by DEQ and EPA:

Best Management Practices (BMPs) are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, and/or drainage from raw material storage. (EPA)

CERCLA is the Comprehensive Environmental Response, Compensation, and Liability Act. It is commonly referred to as the Superfund Act. (EPA)

Clean Water Act (CWA) was formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972. (EPA)

Co-permittees are Port of Portland tenants with Standard Industrial Codes (SIC) that require NPDES permit coverage or that have industrial activities, as deemed by the Port, that impact stormwater. Permit No. 101647 refers to Co-permittees as “Other Permittees”. The Port will continue to use the term Co-permittee when referring to “Other Permittees”.

Corrective Action Plan means an addendum to the SWPCP developed in response to modification to the SWPCP or in response to a benchmark exceedance

EPCRA is the Emergency Planning Community Right to Know Act. (EPA)

Hazardous Materials as defined in *The Code of Federal Regulations*, 40 CFR 302 - Designation, Reportable Quantities, and Notification.

Material Handling Activities include the storage, loading and unloading, and transportation or conveyance of raw material, intermediate product, finished product, by-product, or waste product.

Non-stormwater Discharges are not permitted under the new 1200-Z permit except where specifically authorized. This permit does not authorize the discharge of process wastewaters, vehicle wash waters, cooling waters, or any other wastewaters associated with the facility. Other discharges must be addressed in a separate NPDES permit.

Point Source Discharge is a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, or conduit.

Reportable Quantities are those quantities of hazardous substances listed in Table 117.3 of *The Code of Federal Regulations*, 40 CFR 117.

Significant Material includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Recovery, Cleanup, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

Significant Quantity is the volume, concentration, or mass of a pollutant in a stormwater discharge that can cause or threaten to cause pollution, contamination, or nuisance, adversely impact human health or the environment, and cause or contribute to a violation of any applicable water quality standards for the receiving water.

Stormwater is the runoff from a storm event, snow melt runoff, and/or surface runoff and drainage. It does not include infiltration and runoff from agricultural land.

Stormwater Associated with Industrial Activity is the discharge from any conveyance that is used for collecting and conveying stormwater directly pertaining to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials and intermediate and finished products; and areas where industrial activity has taken place in the past at which significant remaining materials are exposed to stormwater. The term also includes stormwater discharges from all areas listed in the previous sentence (except access roads) where material handling equipment or activities, raw materials, intermediate product, final products, waste materials, by-products, or industrial machinery are exposed to stormwater. Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the descriptions of the facilities listed in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

Toxic Concentration refers to lethality to aquatic life as measured by a significant difference in lethal concentration between the control and 100-percent effluent in an acute bioassay test.

1.4 Information Sources

Sources of information used to assist with the development of this SWPCP include the following:

- NPDES Stormwater Discharge Permit Evaluation Report, Industrial Stormwater General Permit 1200-Z, Oregon DEQ
- Oregon General Permit, 1200-Z (October 22, 2018 through July 31, 2022)
- NPDES 1200-Z, General Permits, applying for Permit Coverage, Developing Your Stormwater Pollution Control Plan: Technical Assistance for Industrial Operators, October 2018. Oregon DEQ
- 40 CFR Part 122 (Final Rule)

Information was also provided by the following individuals who are knowledgeable in stormwater management and familiar with the facility:

- Blake Hamalainen, Environmental Technician
- Amanda Coleman, Engineering Design Technician
- Rochelle Regutti, GIS

1.5 SWPCP Revisions

The SWPCP will be kept current and updated by the Port of Portland's (Port) Environmental Operations department as necessary to reflect any changes in facility operation. Not all revisions to the SWPCP require re-submittal of the SWPCP. SWPCP revisions must be submitted if they are made for any of the following reasons:

- Change in site contact(s);
- In response to a corrective action or inspection;
- Changes to the site or control measures that may significantly change the nature of pollutants present in stormwater discharge; or significantly increase the pollutant(s) levels, discharge frequency, discharge volume or flow rate; and
- Changes to the monitoring locations or outfalls.

Co-permittees are required to review the SWPCP at least annually as part of the annual verification for compliance with the stormwater permit. Permittees must submit any changes or corrections to the SWPCP to the Port within two weeks of identified revisions.

The Port will submit SWPCP revisions to DEQ. The Port will keep a copy of the revised SWPCP at the Port Headquarters office and document the changes in the Record of Change form in Appendix D.

1.6 Co-Permittee Responsibilities

PDX tenants who are a Co-permittee on the PDX 1200-Z NPDES Stormwater Discharge Permit are listed in Appendix B. Each Co-permittee will comply with the permit and the PDX SWPCP.

PDX tenants within the 1200-Z permit boundary with industrial activities impacting stormwater must become Co-permittees by submitting an application to Port. The application form is included in Appendix B. Each Co-permittee is responsible for ensuring their activities are in compliance with the permit, and for complying with all of the following requirements:

- Implement planned control measures and best management practices identified in the SWPCP.
- Conduct and document monthly inspections of industrial areas and activities exposed to stormwater, stormwater control measures, structures, catch basins, and treatment facilities including oil-water separators and catch basin filters in accordance with Schedule B.7.
- Perform any necessary preventative maintenance of stormwater control structures and facilities on leasehold.
- Submit information related to the Co-permittee's operations and participate in benchmark exceedance investigations if requested by the Port or DEQ.
- Retain copies of inspection forms, preventative maintenance and repair documentation for a minimum of three years and provide copies to the Port or DEQ upon request.
- Develop and implement a Spill Prevention and Response Plan (Spill Plan). The plan must include methods to prevent spills along with clean-up and notification procedures.
- Maintain a copy of the Spill Plan and adequate spill clean-up materials on-site.
- Conduct and document an employee education program to inform personnel of the components and goals of the SWPCP and the Spill Plan consistent with 1200-Z permit requirements. The education and training should occur at the time of hire and annually thereafter.
- Review the SWPCP whenever facility operations change.
    - Ensure activities are adequately represented in the SWPCP for compliance and accuracy.
    - Submit any revisions or updates within two weeks to the Port's Environmental Operations Department.
- Submit a completed and signed annual verification form to the Port certifying that the Co-permittee has performed the required inspections, preventative maintenance, and best management practices and has prevented illicit discharges. Verification forms are sent to Co-permittees by the Port each year.

Section 2: Site Description

PDX is owned and operated by the Port. The Port leases space at PDX to private companies including airlines, cargo carriers, car rental companies, fueling consortiums, and support service providers. Operations at PDX occur 24hours a day seven day a week. Port administrative employees typically operate during regular business hours between 0700 and 1700.

2.1 Location

PDX is located at Latitude 45° 35' 21" North and Longitude 122° 35' 46" West. The airport is bordered to the north by the Columbia River, to the south by the Columbia Slough, to the east by Interstate 205, and to the west by NE 33rd Avenue, as shown in Figure 1. PDX occupies approximately 3,246 acres of land and is used primarily for aviation related industrial and public airport uses.

To the north of PDX is the Columbia River, NE Marine Drive and public pedestrian and bicycle trails. To the east of the airport is the Columbia Shore District, industrial/commercial parks and open space. To the south of PDX is the McBride and Columbia Sloughs and Columbia Boulevard. Land uses occurring between the sloughs and Columbia Boulevard, include a variety of industries, commercial uses, and open space. Land uses to the west of PDX are predominantly open space and golf courses. To the southwest are a mixture of industries and commercial businesses, as well as a golf course.

2.2 Facility Details

Stormwater from PDX either discharges directly into the Columbia Slough or into a tributary of the Slough. Impervious surface covers about 41-percent of airport property. Impervious surfaces include roofs, runways, roads, parking lots, gravel lots and other paved areas. The topography at PDX is flat, with the majority of pervious areas covered with grass or other landscaping.

Domestic water at PDX is provided by the City of Portland. The majority of the airport's domestic waste water discharges to the City of Portland's Columbia Boulevard Waste Water Treatment Plant via the sanitary sewer. However, there are two active septic systems at PDX. The septic system drain fields serve hangars 8580, 8540 and BPA hangar and are located: (1) on the west side of the airport, southeast of hangar 8540, east of Elrod Road; and (2) on the west side of the airport, east of the BPA hangar, just northeast of Elrod Road.

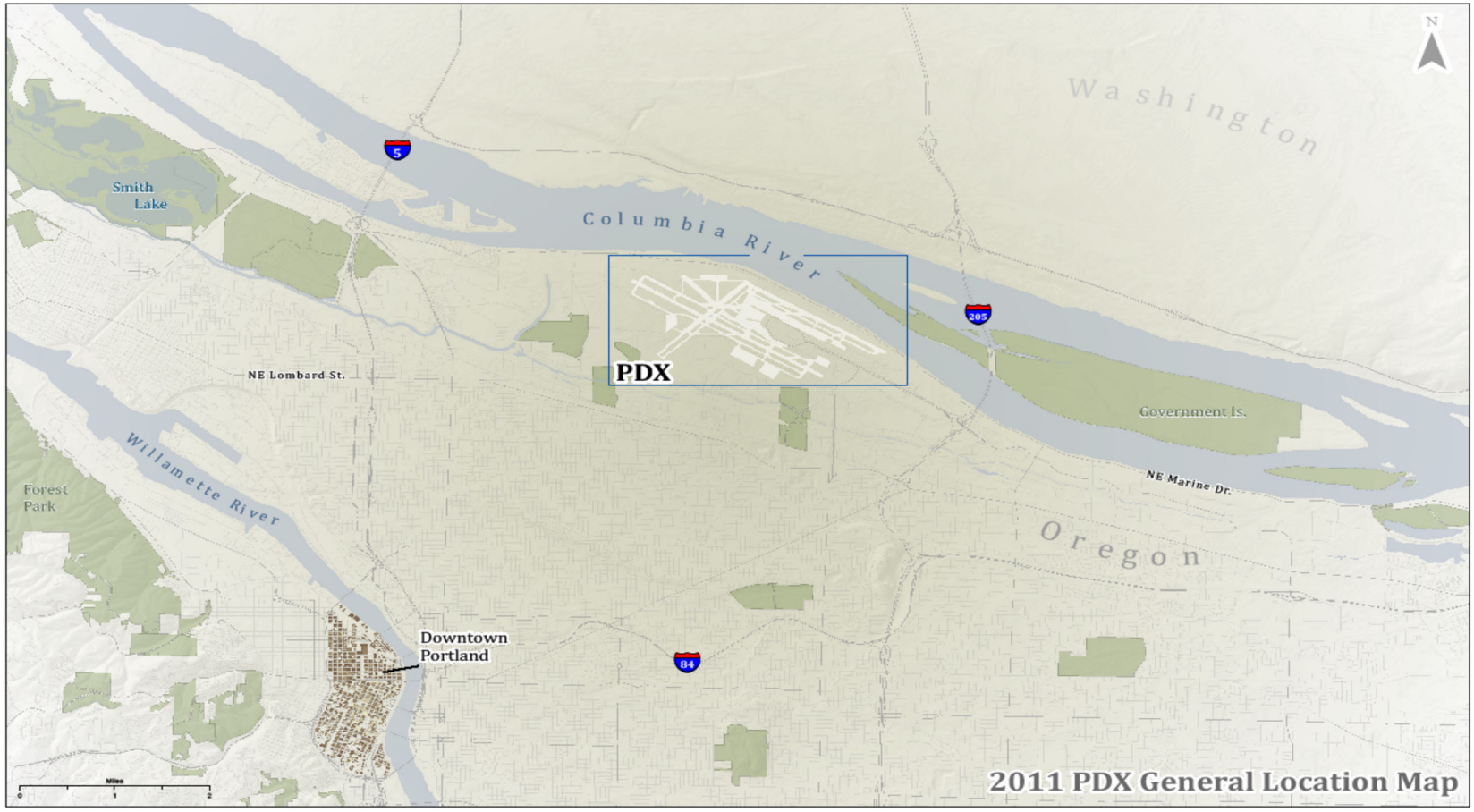
2.3 Site Map

An airport facility map showing the location of the Port's major industrial activities and tenants is included on Figure 2. and contains information about:

- Drainage patterns
- Drainage and discharge structures
- Outline of the drainage area for each stormwater outfall

- Paved areas, equipment, tanks and buildings within each drainage area
- Areas used for outdoor manufacturing, treatment, storage, and/or disposal of significant materials
- Existing structural control measures for reducing pollutants in stormwater runoff (Figure 3)
- Stormwater features to reduce flow or minimize impervious surfaces
- Material loading and access areas
- Used oil, hazardous waste treatment, storage, and disposal facilities
- Location of wells including waste injection wells, seepage pits, dry wells, etc. (see Figure 4. The Port does not have any waste injection wells, seepage pits, or dry wells at PDX)
- Location of springs, wetlands and other surface water bodies, and
- Location of spill kits
- Location of sampling points and outfalls
- Location of spill prevention and clean up materials (mobile spill kits and drain covers)

Figure 1 General Location Map



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2.4 Receiving Waters

Stormwater at PDX is collected through a series of drainage ditches and stormwater pipes that discharge into the middle reach of the Columbia Slough or its tributaries. The waters of the Slough are pumped or gravity flow to the lower Slough via the Multnomah County Drainage District (MCDD) pump station #1. The lower Slough, which is tidally influenced, flows into the Willamette River near its confluence with the Columbia River. PDX has one outfall to the Columbia River used for discharging deicing stormwater and non-deicing stormwater as needed. This outfall is permitted under Anti-icing/Deicing Permit #101647 between October 1 and May 31. Between June 1 and September 30, the 1200-Z requirements apply.

2.5 Drainage Area Descriptions and Industrial Activities

The drainage system conveying stormwater for industrial activities at PDX's is divided into eight major drainage areas (see Figure 2). Each drainage area has one major discharge outfall where stormwater leaves PDX property. Detailed descriptions of each area including a summary of the Port's and Co-permittee industrial activities within each basin are provided below. The total acreage owned by the Port is approximately 3,246 acres. The total drainage area discharged through the Port's outfalls is approximately 3,865 acres, which includes runoff from areas not owned nor managed by the Port. Examples of areas not owned or managed by the Port include public roadways and privately-owned parcels. Not all the acreage owned by the Port is included within the PDX permit boundary. For example, the Oregon Air National Guard leases land from the Port, and tenants with isolated drainage basins located on Alderwood Road have their own 1200-Z permit. The total acreage within the permit boundary is approximately 2,199 acres; of this acreage, the total impervious area is 41-percent or 901 acres and includes buildings, runways, parking lots, or structures operated or occupied by the Port or its tenants.

Table 2-1 provides the estimated impervious area within the permit boundaries for each drainage area. Note that drainage area estimates are limited to pervious and impervious surfaces within the boundaries of the PDX permit because in some instances the drainage basin boundary extends to areas not owned or controlled by the Port or Co-permittees.

Table 2-1 Drainage Basin Area in Acres

Drainage Basin	Impervious Area Acres	Total Area Acres	Drainage area Discharge Location
Sub-1S	32	160	SW Quad and Elrod ditch system then Columbia Slough via MCDD PS-2
Sub-1N	130	648	Elrod ditch system then Columbia Slough via MCDD PS-2
Sub-1E	18	20	Elrod ditch system then Columbia Slough via MCDD PS-2
Basin 2	83	203	Broadmore ditch then Columbia Slough via MCDD PS-3
Basin 3	11	13	Columbia Slough
Basin 4	45	50	Columbia Slough
Basin 5	29	48	Columbia Slough
Sub-6G	190	264	Columbia Slough
Sub-6H	10.5	11	Columbia Slough
Sub-6J	3.8	4	Columbia Slough
Sub-7A	338	634	McBride Slough then the Columbia Slough
Sub-7B	3.8	4	McBride Slough then the Columbia Slough
Sub-7C	4.5	5	McBride Slough then the Columbia Slough
Sub-7D	4.3	5	McBride Slough then the Columbia Slough
Sub-8a	160	216	PIC ditches then Columbia Slough

Drainage Basin 1

Drainage basin 1 is the most western drainage area at PDX and is divided into three sub-basins: 1E, 1N and 1S. Sub-basin 1E conveys stormwater to the Elrod ditch from hangars 8580, 8540, and BPA, and their associated ramps. Sub-basin 1N includes: portions of Runways 10R/28L and 10L/28R; Taxiways D, H and K, Perimeter Road, Fire Station; Fire Training Facility; PFFC Fuel Farm; and, Deicing System Dilute Storage Tanks, Treatment Plant and pump stations. Sub-basin 1S discharges to the Elrod ditch and drains portions of Northwest Ramp, portions of Taxiways B, C, E, G, M, T, and portions of Runway 3/21. The remaining areas in Drainage basin 1, located on

Port property, are undeveloped or areas where non-industrial activity occurs and stormwater infiltrates and does not runoff.

Industrial activities in the Basin 1 drainage area include aircraft support services, which include: light aircraft maintenance, aircraft and vehicle fueling, fuel storage, aircraft painting, septic systems, and fire- fighting training (impervious areas only).

Drainage Basin 2

Drainage basin 2 is located on the southwestern side of the airfield. It includes the southern portion of Runway 3/21, Taxiways E and F, Central Ramp, Portland Fueling Facilities Corporation (PFFC) remote Fuel Island, United Parcel Service (UPS) Buildings and ramp, and deicing pump station F. Stormwater is conveyed through a quiescent pond before discharging to the Broadmore ditch.

Industrial activities include aircraft support services including: fuel storage, aircraft and ground support vehicle fueling, aircraft maintenance, deicing and anti-icing.

Drainage Basin 3

Drainage basin 3 is the smallest basin at PDX and is located on southwestern side of the airfield adjacent to the Columbia Slough. All areas within Basin 3 are leased by Boeing and includes their hangar, employee parking and ramp.

Industrial activities include: vehicle parking, aircraft maintenance, aircraft painting, and materials storage.

Drainage Basin 4

Drainage basin 4 is located on the southwestern side of the airfield, and boarders the Columbia Slough. Basin 4 includes the South Ramp air cargo carriers including Federal Express, UPS-Cartage Services, DHL Express, Burlington Air Express buildings (BAX), and deicing pump station G. Stormwater is conveyed through a quiescent pond before discharging to the Columbia Slough.

Industrial activities include aircraft support services including: aircraft loading/unloading, fueling, deicing and anti-icing, unscheduled aircraft maintenance, equipment parking and maintenance, truck fueling, washing, and parking.

Drainage Basin 5

Drainage basin 5 is located outside of the airfield security fence and is one of the central southern basins. Stormwater is conveyed to an outfall that discharges directly to the Columbia Slough. Multiple cargo facilities operate in this basin as well as the airport's largest mobile fuel provider. Facilities and operations include, the International Air Cargo Center building and ramp, Horizon Air, UPS-Cartage Services, Airborne Express, Burlington Air Express loading docks (BAX), and USPS Annex. There are multiple oil water separators and water quality vaults and one large vegetated swale that provide stormwater treatment.

Industrial activities include: fueling, maintenance, washing, loading docks, parking, and landscape maintenance.

Drainage Basin 6

Drainage basin 6 is the third largest basin at PDX, occupying the southcentral area of the airfield. Basin 6 is divided into four sub-basins, 6G, 6H, 6J and the ORANG's basin. ORANG discharges stormwater into the lower east detention pond just above pump station 6. Sub basin 6G discharges into the Quiescent pond above the location where ORANG discharges into the Port's detention basin. Sub-basin 6G includes the middle portion of Runway 10R/28L and Taxiway J, portions of Taxiways B, C, and J, Terminal Gates B, C, and south D, a portion of Short-term Parking Garage P1, Horizon maintenance building and associated ramp, USAF Reserve buildings and ramp, Ground Run-up Enclosure, the Terminal building, and deicing concentrated storage tanks, dilute detention basin, and deicing pump stations. Sub-basin 6H includes the United Airlines hangar roof and ramp. Sub-basin 6J also includes the United hangar roof and parking lot.

Industrial Activities include aircraft support services including: aircraft maintenance, fueling, washing, deicing and anti-icing, automotive maintenance, ground equipment maintenance, general washing and maintenance, fuel storage, and lavatory truck use.

Drainage Basin 7

Drainage basin 7 has four sub-basins, 7A, 7B, 7C and 7D. Sub-basin 7A is the largest and contains: runway 10L/28R and east portion of Runway 10R/28L, General Aviation Ramp, North, Northeast, and Southeast Ramps, Taxiways A and portions of B and C, Terminal Gates A, E, and north D Gates, Transportation Network Company parking lot, a small portion of the Port Maintenance facility including the Hazardous Materials building, Central Utility Plant, and the SE PDX Cargo, 82nd, Airport Way and Air Cargo Road. Sub-basin 7B is approximately 3.8 acres and contains a portion of the PDX maintenance facility. Sub-basin 7C, is adjacent to Alderwood Road and contains Sky Chefs building and parking lot. Sub-basin 7D contains the employee parking lot for the PDX Maintenance facility.

7A Industrial activities include aircraft support services including: aircraft fueling, maintenance, deicing and anti-icing, deicing and anti-icing fluid storage, air cargo/cabin service, limited vehicle parking, lavatory truck use, Port hazardous materials storage facility, and landscape maintenance activities.

7B Industrial activities include: automotive washing, automotive maintenance, ground vehicle fueling and maintenance.

7C Industrial activities include: food service airline catering facility.

7D Industrials activities include: no industrial activities, employee parking only.

Drainage Basin 8a

Drainage basin 8a contains the Portland International Center, parking Lots, car rental companies, Sheraton Inn, Hampton Inn, Embassy Suites Hotel, United Airlines maintenance facility, Port Central Storage facility, and the Tri-Met Light Rail.

Industrial activities include: ground service equipment maintenance, landscape maintenance and automotive fueling, washing, detailing, and parking.

Drainage Characteristics Site Map

Drainage characteristics for the areas of industrial activity, as required in the general permit, are shown in Figure 2, Site Map, and includes the following attributes unless otherwise noted:

- drainage patterns;
- conveyance and discharge structures, such as piping or ditches;
- all discharge points assigned a unique three-digit identifying number starting with 001, 002 used for electronic reporting;
- outline of the drainage area for each discharge point;
- paved areas and buildings within each drainage area;
- areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials; - These activities
- existing structural control measures for minimizing pollutants in stormwater runoff;
- structural features that reduce flow or minimize impervious areas;
- material handling and access areas;
- hazardous waste treatment, storage and disposal facilities;
- location of wells including waste injection wells, seepage pits, drywells;
- location of springs, wetlands and other surface waterbodies both on-site and adjacent to the site;

- location of groundwater wells;
- location and description of authorized non-stormwater discharges;
- exact location of monitoring points, indicating if any discharge points are “substantially similar” and not being monitored;
- location and description of spill prevention and cleanup materials; and
- locations of the following materials and activities if they are exposed to stormwater and applicable:
  - fueling stations;
  - vehicle and equipment maintenance cleaning areas;
  - loading/unloading areas;
  - locations used for the treatment, storage, or disposal of wastes;
  - liquid storage tanks;
  - processing and storage areas; (Not applicable)
  - immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; (Not applicable)
  - transfer areas for substances in bulk;
  - machinery; and
  - locations and sources of run-on to your site from adjacent property

Figure 2 Site Map

Figure 2 Site Map

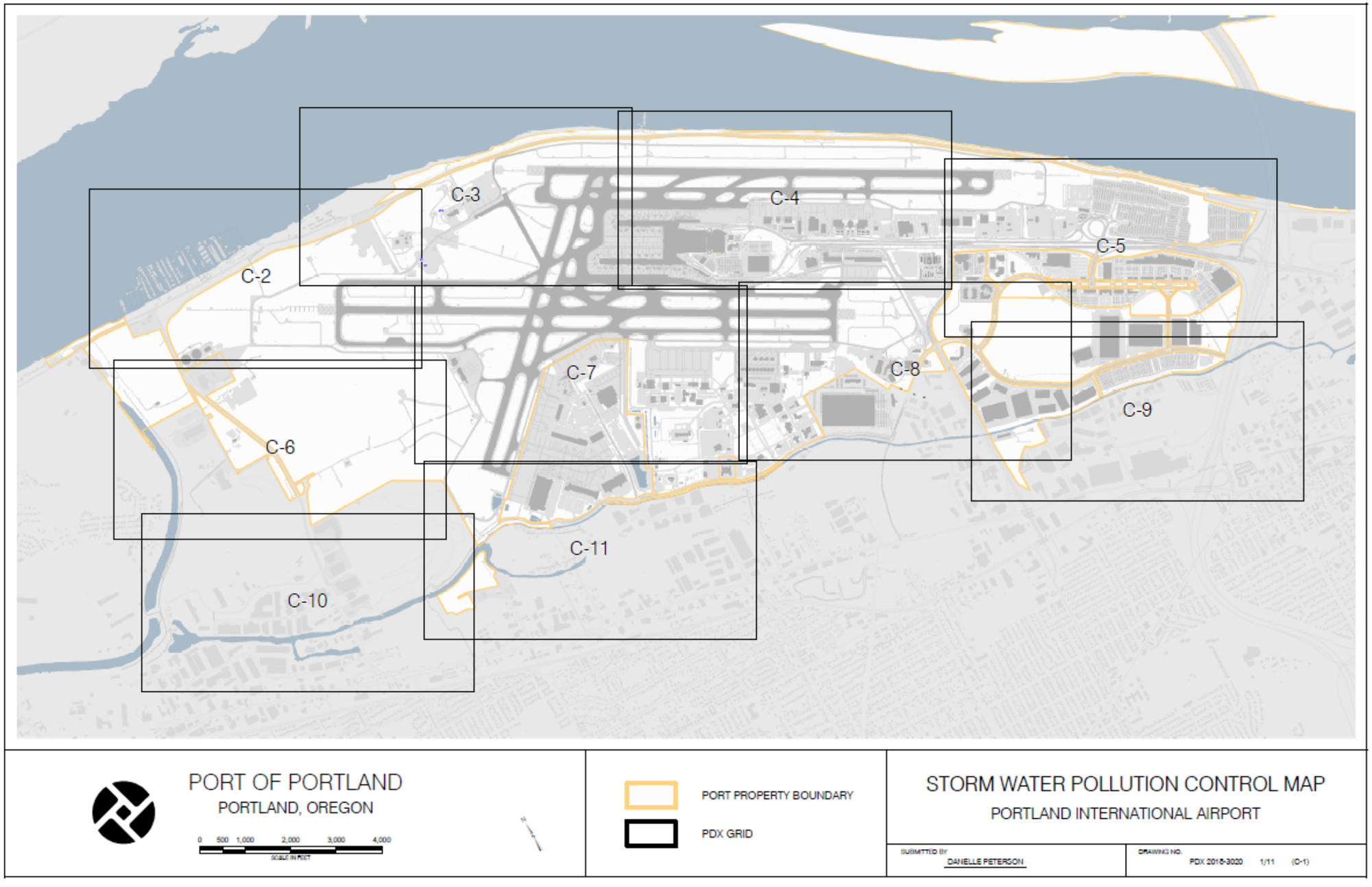


Figure 2 Site Map

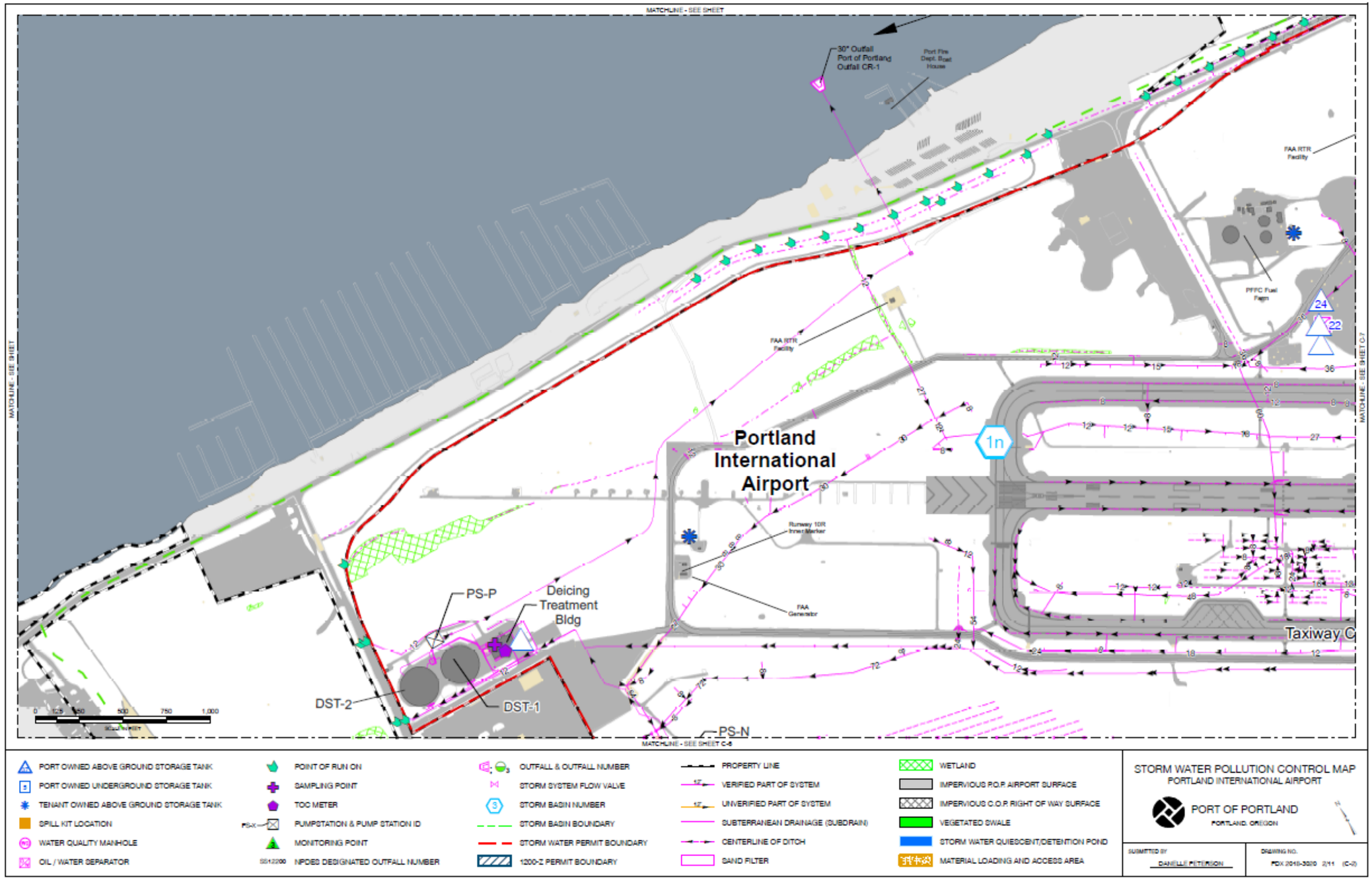


Figure 2 Site Map

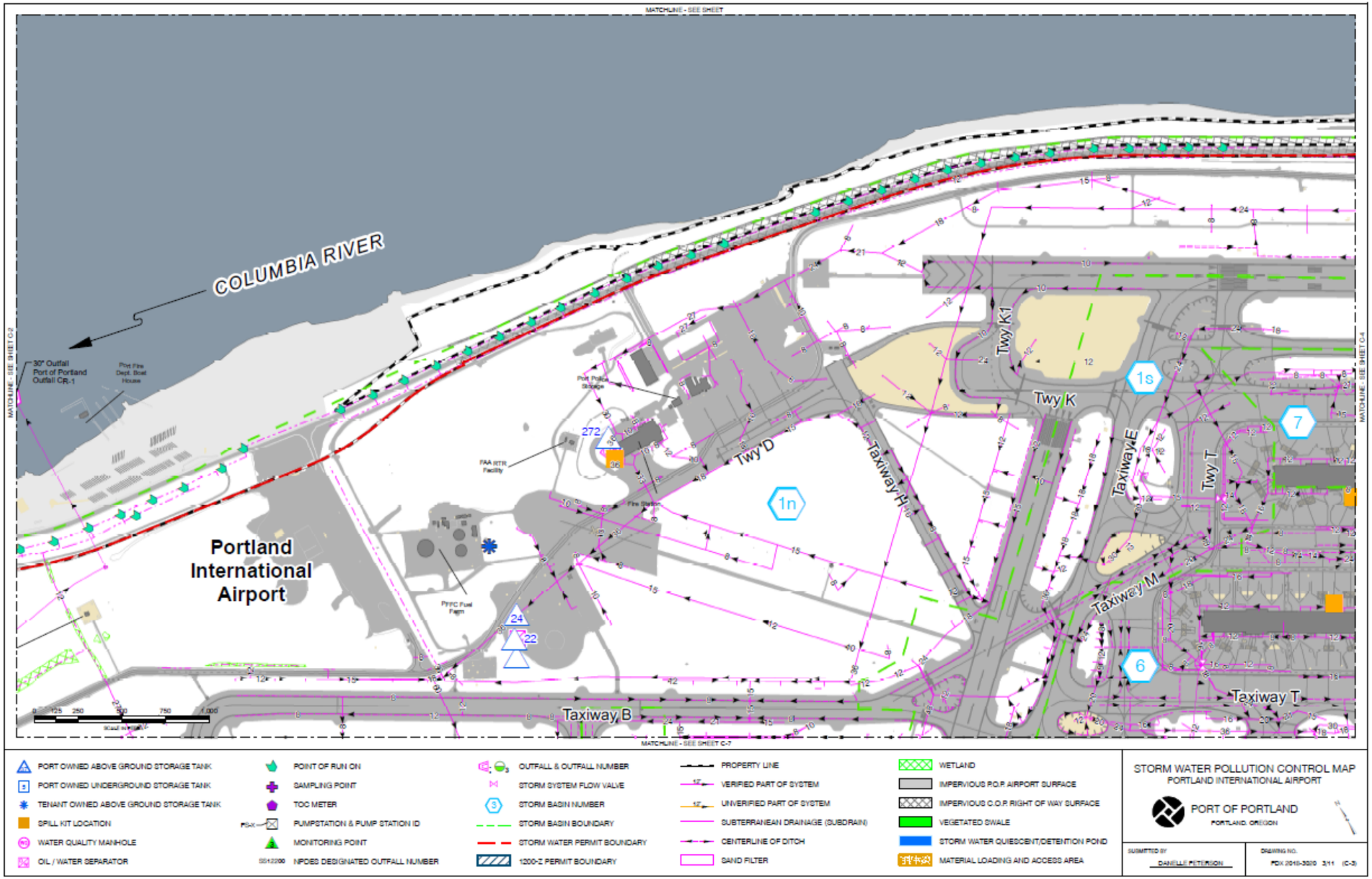
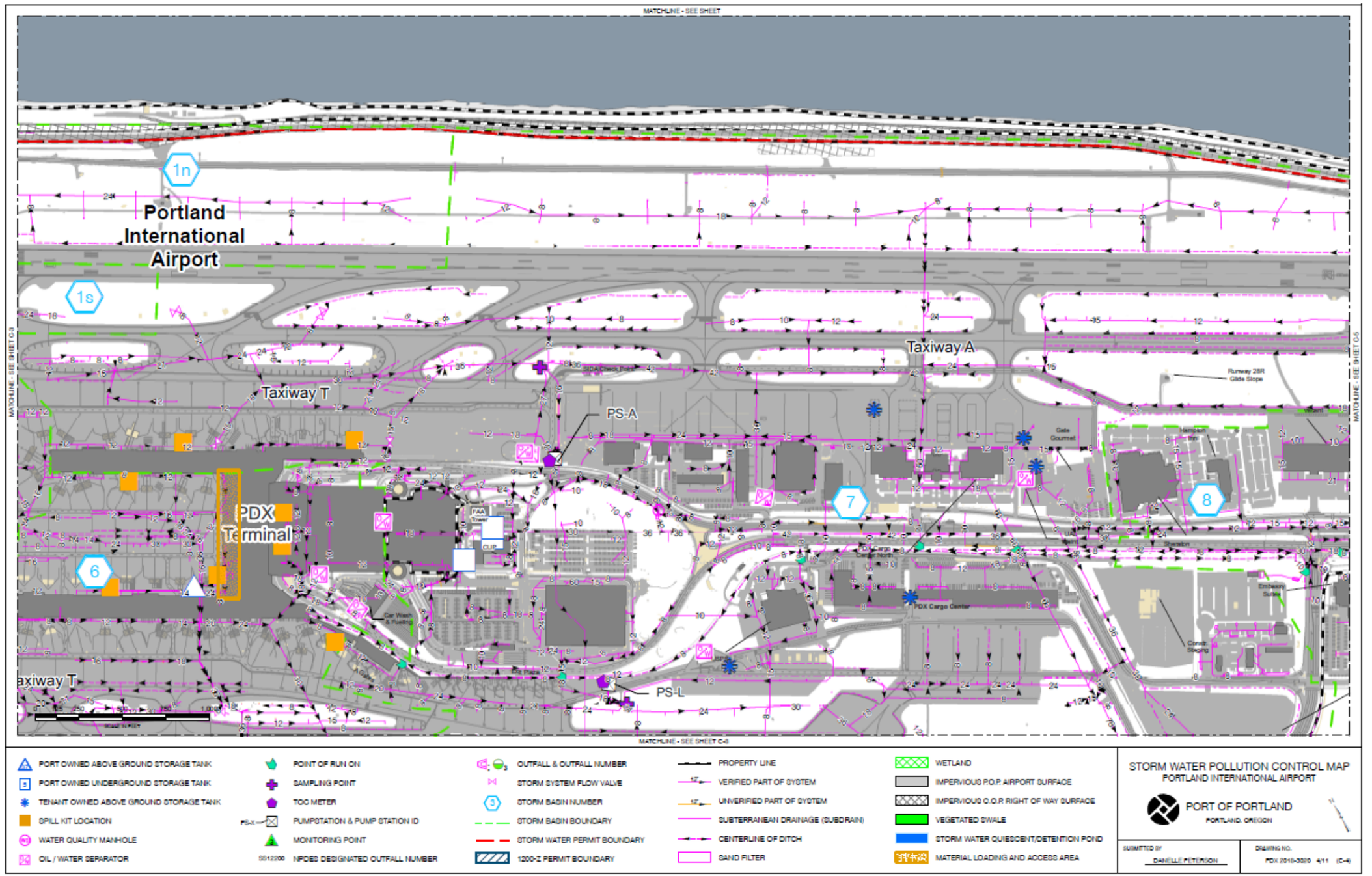


Figure 2 Site Map



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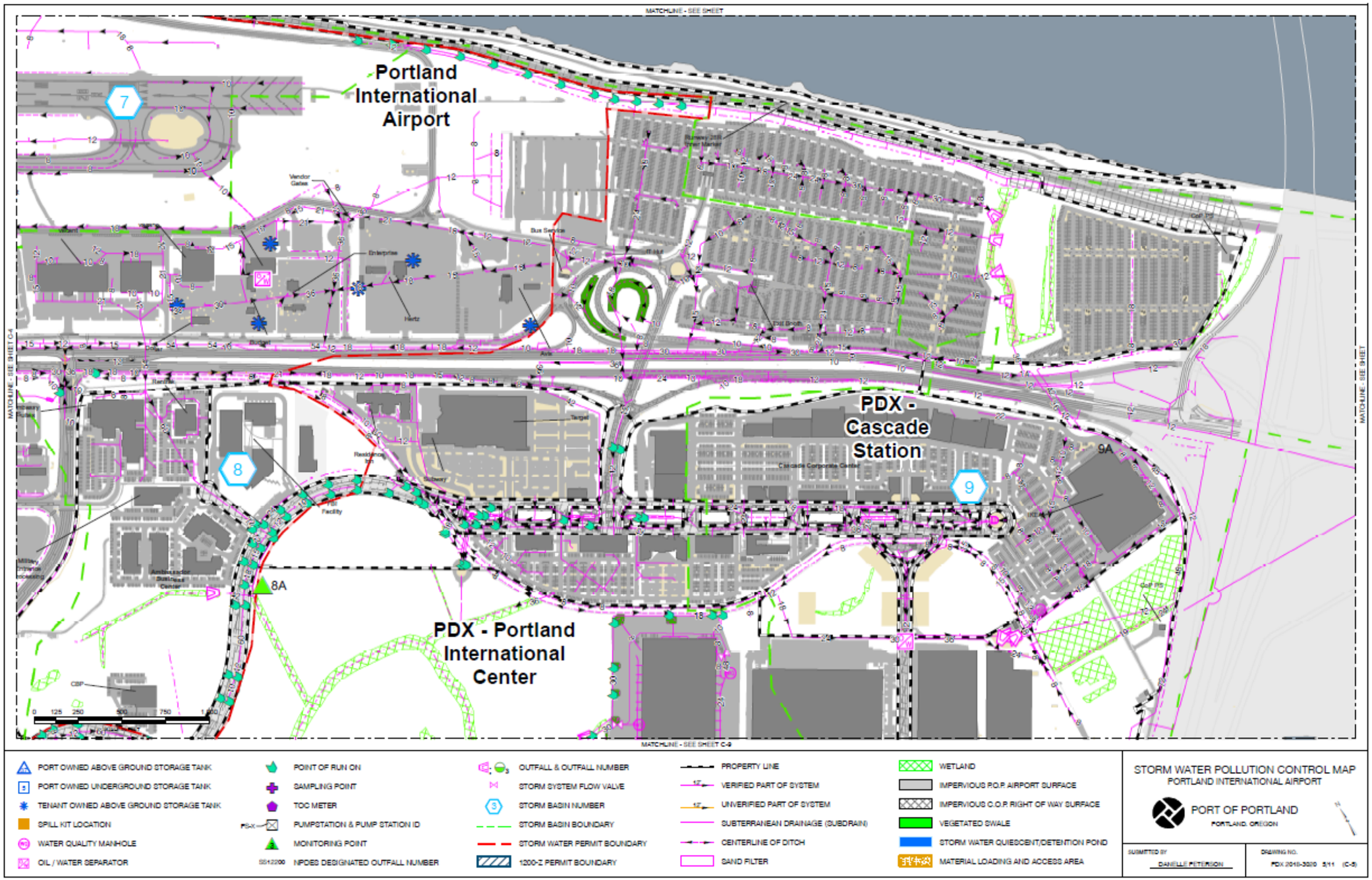

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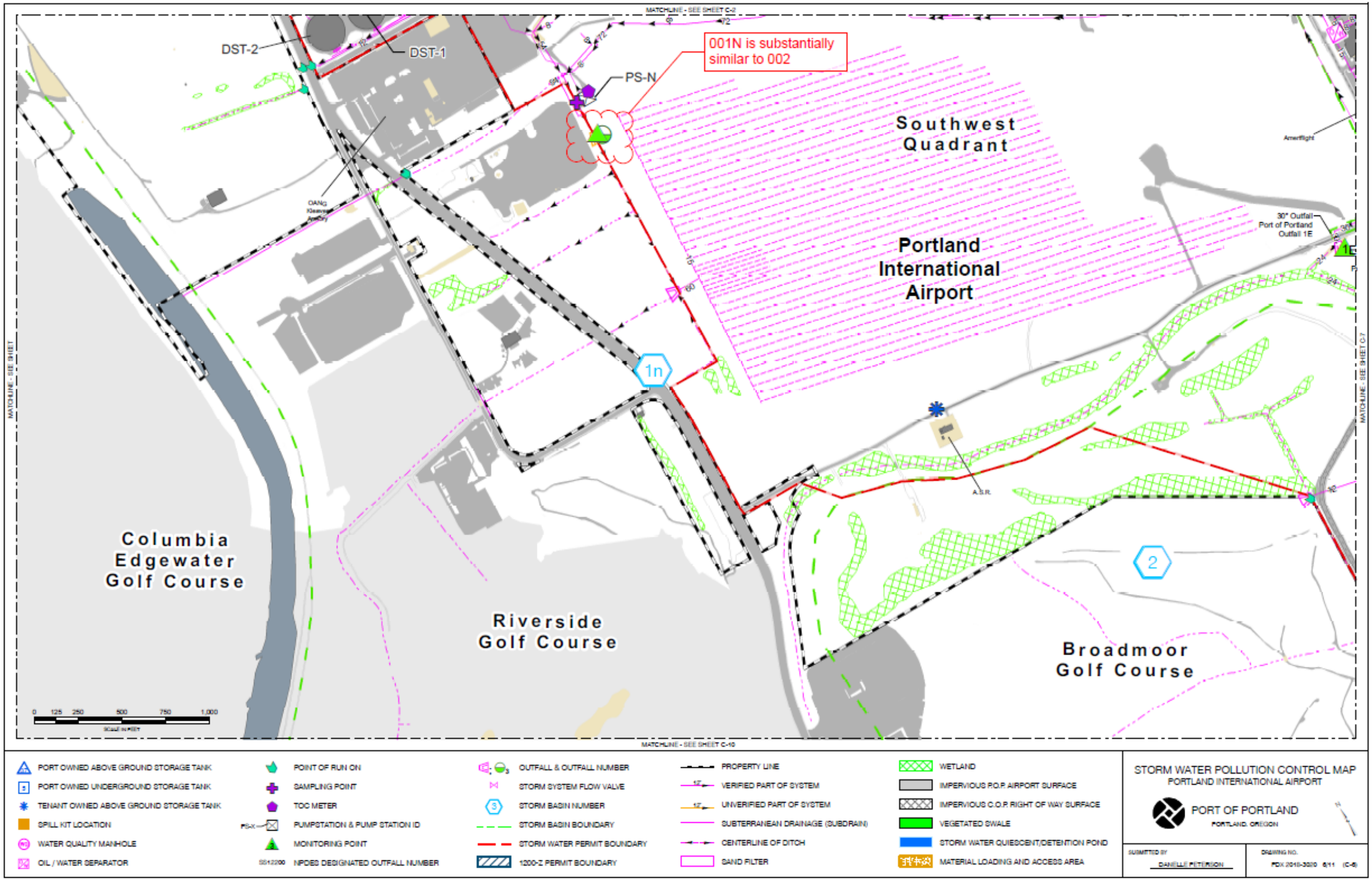

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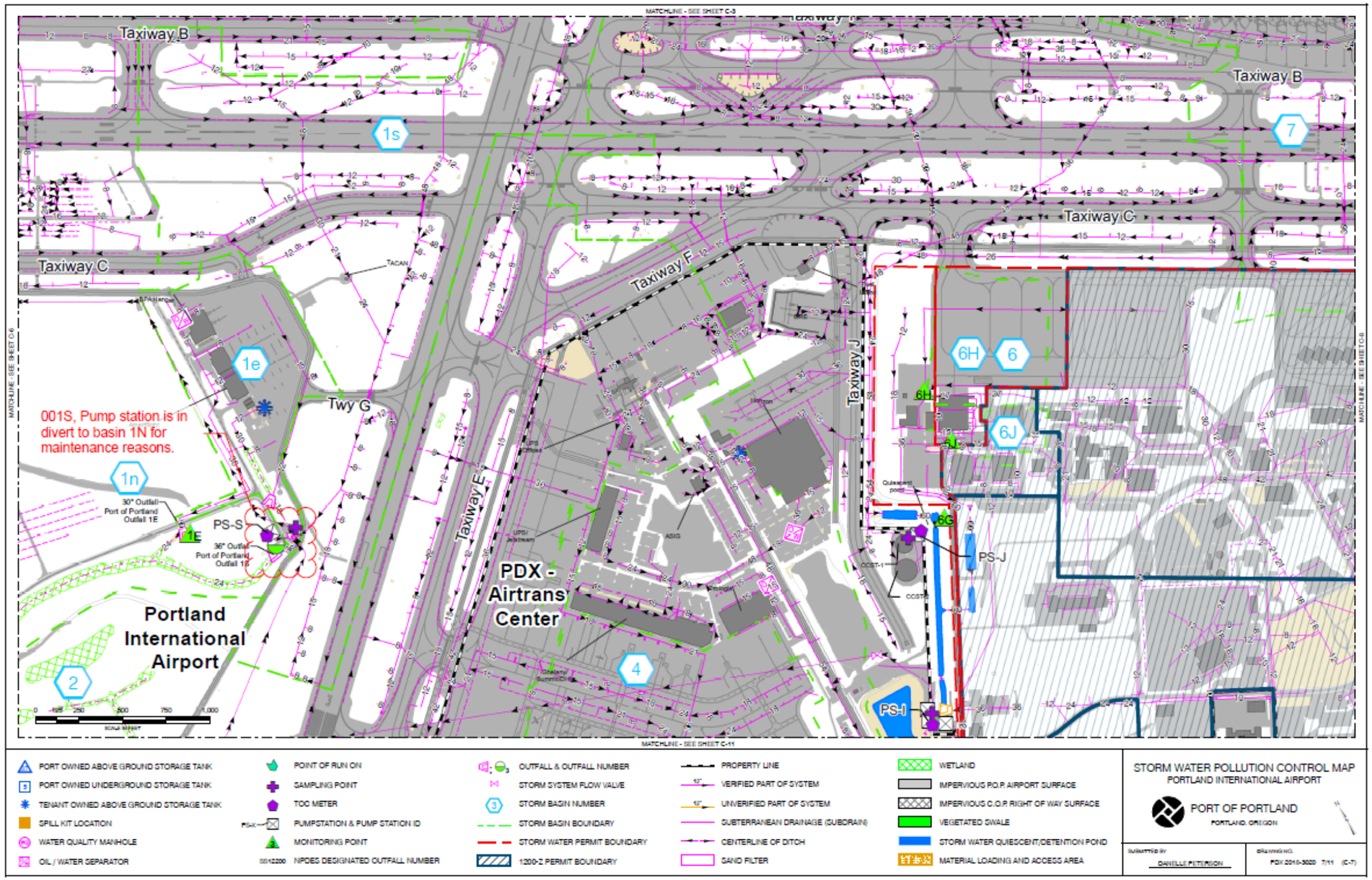

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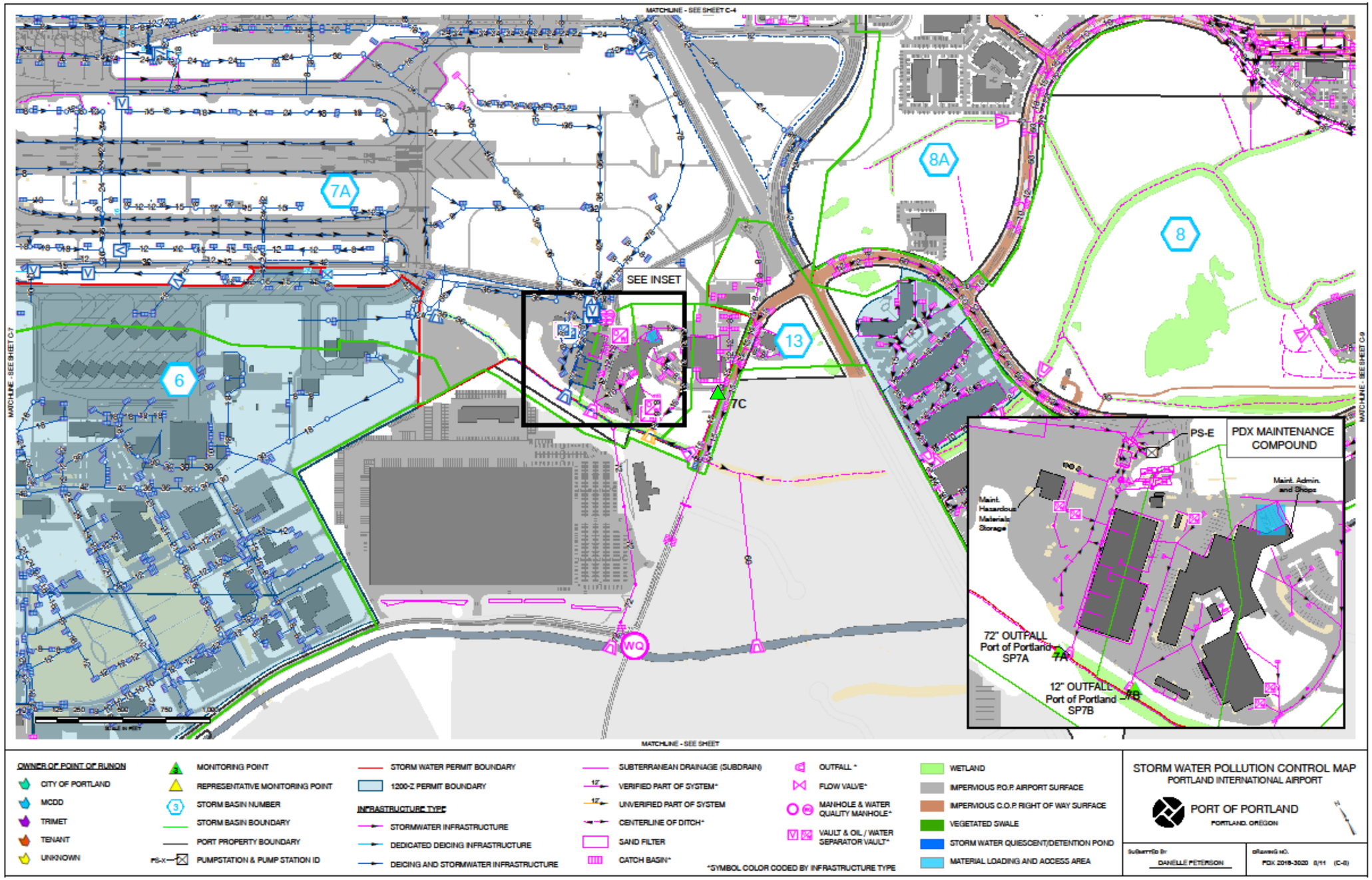

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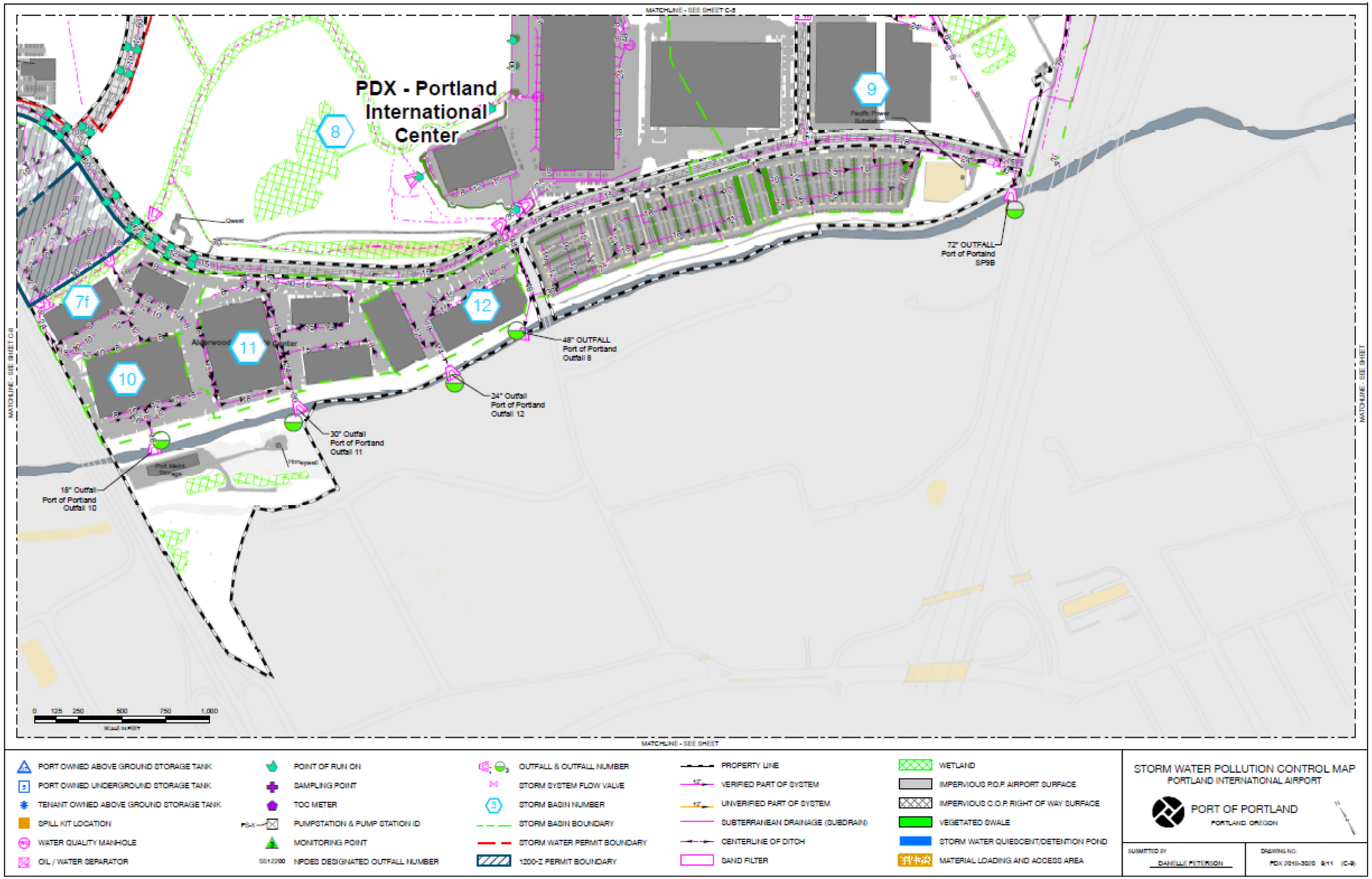

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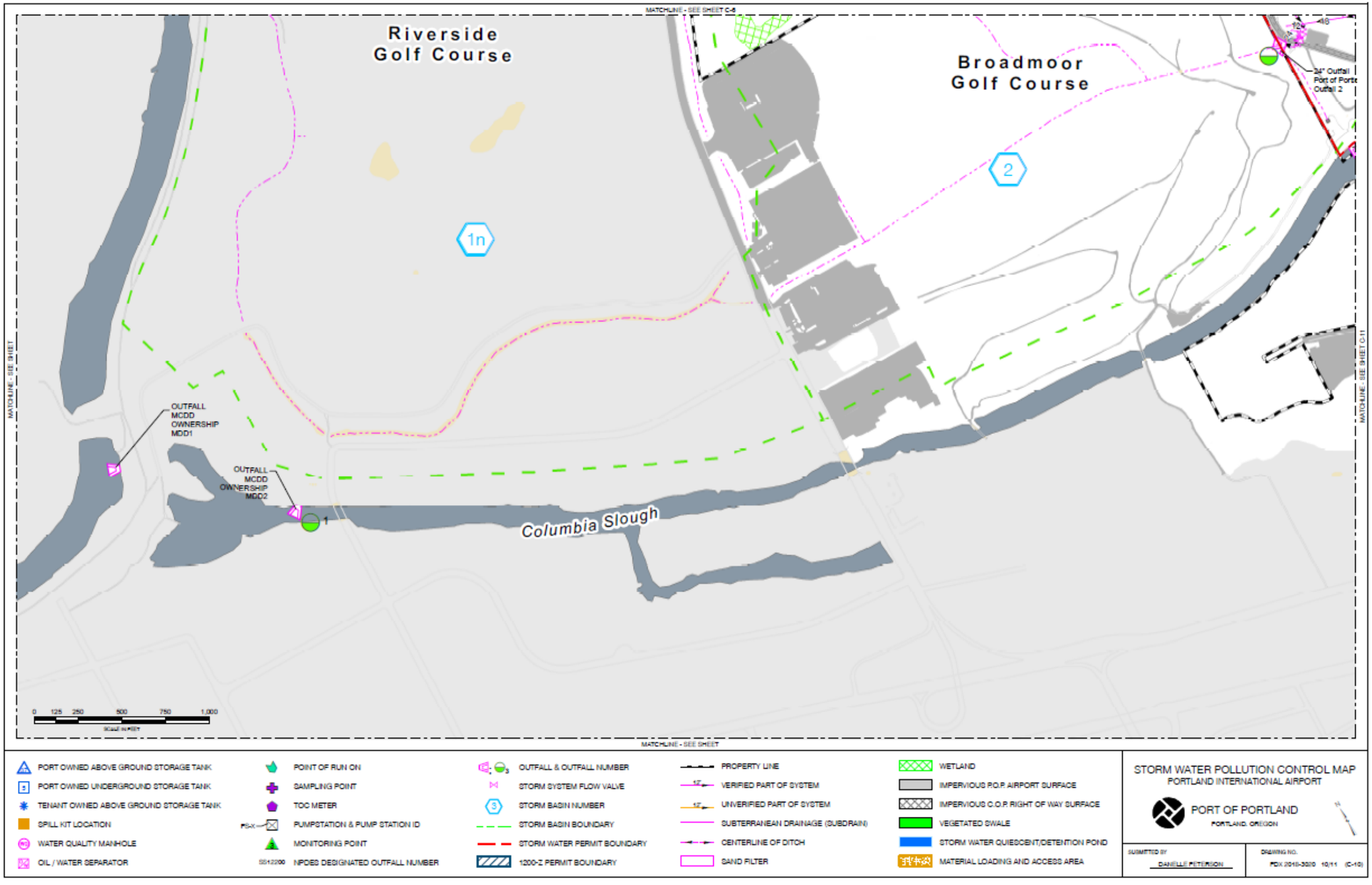


Figure 2 Site Map

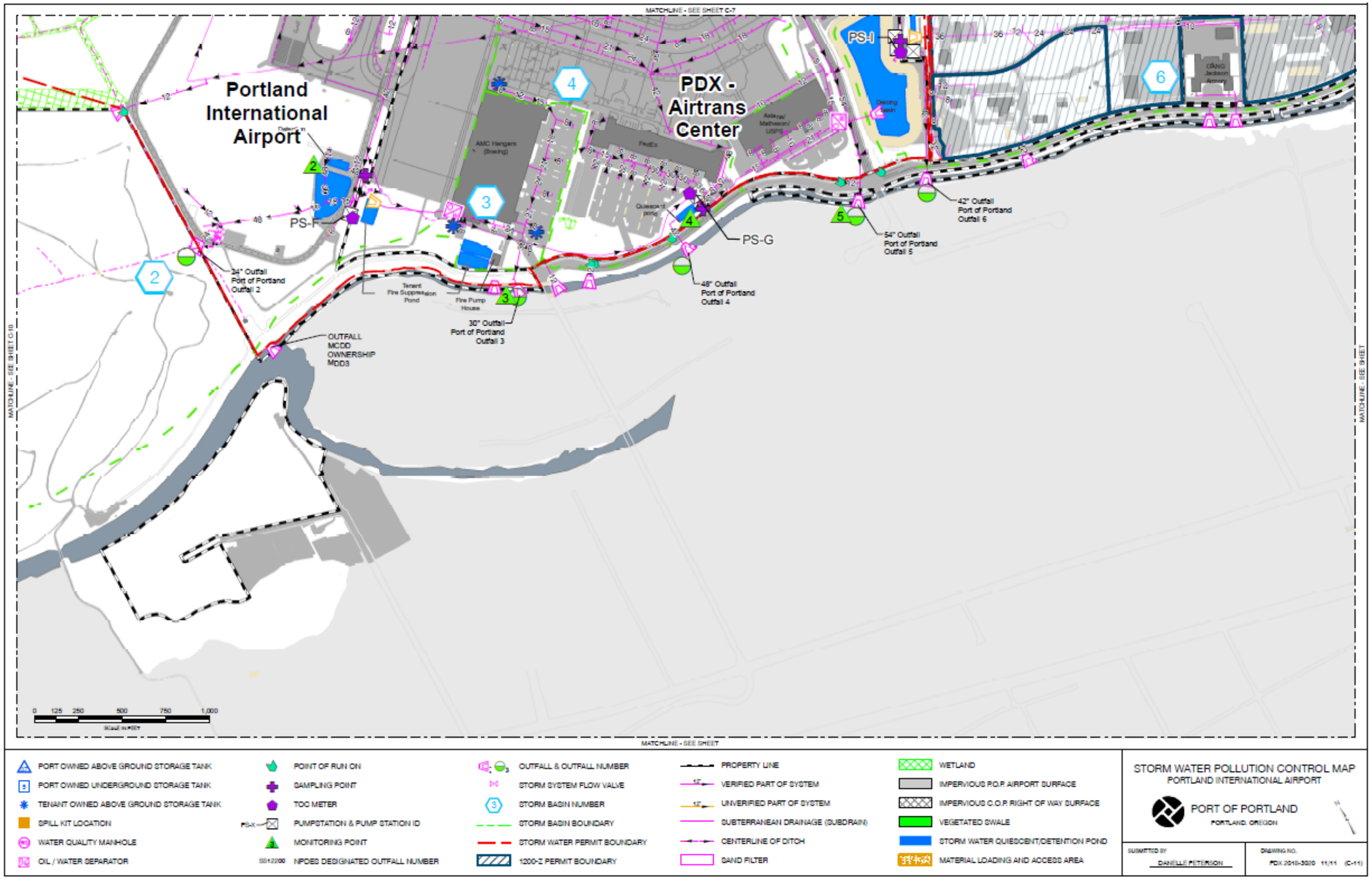
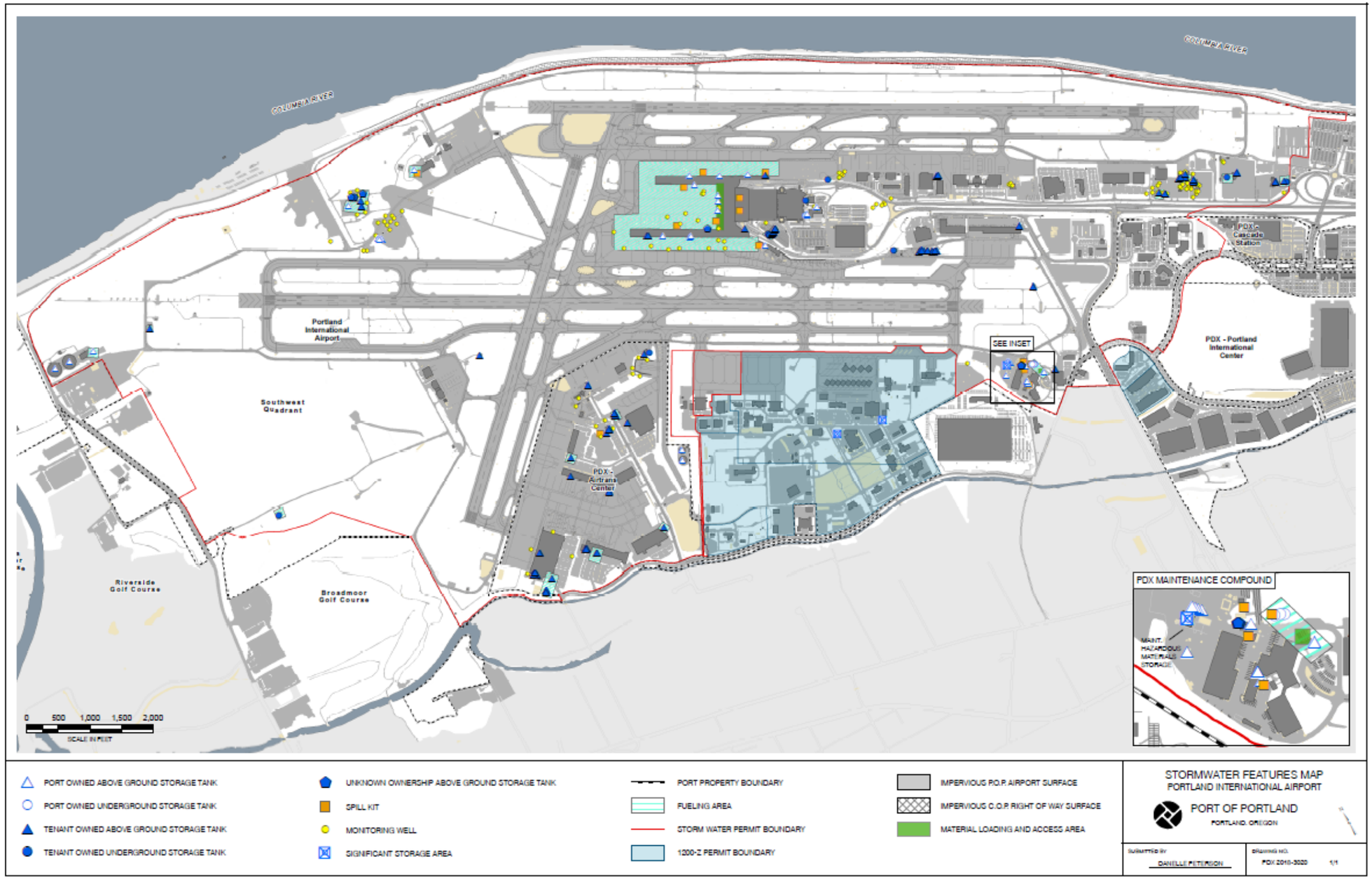


Figure 3 Site Map – Non-Drainage Features

Figure 3 Site Map - Non-Drainage Features



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2.6 Significant Materials

Significant materials are handled and stored at PDX in a manner that minimizes exposure to stormwater. Most of the maintenance and shop activities occur within roofed buildings. Activities that could contribute pollutants to runoff that occur in impervious areas include, equipment maintenance, material storage and fueling. Section 2.7 describes these areas and activities, and Table 2-2 summarizes industrial activities, their location and potential pollutants.

Federal regulations (40 CFR Part 112) require facilities with oil-containing Aboveground Storage Tanks (AST) greater than 55 gallons totaling or exceeding 1,320 gallons, or total Underground Storage Tanks (UST) with capacity exceeding 42,000 gallons, must prepare a Spill Prevention Control and Countermeasure Plan (SPCC). The Port maintains an SPCC plan for PDX. The spill response section of the SPCC plan is attached as Appendix F. The SPCC Plan and Spill Response Plan are also available on the Port's public website https://popcdn.azureedge.net/pdfs/StrmWtr-PDX-Spill-Prevention-Control-Countermeasures-Plan.pdf

Multiple above ground storage tanks, mobile storage tanks and portable containers containing petroleum products are stored in designated areas. Locations of storage areas are also shown in Figure 2. The PDX SPCC Plan provides an inventory of tanks and containers.

2.6.1 Known or Discovered Significant Materials from Previous Operations

There are multiple historical sites within the PDX permit boundary that have received a No Further Action under the Environmental Cleanup program. Currently, there is one open site under consent order, LQSR-NWR-12-06. This project is commonly called the McBride Slough Cleanup Project. The Port is complying with the Order, and cleanup is underway. Stormwater pathways are being addressed through the June 2018 Geosyntec Source Control Measures and Performance Monitoring Work Plan.

Table 2-2 Significant Materials and Potential Source Descriptions

Industrial Activity	Associated Pollutants	Basin
Vehicle and Equipment Fueling	Petroleum products, and metals	1, 2, 3, 4,5,6,7,8
Aircraft, Equipment, Vehicle and Building Maintenance	Petroleum products, paints, antifreeze, hydraulic fluids, and solvents, metals	1, 2, 3, 4,5,6,7,8
Material Storage and Handling	Petroleum products, hydraulic fluids, paint, antifreeze and AFFF, metals	1, 2, 3, 4,5,6,7,8
Food Services	Petroleum products, deicing and anti-icing materials, hydraulic fluids, solvents, metals	6 & 7
Garbage and Recycling Storage	drainage off food compactors, drainage from scrap metal recycling bins, metals, trash, food wastes, metals	1, 2, 3, 4,5,6,7,8
Fire Station Operations and Training	Petroleum products and hydraulic fluids, metals	1
Aircraft, Vehicle, and Equipment Washing	Petroleum products, fertilizers, antifreeze, hydraulic fluids, metals	1, 2, 3, 4 ,6,7
Rental Car Fueling, Maintenance, and Washing	Petroleum products, paints, antifreeze, hydraulic fluids, metals	7A & 8
Aircraft and Ground Service Equipment Painting	paints, solvents	3

2.7 Industrial Activities Conducted On-Site

The Port and Co-permittee regulated activities at PDX have been divided into the following 10 categories:

1. Fueling (Co-permittee)
2. Aircraft, Equipment, Vehicle and Building Maintenance (Co-permittee)
3. Airport Maintenance and Operations (Port)
4. Material Storage and Handling (Port and Co-permittee)
5. Food Services (Co-permittee)
6. Garbage and Recycling Storage (Port and Co-permittee)
7. Fire Station Operations and Training (Port)
8. Aircraft, Vehicle, and Equipment Washing (Port and Co-permittee)
9. Rental Car Fueling, Maintenance, and Washing (Co-permittee)
10. Aircraft and Ground Service Equipment Painting (Co-permittee)

The 10 categories of activities or practices that occur at PDX and the type of potential pollutants generated are discussed below. Deicing operations are managed under the applicable sections in the NPDES discharge permit number 101647.

2.7.1 Fueling (Co-permittee)

Jet-A fuel is pumped to the PDX fuel farm via an underground pipeline, owned and operated by Kinder Morgan, from the Willbridge Terminal located in North Portland. PDX's fueling distribution system, including the fuel farm, is owned by Portland Fueling Facilities Corporation (PFFC) and operated by Menzies Aviation (Menzies). Menzies conducts fueling operations for all carriers at PDX with the few exceptions noted below.

The fuel farm is located at the northwest corner of the airport and consists of three aboveground storage tanks (ASTs) and one waste fuel/water tank, with a total capacity of 3,370,500 gallons of jet fuel. Two tanks have a capacity of approximately 840,000 gallons each; the third tank has a capacity of about 1,680,000 gallons. The waste fuel/water tank has a 10,000-gallon capacity. There is also a 500-diesel tank for the emergency generator at the site. Generally, at any given time, one tank receives fuel, one is full but idle, and the other is used to provide fuel to the distribution system.

Underground pipelines are used to distribute fuel to the terminal gates. All airport gates at Concourses B, C, D, and E, except the A Gates and Gate E6, have a fuel hydrant system installed on-site. Menzies performs fueling and metering operations between the hydrant system and the aircraft. Aircraft at Concourse A Gates and Gate E6 are fueled by Menzies mobile fuel trucks.

Menzies also conducts fueling operations using mobile fuel trucks for multiple tenants throughout the airport.

There are two jet fuel islands owned by PFFC and operated by Menzies at PDX. One fuel island is located adjacent to the Ground Run-up Enclosure, west of Taxiway J. The second fuel island is located on the east end of Concourse E and drains to an oil-water separator with an emergency shut off valve. The fuel islands provide jet fuel to mobile fuel trucks.

PFFC also owns two remote gasoline stations for fueling Ground Service Equipment (GSE), one on the north side and one on the south side of the airport. The north GSE fuel station is located at the east end of the E concourse and the south GSE fuel station is located to the west of the United States Post Office. The concrete drive pads adjacent to both gasoline dispensers drain to an oil-water separator.

Several tenants have separate aboveground storage tanks (ASTs) or underground storage tanks (USTs) to store fuel such as aviation gasoline or diesel. These fuel storage tanks are supplied by truck deliveries and dispensed by mobile fuel trucks.

Each Co-permittee is responsible for determining whether their operations trigger Spill Prevention Control and Countermeasure (SPCC) Plan requirements. The development and implementation of an SPCC Plan, if required, is also the responsibility of the Co-permittee. However, every Co-permittee is responsible for the development and implementation of a spill response plan specific to their operations as required by the 1200-Z permit.

Potential pollutants from fueling include diesel, gasoline, jet fuel, and metals.

2.7.2 Aircraft, Equipment, Vehicle, and Building Maintenance (Co-permittee)

Routine aircraft maintenance is generally performed outdoors on the ramps. However, a few tenants have their own aircraft maintenance facilities located at PDX; these tenants include Atlantic, Horizon, Bonneville Power Administration (BPA) and Ameriflight. In addition, materials and equipment may be stored inside or outside undercover. These materials include, but are not limited to, drums, tanks (containing hydraulic fluid, and fuel), and electrical transformers.

Building maintenance includes floor sweeping and washing activities.

The sanitary wastes from aircraft holding tanks are disposed of into the sanitary sewer system in specially designated locations. However, there is the potential for contamination from spills that occur while handling sanitary wastes during aircraft off-loading and transport.

Ground Service Equipment (GSE) maintenance is performed by a number of Co-permittees. GSE may include vehicles, bag carts, tugs, belt loaders, or other equipment used in aircraft operations. Maintenance occurs both outdoors and indoors. The following Co-permittees have their own equipment maintenance facilities: United, Horizon, SkyWest, BPA, Aircraft Terminal Services and American Airlines. Other Co-permittees may contract with one of these companies or hire an outside company to conduct equipment maintenance either on-site or off-site.

Potential pollutants from aircraft, vehicle, equipment and building maintenance include fuel, new and used oil, antifreeze, solvents, hydraulic fluid, brake fluid, paints, metals, degreasers and solid wastes. Potential contaminants from sanitary waste spills include bacteria, ammonia, phosphorus, biochemical oxygen demand (BOD) and nitrogen.

2.7.3 Airport Maintenance and Operations (Port)

PDX Maintenance (MX) staff is responsible for maintaining the airport infrastructure. Maintenance activities include painting, significant materials storage, materials handling, hazardous waste storage and handling, and fueling and fuel transfers.

PDX currently operates three maintenance facilities at PDX: The Maintenance Compound, the Maintenance Annex, and the Central Utility Plant (CUP). PDX MX is also responsible for maintaining emergency generators for the terminal and deicing plant. The following narrative provides descriptions of the industrial activities conducted at these sites.

PDX deicing staff operates the Deicing Treatment Plant. All chemicals associated with the treatment process are stored inside the treatment plant with secondary containment.

Vehicle fueling: there is one vehicle fueling area for facility vehicles and equipment. The fuel island is located northwest of Building Number 7111 and is partially covered. The fuel island is drained by strip drains on the north and east sides which direct flow to an oil-water separator then to the stormwater system. The oil-water separator has an emergency shut off valve so that if a large fuel spill were to occur, it would be contained within the separator.

Storage Tanks:

- Fuel Island - One 6,000-gallon unleaded gasoline UST, one 6,000-gallon diesel UST and one10,000 -gallon diesel UST. All USTs are equipped with spill protection, leak detection, corrosion protection, overfill alarm and shutoff system.

- Vehicle Maintenance Building - A double-walled 500-gallon aboveground used oil storage tank is located outside on the southeast side of the vehicle maintenance building. Used oil, brake, and hydraulic fluid from the vehicles are collected and poured into a drain, inside the building, leading to the used oil tank. The used oil is recycled. A 500-gallon motor oil AST is located inside the vehicle maintenance building.

- Maintenance Compound Emergency Generator - A 500-gallon double-walled AST containing diesel for the emergency generator is located to the east of the loading dock area of Building 7111.

- Central Utility Plant (CUP) - Two 30,000-gallon USTs containing fuel oil are located on the north side of the CUP. The fuel oil tanks are used only in emergencies when the natural gas lines are out of service or during times of low visibility on the airfield. The USTs feed small ASTs within the building (known as Day Tanks) associated with the generators. UST refueling occurs outside and this is the only activity with the potential to impact stormwater. The Port performs line tests and tests of the cathodic protection system, where applicable, for these USTs annually.

- Deicing Treatment Plant - An emergency generator located on the east side of the treatment plant includes an internal 980-gallon diesel storage tank.

- Concourse C - A 500-gallon diesel emergency generator located at gate C-4.

Process and waste water: vehicles and equipment are washed at the PDX maintenance facility in either the vehicle and equipment wash bay, or the re-circulating wash rack. Both designated wash areas are covered and drain through oil-water separators to the sanitary system. Pressure washing of engines is also conducted in the wash bay. Other waste waters, such as latex paint rinse water and asphalt tack rinse water are discharged to the sanitary system via the wash bay.

Solids containment area: sweeper and vactor trucks unload solid waste material into a designated solids containment area, located in the southwest corner of the PDX Maintenance Facility. Residual liquids in the solids are allowed to drain to the sanitary system. The solids are profiled and permitted for disposal at a licensed landfill.

Landscape maintenance pesticide mixing is conducted under cover on concrete at the PDX maintenance facility breezeway and inside the Economy Lot pump house. Spill response equipment is kept on the landscape maintenance vehicles.

Potential pollutants generated from airport maintenance activities at PDX include fuel, oil, paint, detergents, solid wastes, bacteria, metals and sediment.

2.7.4 Material Storage and Handling (Port and Co-permittee)

There are several locations throughout the airport where fuel, oil, and wastes are stored in ASTs or USTs. The largest ASTs at PDX are used for storing aviation fuel and are owned by PFFC. The Port owns a number of ASTs, some of which are located outside. The remaining ASTs shown on Figure 2 are tenant-owned. Port-owned ASTs that are located indoors with containment are not shown on the figure. The ASTs contain a variety of compounds, including oil, propane, fuel, transmission fluid, hydraulic fluid, and firefighting foam. A list of ASTs, including location, content, and size of each AST, is included in the SPCC plan.

There are also Port- and tenant-owned active USTs located at PDX. Because the USTs are below ground, they do not represent a significant source of potential stormwater pollutants. However, overfilling and spilling when the USTs are refilled can lead to stormwater contamination.

Potential pollutants from these activities include fuel, oil and grease, and firefighting foam.

2.7.5 Food Services (Co-permittee)

There is one in-flight catering company, Sky Chefs, located at PDX that serves the airlines. Several airlines, such as Horizon, provide their own food. Sky Chefs has a food preparation facility located at PDX.

Food wastes are contained in carts or sealed plastic bags during aircraft off-loading. The food wastes are then transported to food services companies by trucks and stored in compactors before they are picked up and disposed off-site by licensed contractors.

Potential pollutants related to food processing activities include fuel, oil and grease, nutrients, bacteria, BOD, and pH.

2.7.6 Garbage and Recycling Storage (Port and Co-permittee)

The Port is responsible for garbage storage and disposal at the terminal building, Central Utility Plant, the PDX Maintenance Facility, some tenant facilities, PDX Cargo Center, and the parking and transportation networking company holding areas. The storage containers are all fully enclosed, covered, or stored undercover where feasible. Tenants not serviced by the Port are responsible for their own waste storage and disposal.

Tenants and Port staff are discouraged from placing ice in garbage and recycling containers. The preferred method is to let the ice melt in a sink, on grass, or directly over a sanitary drain to minimize any pollutants that may be picked up by the ice melt.

There is potential pollutant exposure to stormwater from uncovered garbage. Garbage can contain materials which could contribute to stormwater pollution, such as oil and grease, nutrients, BOD, heavy metals, bacteria, and other significant materials disposed of improperly in garbage receptacles.

2.7.7 Fire Station Operations and Training (Port)

The PDX fire station is located in the northwest corner of the airport. A 2,000-gallon diesel double-walled AST is located next to the fire station. Stormwater from the vicinity of the tank flows through an oil-water separator prior to discharge to the storm system. All other significant materials are stored inside the garage and work area and are not exposed to precipitation. Washing of equipment and vehicles is conducted inside the garage where the water drains through an oil-water separator to the sanitary system.

In addition to the fire station, a live Fire Training Facility (FTF) is located near the northwest corner of the airport. The FTF is a closed loop system consisting of a live fire burn area, two 2,000-gallon ASTs containing a mix of 60 percent jet fuel and 40 percent gasoline, one 400-gallon AST that also contains the 60/40 mixture as well as water, an oil-water separator, and two 20,000-gallon ASTs containing water. The ASTs containing fuel are surrounded by a concrete secondary containment structure. A sump inside the containment structure drains any spilled fuel into the adjacent oil-water separator. The water is then pumped into the two 20,000-gallon tanks for storage and reused in the live burn area. The area surrounding the fire training pit and containment structures is pervious and does not drain to the storm system.

The burn area is a lined, gravel-filled depression approximately 100-feet in diameter that contains several fuel sprinklers, and a drain box. Fuel for the burn pit is provided by two ASTs (used for jet fuel fire practice). A second, propane fired system is also present and is used more frequently than the jet fuel system. When training exercises occur, the burn pit is first partially filled with water. Fuel from the ASTs or propane system is pumped to the burn pit and ignited. When the exercise is complete, the fuel supply is cut off and the water in the burn pit is drained into the adjacent oil-water separator. Residual fuel from the oil-water separator is collected in a 400-gallon AST and re-burned in the pit. Water collected in the oil-water separator is pumped to one of the two 20,000-gallon ASTs and stored for reuse in the next exercise.

Other activities that may result in potential pollutants to the storm system include the infrequent discharge of firefighting foam. The firefighters are required to test the composition of the firefighting foam discharged by the fire vehicle turrets on an annual basis. When this occurs, a limited amount of the three percent foam mixture is sprayed onto a grassy area that does not discharge to storm.

2.7.8 Aircraft, Vehicle and Equipment Washing (Co-permittee)

Alaska Airlines utilizes a collection system to collect aircraft wash water. Horizon Air and Atlantic both have aircraft wash pads which drain to the sanitary system utilizing a valve to divert flow from the storm system. United Airlines and the car rental facilities have individual vehicle and equipment wash pads or wash racks which drain to the sanitary system. Other tenants utilize a collection method to wash equipment, vehicles or aircraft. The ORANG maintains a DEQ issued1700-A wash water permit.

2.7.9 Rental Car Fueling, Maintenance and Washing (Co-permittee)

Rental car operators (Enterprise, Hertz and Avis/Budget), are located on-site to serve PDX. The Quick Turn Around (QTA) area is located on south of the Port's employee parking lot, adjacent to the outbound Airport Way. The majority of refueling and car washing is conducted at the QTA. The fueling area is covered and the washing facilities drain to the sanitary system. Rental car maintenance, detailing, and some washing in wash racks are conducted at each operator's individual facility located on NE Airport Way. Each of the rental car operators also has an AST at their individual facilities. The maintenance activities are performed indoors or undercover

Potential pollutants include petroleum products, detergent, antifreeze, metals, and solid waste.

2.7.10 Aircraft and Ground Service Equipment Painting (Co-permittee)

Aircraft painting is performed at the AMC Maintenance Hangar (4635 NE Cornfoot Road) by Boeing. The work is performed inside the hangar and waste materials are collected, stored in aboveground tanks inside the hangar, and shipped off-site for disposal or disposed of into the sanitary sewer under permit.

Several Co-permittees (Horizon and United) perform aircraft parts and GSE painting at PDX. This activity is required by the Port to be performed indoors, and associated waste materials are collected and disposed of properly. The waste containers for this activity are stored inside or outside undercover.

2.8 Stormwater Monitoring Points

DEQ requires the monitoring points to be located such that samples and measurements are taken prior to the effluent joining other water bodies or waste streams. Samples must be taken at a monitoring point before the stormwater joins or is diluted by stormwater from a different drainage area of the facility or areas outside the facility. Co-permittees are not required to conduct monthly visual monitoring or collect stormwater samples at designated locations.

The Port samples all major drainage basins (see Figure 2) according to the criteria specified in the 1200-Z permit. The stormwater runoff from PDX industrial activities is represented by the analysis of samples collected from 12 designated monitoring points, Table 2-3. Samples are not collected from outfall 007D because this area does not drain industrial activities covered by the 1200-Z permit.

All monitoring points are visually monitored once each month for flow, water clarity, water color, odor, foam, floating solids, and oil and grease sheen. Grab or composite sampling of the eight basins are conducted at 12 designated monitoring points (see Figure 2 and Table 5) four times per permit reporting year (July 1 – June 30) within 12 hours of stormwater discharge. Two samples are collected prior to December 31, and two samples are collected after December 31.

All sample events are required to be at least 14 days apart. Both sets of samples are analyzed for the constituents listed in Permit No. 101647, Attachment B.

The stormwater monitoring period is July 1 through June 30. The Port submits the stormwater monitoring results to the DEQ's Northwest Regional Office quarterly on November 15, February 15, May 15 and August 15. All the sampling data and annual reports are retained by the Port for a minimum of 5 years.

Table 2-3 Monitoring Points

Basin or Sub-basin	Monitoring Point? Yes/No	Monitoring Point ID	Comments
1E	Yes	001E	BPA
1S	No	001S	Visual monitoring only. Industrial activities and BMP do not differ from other basins. Runways and taxiway are the primary impervious surface
1N	No	001M	Visual monitoring only. Industrial activities and BMP are substantially similar to Basin 2 (Monitoring Point 002). Runways and taxiway are the primary impervious surface. The Monitoring Point was moved in May 2022 upstream in the system to a manhole upstream of pump station N to avoid sampling off-site run on. The new visual Monitoring Point named is 001M and samples representative of this discharge are collected from Monitoring Point 002.
2	Yes	002	Airfield. Substantially similar effluent to Basin 1N.
3	Yes	003	Boeing
4	Yes	004	Airfield cargo ramps
5	Yes	005	No airfield activity. Cargo handling and fueling
6G	Yes	006G	Located at the outlet of the basin 6 quiescent pond, upstream of the OANG discharge point.
6H	Yes	006H	Sample location upstream of the OANG NPDES permitted storm system captures ramp area of building 7759.
6J	Yes	006J	Upstream of the OANG NPDES permitted storm system captures the loading dock and parking areas of building 7759.
7A	Yes	007A	Airfield and terminal
7B	Yes	007B	PDX Maintenance facility
7C	Yes	007C	Sky Chefs. The monitoring point was moved in April 2022 to a manhole upstream of the previous monitoring point to avoid sampling of off-site run on from a catch basin in Alderwood Road.
7D	No	007D	Small parking lot, no industrial activity.
8A	Yes	008A	Rental cars, hotels roadways
NA*	Yes	CR-002	Outfall to the Columbia River. Stormwater is regulated through this outfall June 1 – October 31

**Outfall CR-002 is a different name for CR-001 used during the discharge of industrial stormwater (without deicing stormwater) to the Columbia River. Stormwater must be pumped to the Columbia River. Discharges between June 1 and October 31 have not occurred and are not expected at this time but could occur in the future.*

2.8.1 Demonstrating Substantially Similar Discharge Points

Sub-basin 1N and basin 2 are substantially similar. The majority of impervious surface primary used for runways, taxiways, roads and buildings. Industrial activities in both basins include, fueling, fuel storage, vehicle, unscheduled aircraft maintenance. Potential pollutants of concern for both basins include, hydrocarbons and metals. The Fire station is located in sub-basin 1N, however, the training activities take place over pervious gravel area, or a lined gravel area. Stormwater from the lined gravel area is managed in a closed loop tank and oil water separator system. Waste water generated from firefighting training activities is collected and discharged to the sanitary sewer under a BES pretreatment permit no. 400.131. Fire department industrial activities exposed to stormwater are limited and include fueling and fuel storage.

2.9 Underground Injection Control Rules and Regulations

The Oregon Administrative Rules (OAR) 340-044-0050 regulate the discharge of waste, including stormwater discharges, into underground injection control (UIC) systems. The 1200-Z permit requires that all permittees comply with these regulations.

It is the Port's policy that no new UICs be created when there are other means of disposal available (i.e. stormwater system, sanitary system, off-site disposal). If a UIC is the only option, it must be approved in writing by the Port, and it shall be constructed, registered and operated in accordance with the UIC rules and regulations to protect groundwater. There are currently no known UICs at PDX.

Section 3: Site Controls

3.1 Stormwater Best Management Practices

Stormwater management controls are often categorized as source controls that minimize exposure of pollutants to precipitation and runoff, and treatment to remove pollutants from stormwater. Both types of controls help reduce the amount of pollutants in the stormwater discharge.

Source controls help reduce the contact of stormwater with potential pollutants. The overall intent of the NPDES stormwater regulations is to improve the quality of stormwater discharges by eliminating or reducing the exposure of stormwater to potential contaminants. Examples of source controls include good housekeeping, improved material handling techniques, secondary containment, and covering of potential pollutant areas.

End-of-pipe controls can be either structural or non-structural. They are used to remove a pollutant after it has already entered the stormwater. Examples include oil/water separators, stormwater filter vaults, catch basins, and catch basin inserts.

The site controls required under the Schedule A, Technology Based Effluent Limits of the Permit are listed in the sections below.

3.1.1 Minimize Exposure

Minimize exposure of processing, and material storage areas, including loading and unloading, disposal, cleaning, maintenance and fixed fueling areas, to rain, snow, snowmelt and runoff. The types of containment used at PDX to prevent the discharge of contaminants to the stormwater drainage system from storage tanks include: (1) berms or curbs around ASTs, (2) double-walled ASTs, (3) water quality improvement ponds at the downstream end of drainage areas, and (4) oil-water separators and shut-off valves to provide containment for spills.

- The largest ASTs at PDX are used for storing aviation fuel and are owned by PFFC and operated by ASIG. The PFFC tank farm consists of three double-walled ASTs with a total capacity of 3,400,000 gallons that are contained within concrete berms. The drainage pipe exiting the catch basin located inside the concrete berms is equipped with a valve which is normally in the closed position. After storm events the valve is opened and clean stormwater, free of odor and sheen, drains through an oil-water separator to a drainage ditch west of the tank farm. Secondary containment will also prevent the escape of the AST contents in the event of a catastrophic tank failure.

- All Port-owned ASTs are located indoors or have secondary containment, except for propane tanks.

- Port and tenant-owned USTs have spill and overfill protection. The Port and Co-permittees with USTs are required to have a spill response plan and to comply with state and federal regulations requiring spill and overfill protection for regulated USTs.

- Locate materials and activities indoors – Vehicle maintenance is conducted indoors or if this is not possible due to equipment or vehicle size, these activities will be conducted outside in a designated berm and/or covered area to eliminate stormwater exposure. All impervious areas are swept at the end of the work day. All Port- owned drums containing liquid or solid significant materials are stored indoors at the PDX maintenance facility compound and labeled with the content. Tenants store drums of significant materials either indoors or outside undercover. Solid significant materials are typically stored indoors or undercover to prevent potential contact with stormwater.

- Use grading, berm, or curbing - Berms, bunds or curbs provide secondary containment for materials stored in ASTs. The pesticide mixing area in drainage basin A is located on a depressed concrete pad with curbs that contain spills or overspray from mixing activities. The concrete pad is hydraulically isolated from the storm system when in use. There are holes in the curbs that are plugged when mixing activities take place. The plugs are removed when the pad is not being used.

- Store all hazardous substances within berms or other secondary containment devices – All hazardous substances are stored under cover and in secondary containment. Smaller amounts of significant materials are typically stored in 55-gallon drums. Stormwater collected in secondary containment is inspected prior to discharge. If the water is clean and there is no evidence of contamination, the water may be discharged to the stormwater system. This inspection must be documented by each Co-permittee and the records maintained for 5-years.

- Leak prone equipment and activities – Leak prone equipment and activities will be located indoors or in containment and diversion systems. Drip pans or absorbents will be used under or around leaking or leak-prone vehicles and equipment. Drain fluids from equipment and vehicles prior to on-site storage or disposal.

- Perform all cleaning operations indoors, under cover or in bermed areas that prevent runoff and run-on and also captures overspray - Cleaning operations are not typically conducted. If cleaning activities are needed they will be performed in a manner that minimizes exposure to stormwater. Activities such as surface grinding will be performed indoors, under cover or in an area that prevents runoff and run-on.

- Clean up spills or leaks promptly using absorbents or other effective methods to prevent discharge of pollutants and use spill/overflow protection equipment. – Follow the PDX spill response procedures for all spills and leaks. Spill kits are located in areas were spills are likely to occur.

- The Port requires that all pesticide applicators working on Port property are licensed by the Oregon Department of Agriculture and receive annual training on pesticide best management practices. Maintenance staff use an Integrated Pest Management approach to minimize impacts to stormwater on all Port properties.

3.1.2 Oil and Grease

Employ oil/water separators, booms, skimmers or other methods to eliminate or minimize oil and grease contamination of stormwater discharges, where needed. Existing control measures include both source control and structural/treatment BMPs. The source control BMPs consist of spill prevention and control measures. The following measures are implemented to minimize exposure to oil and grease:

- Co-permittees conduct vehicle and equipment maintenance indoors when possible to eliminate stormwater exposure to pollutants from these activities. Due to the size and nature of aircraft and some associated equipment, maintenance cannot always be conducted indoors.

- Co-permittees are required to use drip pans, absorbents or other means of spill prevention, when conducting maintenance outdoors to minimize potential for oil and grease to be released onto paved surfaces. This minimizes stormwater exposure to potential pollutants. Fluids are drained from vehicles and equipment that are no longer in service and need to be stored for a short time before being moved off-site for disposal or recycling.

- Many locations at PDX have catch basins with an invert pipe designed to capture oil and grease. This helps to minimize oil and grease that enters the stormwater system.

- Co-permittee are responsible for identifying and inspecting catch basins in industrial activity areas on their leaseholds. Some Co-permittees are responsible for the cleaning and maintenance of the catch basins on their leaseholds. Responsibilities are outlined in each tenants' individual lease agreement.

- Structural/Treatment BMPs include oil-water separators, quiescent water quality improvement ponds, water quality manholes, water quality treatment vaults and vegetated swales. Quiescent water quality improvement ponds at the downstream ends of Drainage Areas 2, 4 and 6 provide additional stormwater treatment and containment of and potential spills. Each quiescent pond is equipped with a valve which is normally in the open position.

- Stormwater Catch basins are fitted with an invert pipe designated with oil and grease. Filter inserts are installed in both catch basins.

3.1.3 Waste Chemicals and Material Disposal:

Recycle or properly dispose of wastes to eliminate or minimize oil and grease contamination of stormwater discharges. Cover all waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste to prevent exposure of stormwater to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of permanent lids. Waste chemicals generated at PDX include used motor oils, hydraulic fluid, solvents, and paints. All hazardous waste chemicals are stored indoors or under cover and recycled or disposed of off-site by a licensed contractor.

- Co-permittees are responsible for managing their own waste. Typical waste chemicals generated at PDX include, used motor oils, hydraulic fluid, solvents, and paints. Waste chemicals are recycled or disposed off-site by a licensed contractor. Prior to disposal or recycling, these materials are typically stored in dumpsters or labeled 55-gallon drums or other appropriate labeled containers.

- All waste bins and dumpsters are covered to prevent exposure of the waste to stormwater.

- Port hazardous and special wastes are stored inside the Port's Hazardous Material Building. The Port maintains a double-walled, 500-gallon AST at its vehicle maintenance shop for the storage of used oil.

- Sweeper debris collected by the Port, is stored in a designated containment area at the PDX Maintenance Facility (PMF) which drains to the sanitary system. The sweeper debris is re-profiled as necessary for permitted disposal at a licensed landfill. Port Environmental Operations group maintains records of the sweeper debris profiles and disposal.

- Catch basin filters maintained by Port Maintenance and are changed out annually or more frequently if needed and disposed of as non-hazardous waste.

3.1.4 Erosion and Sediment Control:

Stabilize exposed areas and contain runoff using structural and non-structural controls to minimize erosion of soil at the site and sedimentation. Employ erosion control methods such as vegetating exposed areas, graveling or paving to minimize erosion of soil at the site. Employ sediment control methods such as detention facilities, vegetated filter strips, bioswales, flow velocity dissipation devices or other permanent erosion or sediment controls to minimize sediment loads in stormwater discharges. For activities that involve land disturbance, the permit registrant must contact the local municipality to determine if there are other applicable requirements related to stormwater control.

- Several drainage basins have vegetated drainage ditches and swales that convey stormwater. The vegetation can provide a removal mechanism for stormwater pollutants, including Total Suspended Solids (TSS). The three detention ponds also provide control of sediment discharges. Bio-swales are used at the PDX Employee Parking Lot, grassy swales are used on the west side of the overpass on Airport Way, and rocky swales are used on the site surrounding the Deicing Treatment Plant.

- A sediment fence has been installed on the south side of the compost pile located at the PMF because the south side of the pile is adjacent to McBride Slough. This prevents any compost material from leaving the site and entering the stormwater system. The remaining area to the north and west of the mulch pile is pervious and does not have any storm drains in the vicinity.

- All Port construction contractors are required to comply with the Port's DEQ-issued NPDES General Construction Stormwater Permit 1200-CA or the 1200-C permit. The Port implements construction specifications for "Required Environmental Practices for Construction" to minimize environmental risk at PDX and the Port's General Aviation Airports. Contractors are required to follow the construction specifications pertaining to the Port's permit conditions. The Port prepares a project-specific erosion control plan and the contractor supplies some additional information for the plan. The Port's engineering and environmental staff review the plans. In addition, all construction projects that require a City of Portland building permit of any kind are done in compliance with the most current edition of the City of Portland's Erosion Control Manual.

- Co-permittees and other tenants must their own 1200-C permits from DEQ and the City.

- Any construction dewatering that occurs on PDX property is required to comply with the 1200-CA for uncontaminated groundwater. Port construction contractors are required to follow dewatering guidelines in the contract specifications and tenant construction contractors are required to comply with a given set of permit criteria which must be met prior to any construction discharges to either the land or stormwater system. Both Port and Tenant construction contractors must submit a dewatering plan which is reviewed by Port engineering and environmental staff.

- All Port construction inspectors are trained annually on appropriate construction dewatering and erosion control measures to assist in the enforcement of mandatory erosion control measures. Tenant erosion control measures.

3.1.5 Debris Control:

Employ screens, booms, settling ponds, or other methods to eliminate or minimize waste, garbage and floatable debris in stormwater discharges and ensure that this debris is not discharged to receiving waters.

- Employees are required to keep work areas clean and free of debris.

- Maintenance crews are utilized for trash and debris collection on both landside and airside areas. These crews collect litter and debris along Marine Drive, inside the airport security fence, and at various other locations.

- Debris control is also provided by the booms in each drainage area and detention ponds in Drainage Areas 2, 4, 6, and 7. Drainage Areas 2, 4, and 6 have booms located in the quiescent ponds. Additional debris control in drainage areas 2 and 6 are provided by the detention ponds. In Drainage Area 7, a boom and trash gate is located at the outfall on McBride to minimize discharge of debris. The booms are replaced on a regular basis. Drainage Area 6 has a trash rack located in front of the outfall at Pump Station 6. Debris control in Drainage Area 7 is also provided by catch basins and catch basin filters in place at the maintenance facility.

3.1.6 Dust Generation and Vehicle Tracking:

Minimize generation of dust and off-site tracking of raw, final or waste materials. To minimize the presence and buildup of debris on impervious areas within the security fence, the Port and its tenants inspect outdoor areas daily. Foreign Object Debris (FOD) can damage aircraft and is therefore monitored and removed. The prevention and removal of FOD greatly reduces the amount of debris that reaches catch basins on PDX property.

- As part of a FOD prevention program, the Port operates sweeper trucks a minimum of 8 hours per day. Depending on the function of the impervious surface, the area may be swept as many as three times per week. Parking structures and main parking lot travel areas are swept every two weeks.

- Construction contractors are required to provide a sweeper for all projects to remove any FOD resulting from the construction activity. These sweepers are operated during construction hours.

3.1.7 Housekeeping:

Regularly inspect, clean, maintain and repair all industrial equipment and systems, and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures, catch basins, and treatment facilities to ensure effective operation and in a manner that prevents the discharge of pollution.

Routinely clean all exposed areas that may contribute pollutants to stormwater using such measure as sweeping at regular intervals, litter pick-up, keeping materials orderly and labeled, and prompt clean-up of spills and leaks, proper maintenance of vehicles and stowing materials in appropriate containers.

Areas that may contribute to pollutants to stormwater will be kept clean and free of debris. Proper routine maintenance is performed on transportation vehicles, thereby minimizing the potential leakage of automotive components and exposure of stormwater to pollutants. The following measures will be implemented:

- Incidental spills at the site will be cleaned up quickly.

- Port staff performs monthly inspections of outdoor areas at the PDX including: Maintenance Facility compound and fuel island, vehicle wash rack, and fuel storage area, the Fire Training Facility, the Central Utility Plant, and the Fire Station. These areas are continually being monitored by Port staff, and every effort is made to keep all Port facilities clean.

- Co-permittees have established routine inspection programs for their industrial activities. PFFC and Menzies perform daily inspections of the fuel tank farm and fuel

islands. Other Co-permittees typically inspect their fuel islands, outdoor storage areas, and maintenance areas on a daily or weekly basis.

- The Port operates sweeper trucks a minimum of 8 hours per day. Depending on the function of the impervious surface, the area may be swept as many as 3 times per week. Parking structures and main parking lot travel areas are swept every 2 weeks.

- Standard Parking, the Port's contracted parking management company, conducts daily inspections of the stormwater drains during the rainy season and conduct weekly debris pick-up in all Port parking lots. If a problem with a drain is discovered, Standard will remove the debris on top of the drain or have Port maintenance clean the drain out completely. Port maintenance removes leaves and debris from the storm system in the Economy parking lots every year.

- Co-permittees conducting maintenance activities outdoors have spill equipment on hand and promptly clean up spills from maintenance activities.

- All containerized materials e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) are stored and plainly labeled (in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors. Secondary containment and enclosures are used for materials stored outdoors.

3.1.8 Vehicle and Equipment Maintenance

Prevent contaminants from vehicle and equipment maintenance from entering the stormwater drainage system. The following measures will be implemented:

- No wash downs are allowed to clean the work areas. Rags or spill pads will be used for cleaning small spills and a damp mop will be used for general cleaning. Sorbent materials including kitty litter, sawdust, spill pads, and spill booms may be used for containing large spills. Disposal of clean up materials will be conducted appropriately.

- Drip pans will be placed underneath vehicles and equipment when performing maintenance such as removing parts, unscrewing filters, or unclipping hoses. Transfer of used fluids to the proper waste or recycling drums will be conducted promptly. Open containers, including full drip pans, will not be left lying around on the site.

- Equipment taken to the site for repair will be examined for leaks. Drip pans will be place under the vehicles to collect fluids for recycling or proper disposal.

- All engine and transmission fluids will be drained and collected from damaged equipment or wrecked vehicles brought on the site. If the equipment or vehicles were drained prior to arrival at the site, drip pans will be placed under them immediately to contain leakage since oils and other fluids may drip for several days. All fluids will be disposed or recycled appropriately.

- All batteries will be stored under cover in a designated area.

- Used materials such as degreasers, used oil, oil filters, antifreeze, cleaning solutions, automotive batteries, used rags, and hydraulic fluid will be stored indoors or undercover in secondary containment. These types of materials will be regularly recycled off-site by an approved vendor.

3.1.9 Spill Prevention and Response:

Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans that include methods for spill prevention and clean-up and notification procedures.

- The Port has a Spill Prevention, Control, and Countermeasures (SPCC) plan for the facility which is provided as an adjunct to this plan. The plan sets forth roles and responsibilities of emergency responders and procedures related to the release of oil or hazardous materials at PDX, see Appendix F. The main objective of the plan is to identify emergency response procedures designed to minimize hazards to human health and the environment if an emergency should occur. For small spills which do not require emergency response, procedures consist of containment, absorption, clean up and disposal.

- Co-permittees are each required to prepare a spill plan applicable to their operations. The spill plan must include methods to prevent spills along with clean-up and regulatory agency and Port notification procedures. These methods and procedures shall be made available to appropriate personnel. The required clean-up material shall be on-site or readily available. Spill prevention plans required by other regulations may be substituted for this provision providing that stormwater management concerns are adequately addressed.

- Co-permittees who own or operate underground or aboveground petroleum storage tanks may be required to prepare a Spill Prevention Control and Countermeasure (SPCC) plan under the federal Oil Pollution Prevention Regulation (40 Code of Federal Regulations Part 112) to address spill prevention to navigable waters of the United States. It is the responsibility of Co-permittees who own and operate storage tanks to assess their operations and determine if an SPCC plan is required. More information may be obtained at the U.S. Environmental Protection Agency (EPA) website www.epa.gov. Regulations allow the spill plan and SPCC plan to be combined into a single document.

- Spill containment and cleanup materials are kept near the potential sources. There are spill kits located throughout the site, see Figure 2 or the Spill Response Plan. Small spills are addressed immediately.

- Containers are labeled (e.g., “Used Oil”, “Spent Solvents”, etc.) to encourage proper handling and facilitate rapid response if spills or leaks occur.

- Monthly visual observations of chemical storage and transfer areas check for the presence of minor leaks or spills and overall operational effectiveness as well as structural integrity.

3.1.10 Preventative Maintenance:

Regularly inspect, clean, maintain, and repair all industrial equipment and systems and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures, catch basins, and treatment facilities to ensure effective operation and in a manner that prevents the discharge of pollution. The preventative maintenance schedule for site controls is listed in Table 3-1. Routine preventative maintenance by the Port and Co-permittees has an important role in reducing the discharge of pollutants in stormwater from PDX. The preventative maintenance program ensures the proper operation of all stormwater BMPs. The key elements of the preventative maintenance program include:

- Monthly preventative maintenance inspections of the stormwater system, secondary containment, chemical transfer and storage areas and spill response materials should be conducted by qualified representatives of the Port and reviewed by site management. Inspection forms will be kept by Environmental Operations at the Port's headquarters

- Monthly inspections of areas where potential spills of significant materials or industrial activities that could impact stormwater runoff occur.

- Regular inspections of stormwater control measures, structures, catch basins, and treatment facilities.

- Cleaning, maintenance and/or repair of all materials handling and storage areas as well as stormwater control measures, structures, catch basins, and treatment facilities in areas which drain industrial activity areas. The frequency of this program will depend on whether the benchmarks are being met within that drainage area.

- Co-permittees are responsible for cleaning, maintenance and/or repair of septic systems associated with their leased areas. The DEQ guidelines for cleaning and maintenance of septic systems should be followed to ensure the proper operation of the system.

- Preventative maintenance on all Port vehicles and industrial equipment.

- Regular pick-up of and disposal of landfill waste and recyclable materials.

- Immediate follow up to correct problems encountered during inspections and complete documentation of the corrective measures.

Table 3-1 Preventative Maintenance Schedule for Site Controls

Site Control	Locations	Cleaning Frequency	Visual Inspection
Catch Basin filters	Basins 7A, 7B,7C	Semiannual	Monthly
Sweeping	All	Daily	Monthly
Catch Basins	All	Semiannual or as needed	Monthly
Water Quality Vaults and Manholes		Annual	Annual
Detention & Quiescent Ponds	Basins 2, 4 and 6	Three-year rotation (one basin per year)	Monthly
Oil booms	All outfalls	Replaced at least semi-annually	Monthly

3.1.12 Recycling and Waste

PDX has a comprehensive waste and recycling program. Waste generated at PDX complies with RCRA, DEQ and METRO and City of Portland waste and recycling regulations. Waste and recycling generated from the PMF and the terminal are closely tracked and are on regular pick-up schedules. The collection frequency of pick-up for the different types of materials generated at PDX are listed in Table 3-2.

Table 3-2 Waste and Recycling Collection Pick-up Schedule

Waste Material	Minimum Pick-up Frequency
Metals	1 per Month
Organic (food waste)	1 per week
Solid Waste	3 per week
Co-mingled Recycling	2-4 per week
Plastic Bottles/Jugs	1 per month
Wood	1 per week
Glass	3 per month
Mixed All Plastics	every three months
Tires (PMF)	semi-annual

3.1.13 Employee Education:

The Port of Portland staff members undergo annual stormwater pollution prevention and spill control training. This training is also provided to new employees.

3.1.14 Non-Stormwater Discharges:

Under the Port's MS4 permit (see section XII MS4 Permit Activities) the Port is required to have an illicit detection and elimination program for all non-stormwater discharges not authorized by one of the Port's NPDES permits. The Port will eliminate any non-stormwater discharges not authorized if detected during routine inspections or upon discovering evidence of a discharge. Employees are trained not to discharge any non-stormwater to the storm sewer system and report any non-stormwater discharges they observe. Illicit detection and elimination procedures are included in Appendix C.

Any discharges not authorized by the Permit are investigated and eliminated. Condition 7 of the Permit Coverage and Exclusion from Coverage section of the permit include a list of authorized non-stormwater discharges. During monthly inspections, signs of non-stormwater discharges in the stormwater conveyance and collection systems are documented and procedures in Appendix C are followed.

3.1.15 Schedule E Industry sector specific requirements include:

The primary industrial activity at PDX is classified under SIC codes 4512-4581. This classification requires compliance with additional technology-based effluent limits in Schedule E Sector S Air Transportation Facilities of the 1200-Z NPDES permit. Good Housekeeping Measures E.S.1.1.1 through E.S.1.1.5 and Additional SWPCP Requirements E.S.2.1 through E.S.2.3 are addressed under Section 3 Site Controls. Sections E.S.1.1.6 through E.S.1.2, E.S.2.4 and E.S.3 apply to deicing and anti-icing activities. Aircraft and Airfield deicing and anti-icing operations at PDX are regulated under NPDES permit number 101647 and are not addressed in this SWPCP. Drainage areas outside of the airfield and deicing collection follow the BMPs listed in Appendix G.

Section 4: Procedures and Schedules

4.1 Spill Prevention and Response Procedures

The Port implements a comprehensive Spill response program. The Spill Response Plan for PDX is included in Appendix F. The plan sets forth roles and responsibilities of emergency responders and procedures related to the release of oil or hazardous materials at PDX. The main objective of the plan is to identify emergency response procedures designed to minimize hazards to human health and the environment in the event that an emergency should occur. For small spills which do not require emergency response, procedures consist of containment, absorption, clean up and disposal. Spill clean-up kits are available and deployed throughout airport facilities and on fuel tankers. Small spills are addressed immediately.

Co-permittees are required to prepare a spill plan applicable to their operations. The spill plan must include methods to prevent spills along with clean-up and regulatory agency and Port notification procedures. These methods and procedures shall be made available to appropriate personnel. The required clean-up material shall be on-site or readily available. Spill prevention plans required by other regulations may be substituted for this provision providing that stormwater management concerns are adequately addressed.

Co-permittees who own or operate underground or aboveground petroleum storage tanks may be required to prepare a Spill Prevention Control and Countermeasure (SPCC) plan under the federal Oil Pollution Prevention Regulation (40 Code of Federal Regulations Part 112) to address spill prevention to navigable waters of the United States. It is the responsibility of Co-permittees who own and operate storage tanks to assess their operations and determine if an SPCC plan is required. More information may be obtained at the U.S. Environmental Protection Agency (EPA) website www.epa.gov. Regulations allow the spill plan and SPCC plan to be combined into a single document.

4.2 Monthly Inspections

Inspections will be conducted monthly at the locations identified in Section 4.2.2 and on Figure 2. In addition, the stormwater control structures will be inspected. the results of the inspections will be documented. Upon completion of the inspection, cleaning and repair activities should be conducted and documented as described in Appendix C.

The Port's Environmental Operations conducts monthly inspections of Port operated areas and stormwater controls within the permitted areas of PDX. The inspections are documented on the SWPCP Monthly Inspection Form. Inspection forms will be kept on file in the Port of Portland Administration Office.

Port Environmental Operations staff will conduct inspections of catch basins, inlets and manholes 1200-Z permitted areas. The inspections will be documented on the SWPCP Monthly Inspection Form. Inspection forms will be kept on file in the Port Administration Office.

4.2.1 Inspection Areas

General inspection areas will include:

- Catch basins
- Roofs and covers for containment structures (for potential leaks)
- Secondary containment areas
- All storage tanks
- Material handling and storage areas
- Waste storage, handling, and process areas
- All areas of potential spills (for possible contamination).

Industry-specific inspection areas include the following:

- Pressure washing area
- Any blasting, sanding, and painting areas
- Material storage areas
- Engine maintenance and repair areas, material handling areas
- General yard area

.

4.3 Cleaning and Repair Program

Cleaning, maintenance, and repair of all materials handling and storage areas and stormwater control measures, structures, catch basins and treatment facilities are performed regularly. The structural condition of the catch basins are documented repairs made as needed. Materials removed from catch basins are disposed of appropriately in the designated debris containment area at the PDX MX facility. Catch basin sediment will be removed as needed by the Port's contractor. Catch basin cleaning records and water quality laboratory results will be kept on file in the Port of Portland Administration Office.

The schedule for cleaning and repairing stormwater management control structures will be based primarily on the results of the monthly inspections. The following cleaning and repair activities will be conducted:

- Repair and cleaning of catch basins
- Regular replacement of catch basin filters
- Maintenance of all equipment and tanks where spills or leaks are possible
- Maintenance of all container-moving equipment and other vehicles that are used or parked in the facility to help prevent leaks.

As an additional component of this program, traditional housekeeping practices will be performed by maintenance staff to keep the facility in a clean and orderly condition. These practices include:

- Maintenance of clean, dry floor, and ground surfaces
- Periodic cleanup of debris and recyclable material

- Proper labeling and identification of chemical substances present in the workplace, and maintenance of Material Data Safety Sheets (MSDS) for each substance (Right-to-Know program)
- Facility-wide sweeping of impervious surfaces annually and on an as-needed basis depending on the frequency of facility operations.
- Proper material container storage practices (to prevent stormwater exposure or damage)
- Proper disposal of old equipment and waste products

4.4 Employee Education Schedule

The Employee Awareness Program is designed to familiarize all employees with the intent and components of the SWPCP. Training will be provided for all existing employees on an annual basis, and within 30 days of hire for all new employees when they begin work at PDX.

For all personnel, topics in the training session may include:

- Importance of preventing stormwater pollution
- Contents of the SWPCP as applicable to employee work
- Spill prevention and internal reporting procedures
- Materials handling and storage procedures
- Used oil management
- Spent solvent management
- Disposal of spent abrasives
- Fueling procedures
- General good housekeeping practices
- Painting and blasting procedures (if used)
- Used battery management.

Selected maintenance personnel will be trained in Preventative maintenance procedures and inspection procedures.

4.5 Record Keeping and Reporting Procedures

The Port of Portland is required to demonstrate the implementation of various components of the SWPCP. Records of the following events or activities will be maintained:

- Emergency Spills
- Monthly inspection of stormwater discharges
- Sampling/monitoring program (see Monitoring Plan) and
- Inspection and maintenance records.
- Training records

Incidents of spills or leaks may require local, state, or federal agency notification. See the SPCC for the notification details. All records will be dated and signed by the person recording the events or activities. Records of the monthly inspections, Preventative maintenance practices,

cleaning and repair activities, and all stormwater monitoring data will be maintained for a period of **five years** with the SWPCP documentation. Training records are maintained in the Port Learning Management System (LMS).

Detailed records must be maintained to provide quality assurance/quality control for a stormwater sampling program. Components of the records management program include the following items:

- Analysis Request Forms
- Chain-of-Custody Forms
- Specific monitoring information (visual and grab sampling).

Records of monitoring information shall include:

- The date, exact place, time, and methods of sampling or measurements
- The individual(s) who performed the sampling or measurements
- The date(s) analyses were performed
- The individual(s) who performed the analyses
- The analytical techniques or method used
- The results of the analyses.

The Field Data Sheets, Chain-of-Custody Forms, and the analytical results shall be maintained by the Environmental Operations department.

A discharge monitoring report (DMR) must be submitted quarterly to DEQ. The monitoring report must be submitted by August 15. The monitoring information for the PDX shall be submitted to:

DEQ Northwest Region
700 NE Multnomah St., Suite #600
Portland, OR 97232

Section 5: Monitoring Requirements

5.1 General

In addition to the specific requirements established for the quality of stormwater runoff, other existing DEQ rules and requirements apply to all types of discharges. The Port is required to monitor for the statewide benchmarks, impairment pollutants as assigned and the applicable sector specific benchmarks. In addition, discharges must meet Water Quality Standards. Monitoring requirements specific to PDX are listed in the Permit No. 101647, Attachment B.

5.2 Water Quality Standards

The permit registrant must not cause a violation of instream water quality standards as established in OAR 340-041.

Water quality standards have been established for many parameters not specifically limited by the 1200-Z permit. These water quality standards shall not be violated.

5.3 Response to Benchmark Exceedance

5.3.1 Tier I Corrective Action Response

If stormwater sampling results exceed any of the statewide benchmarks in Schedule A.9 of the permit, sector specific benchmarks in Schedule E of the permit, or reference concentrations for impairment pollutants identified in the permit assignment letter and summarized in Table 5-4, the permit registrant must within 30 calendar days of obtaining the monitoring results:

- Investigate the cause of the elevated pollutant levels.
- Review the SWPCP and the selection, design, installation and implementation of control measures to ensure compliance with the permit. If permit registrant determines that SWPCP revisions are necessary based on corrective action review, submit the revised pages of the SWPCP to DEQ, including a schedule for implementing the control measures.
- Summarize the following information in a Tier I report that is retained at the Port Administrative Offices and submitted to DEQ or Agent upon request:
    - The results of the investigation.
    - Corrective actions taken or to be taken, including date corrective action completed or expected to be completed. Where the permit registrant determines that corrective action is not necessary, provide the basis for this determination. Document whether SWPCP revisions are necessary.
- Implement the corrective actions before the next storm event if possible or no later than 30 calendar days after receiving monitoring results. If Tier 1 corrective actions take longer than 30 days, reasons for the delay must be documented.

The Port of Portland conducting activities subject to the 1200-Z permit shall comply with provisions reference Section A.10 of the permit for corrective actions.

5.3.2 Tier II Corrective Actions

The Port and Co-permittees are exempt from the Tier II corrective action requirement based on the second year Geometric Mean Benchmark Evaluation, see Schedule A.3 of Permit 101647.

Section 6: Recordkeeping and Reporting Requirements

Detailed records must be maintained to provide quality assurance/quality control for a stormwater sampling program. Components of the records management program include the following items:

- Analysis Request Forms
- Chain-of-Custody Forms
- Specific monitoring information (visual and grab sampling).

Records of monitoring information shall include:

- The date, exact place, time, and methods of sampling or measurements
- The individual(s) who performed the sampling or measurements
- The date(s) analyses were performed
- The individual(s) who performed the analyses
- The analytical techniques or method used
- The results of the analyses.

The Field Data Sheets, Chain-of-Custody Forms, and the analytical results shall be maintained by the Environmental Operations department.

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Appendix A

1200-Z NPDES Permit

THE NPDES 1200-Z PERMIT HAS NOT BEEN ATTACHED TO THE SUBMITTAL FOR PAPER SAVING MEASURES.

THE PERMIT IS ON FILE. THE FACILITY SWPCP HAS THE PERMIT AVAILABLE.

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Appendix B

Co-permittees, Application Form, and Annual Verification Form

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Appendix B - Co-permittees, Application Form and Annual Verification Form

Company	1200-Z Co-permittee	Deicing Co-permittee
ABX AIR, INC.	X	X
Aero Portland, LLC	X	
Aerowash	X	
Air Canada	X	X
Air Transport International-Carrier	X	
Airport Terminal Services, Inc.	X	X
Alaska Airlines	X	X
Allegiant Air, Inc.	X	X
AMB Property, LP	X	
Ameriflight	X	X
Atlantic Aviation	X	X
Avis Rent-A-Car	X	
Boeing	X	X
Bonneville Power Administration	X	
Budget Rent-A-Car	X	
Cargo Screening and Compliance	X	
Condor Fludgienst	X	X
DB Schenker	X	
Delta	X	X
DHL Worldwide Express	X	
Dollar Rent-A-Car	X	
EAN Holdings, LLC (Enterprise Rent-A-Car)	X	
Elite Line Services, LLC	X	
Empire Airlines	X	
Federal Express Corporation	X	X
Frontier Airlines	X	X
Hawaiian Airlines	X	X
Hertz Corporation	X	
Horizon Air Industries, Inc.	X	X
Jazz Air, Inc.	X	X
JetBlue	X	X
LSG/Sky Chefs	X	
Menzies Aviation (USA), Inc.	X	

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix B - Co-permittees, Application Form and Annual Verification Form

Company	1200-Z Co-permittee	Deicing Co-permittee
MN Airlines dba Sun Country Airlines	X	X
Oregon Air National Guard		X
Peninsula Airlines	X	X
Portland Fueling Facilities Corporation	X	
SeaPort Air	X	X
SkyWest Airlines Flight Operations	X	X
Snug's Pro-Wash, LLC	X	
Southwest Airlines	X	X
Spirit Airlines	X	X
United Airlines	X	X
United Parcel Service	X	X
US Postal Service	X	
Virgin America Inc.	X	X
Volaris Airlines	X	X
Western Air Express - Transportation Sys.	X	X
Xtra Airways	X	X

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix B - Co-permittees, Application Form and Annual Verification Form

REGISTRATION APPLICATION
CO-PERMITTEE STATUS
PDX STORMWATER PERMIT

Purpose: The following standard application serves as a signed commitment to comply with the PDX 1200-Z general stormwater permit and the corresponding Stormwater Pollution Control Plan as a Co-permittee. Please complete and submit to Blake Hamalainen, Environmental Operations Department at Port of Portland, PO Box 3529, Portland, Oregon 97208, and (503) 415-6566.

I. FACILITY INFORMATION

A. Name of Company: _____
Owner or Operator: _____
Site Address: _____
Mailing Address: _____
B. Facility Contact Person: _____ Phone No.: _____

C. Standard Industrial Classification (SIC) Code, Name, and Four Digit Number: _____
_____

D. Other Current DEQ/EPA Permits for Facility: _____
_____

E. Sub-tenants Operating at this Facility:
_____

II. STORMWATER DISCHARGE INFORMATION

A. Briefly describe the various industrial activities which take place at the site (e.g. aircraft maintenance, fueling, etc.):
_____
_____
_____

B. Describe any stormwater treatment and/or control facilities in use (e.g. swales, oil-water separator, etc.): _____
_____

C. The NPDES industrial stormwater regulations (40 CFR 122.26) require certification that all stormwater outfalls associated with industrial activities have been evaluated for the presence of non-stormwater discharges not otherwise covered by an NPDES Permit. **Your signature on this application provides that certification.** Describe how the site was inspected for non-stormwater discharges:
_____
_____
_____

D. Have any leaks or spills occurred at the facility within the last three (3) years? Yes: _____ No: _____
If "Yes," describe (or submit spill reports): _____
_____
_____

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix B - Co-permittees, Application Form and Annual Verification Form

III. SIGNATURE

I HEREBY CERTIFY THAT THE INFORMATION THAT IS INCLUDED IN THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

_____	_____
AUTHORIZED REPRESENTATIVE (Please Print)	**Title**
_____	_____
Signature	**Date**

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix B - Co-permittees, Application Form and Annual Verification Form

1200-Z STORMWATER PERMIT ANNUAL COMPLIANCE VERIFICATION

Purpose: The following compliance verification form certifies that the Co-permittee has conducted required inspections, performed preventative maintenance of stormwater control structures, prevented illicit discharges, and implemented any required best management practices under the 1200COLS National Pollutant Discharge Elimination System (NPDES) Stormwater Permit during the current reporting period (July 1 – June 30). Please complete and mail or email to Blake Hamalainen, Environmental Operations Department at Port of Portland, blake.hamalainen@portofportland.com PO Box 3529, Portland, Oregon 97208 **by** ***JUNE 24, of the current year*****.**

I. FACILITY INFORMATION

A. Name of Lessee/Operator _____
Site Address: _____
Mailing Address: _____

B. Facility Contact Person: _____
Phone No.: _____
FAX No.: _____
Email: _____

C. Other Current DEQ/EPA Permits for Facility: _____

D. List all sub-tenants operating at this facility*: _____
*Please complete an Annual Verification form for each facility where the sub-tenant is the sole operator.

II. STORMWATER DISCHARGE INFORMATION

A. Briefly list the facility and operation inspections (e.g. chemical storage areas, maintenance areas, etc.) that were conducted during the reporting period and their frequency: Attach additional sheets if more room is needed.

_____
_____
_____
_____

B. Describe any stormwater treatment and/or control facilities in use on your leasehold (e.g. swales, oil-water separators, catch basins) and the inspection and maintenance frequency of each. Attach additional sheets if more room is needed.

_____
_____
_____
_____

C Did any hazardous or regulated substance leaks or spills occurred at the facility within the reporting period?

☐ Yes

☐ No

If "Yes," describe (or submit spill reports):

_____
_____

D. Were any stormwater samples collected at your facility within the reporting period?

☐Yes (If yes, please attach a site map where samples were taken and all laboratory data)

☐ No

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix B - Co-permittees, Application Form and Annual Verification Form

III. STORMWATER POLLUTION CONTROL AND SPILL RESPONSE PLAN

E. Has the PDX Stormwater Pollution Control Plan been reviewed to ensure it adequately describes your facility operations? Reminder: Please forward any comments, updates and/or revisions to the Port of Portland.

☐ Yes: Date of Review: _____

☐ No: If not, Why not? _____

F. Has the current Stormwater Pollution Control Plan been reviewed to ensure the appropriate best management practices for your facility are being followed?

☐ Yes Date of Review: _____

☐ No If not, why not? _____

G. Has a Spill Response Plan that meets the requirements of the 1200-Z NPDES permit been developed and implemented for your facility?

☐ Yes: (PLEASE ATTACH)

☐ No: If not, why not? _____

H. Have employees been trained on your facility's Spill Response Plan and the Storm Water Pollution Control Plan?

☐ Yes: Dates of training: _____

☐ No: If not, why not? _____

IV. SIGNATURE

(Signature statement required less than 40 CFR 122.22.)

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the 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.

_____ _____

AUTHORIZED REPRESENTATIVE (Please Print) **Title**

_____ _____

Signature **Date**

V. ADDITIONAL INFORMATION

Complete this section only if the annual compliance verification form for the time period July 1-June 15 has already been submitted and additional information for the time period June 15 – June 30 is relevant.

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Describe the new information:

_____

_____

_____

_____

VI. SIGNATURE

(Signature statement required less than 40 CFR 122.22.)

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the 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.

_____ _____

AUTHORIZED REPRESENTATIVE **Title**

(Please Print)

_____ _____

Signature **Date**

**This list is adaptively managed, contact Blake Hamalainen for the most current list of co-permittees.*

Appendix C
Record of Changes

Appendix C Record of Revisions and Corrective Actions

Record of Revisions & Corrective Actions

Date	Revision or Review	Corrective Action?	Person Making Change
February 14, 2019	Updated: Appendix A with reissued 1200-Z permit and the title page with the permit file number and EPA number	No	Danelle Peterson
April 2, 2019	Updates made to meet the requirements in the reissued 1200-Z permit	No	Danelle Peterson
November 14, 2019	Moved the sub-basin 1N monitoring point up-pipe to a manhole north of PS-N to avoid offsite run-on. The new monitoring point is named 001M.	No	Danelle Peterson
February 7, 2020	Added Appendix G Non-Airfield Deicing BMPs	Yes	Danelle Peterson
September 30, 2021	Updated Site Contacts and Revised Inspection Form	No Yes/No Yes/No Yes/No Yes/No	Blake Hamalainen
May 20, 2022	Moved sub-basin 7C monitoring point to a manhole up-pipe of the existing monitoring point to avoid off-site run-on from a catch basin in Alderwood Road	No	Blake Hamalainen

Appendix D
Stormwater Pollution Control Plan Inspection Procedures and Forms

Work Instruction: Stormwater Monthly Inspections	Work Instruction WI-AVI-WTR-001
	Date: 10/08/2018
	Rev. # 3
	Page: # 6-17 of 128
	Owner: Water Quality Manager

1.0 PURPOSE

1.1. The purpose of this procedure is to ensure compliance with the monthly inspection requirements associated with National Pollution Discharge Elimination System (NPDES) general industrial stormwater permits.

2.0 SCOPE

2.1. This procedure applies to monthly monitoring of stormwater discharges and monthly inspections of industrial areas at PDX (Portland International Airport), HIO (Hillsboro Airport), TTD (Troutdale Airport) T2 (Terminal 2), T6 (Terminal 6), and the NAV (Navigation Base)

2.2. These activities are specific to the Port of Portland's Industrial operations (this generally excludes tenant activities).

3.0 DEFINITIONS

3.1. *Site Controls - Best Management Practices (BMPs) for controlling and preventing stormwater pollution. These, can be structural or procedural.*

3.2. *Environmental Management System (EMS)*

3.3. *Industrial Inspections – Inspecting areas where stormwater comes in contact with industrial activities such as: material handling areas, storage or maintenance of material handling equipment, storage areas for raw materials (tank farms) and intermediate and finished products and manufacturing buildings.*

3.4. *Outfall Monitoring – monitoring the stormwater discharges at designated stormwater outfalls as identified the SWPCP (stormwater pollution control plan).*

3.5. *House Keeping – areas that may contribute pollutants to stormwater must be kept clean. Sweeping, litter pick-up, prompt cleanup of spills and leaks, and proper maintenance of vehicles must be employed to eliminate or minimize exposure of stormwater to pollutants.*

4.0 RESPONSIBILITY

4.1. *Environmental Operations Specialist, Technician and/or delegate:*

- Conducts monthly monitoring and inspections per related permits, plans and protocols for each facility.
- Manages and maintains records related to monthly monitoring and reporting.
- Monitors corrective action when deficiencies in performance or controls are identified.

4.2. *Aviation maintenance staff, Marine maintenance staff, and Navigation maintenance staff (as delegated):*

- *Respond to repair requests and address issues in a timely manner.*

4.3. *Designated Environmental Operations staff (generally the Administrative Coordinator):*

- Maintain records per the Port's records retention schedule.

5.0 GUIDANCE

5.1. Required Equipment

- Sampling equipment; for details reference the monitoring protocol for each facility.
    - The monitoring protocal for each facility is kept in the stormwater folder on the PDXEnv-Pvt network, \\pdxfs\PDXEnv-Pvt\Storm Water\Monitoring
- Forms: Field Monitoring; Industrial Inspection; Outfall Monitoring.
    - Forms are provided in the stormwater pollution control plan for each facility.

5.2. Schedule

- Industrial inspections must be completed at least once per calendar month.
- Visual observations of stormwater discharges that occur Monday thorugh Friday during regular business hours (as defined in the associated Stormwater Pollution Control Plan) must be monitored at least once per calendar month.

5.3. Conducting Inspections

- Reference the monthly industrial form for each facility (in scope).
- Document conditions at each monitoring point listed on forms.
- Collect samples (if necessary) – see permits for guidance.
- Reference: Stormwater Sampling Protocol for each facility.
- Document conditions of site controls and industrial areas listed on the inspection forms.
- Follow up and corrective action for for housekeeping issues, spills, or damaged site controls for each facility should be coordinated with the designated group listed below. Establish a timeline, monitor and track completion for each corrective action
    - PDX: Submit work orders in PDX maintenance request via e-mail, which will generate a work order.
    - HIO and TTD general aviation (GA): coordinate maintance requests with GA Maintenance Lead.
    - Navigation Base: coordinate maintenance requests with the Navigation Base lead.

- Terminals 2 and 6: coordinate maintenance requests with the Marine Facilities Maintenance manager.

5.4. Recordkeeping and Reporting

- Industrial Inspections
  - Completed monthly inspection forms are maintained in the Stormwater Monthly Industrial & Outfall Inspections binder for each facility and are located at designated Environmental Specialist's work area. The binder includes records generated July 1 through June 30 of the current year. Inspection forms may also be kept electronically in Veoci.
  - After the tracking year is complete, records are transferred environmental files, along with annual report documentation and maintained per Port's Record Retention Schedule.
- Monthly Monitoring
  - Completed forms are scanned annually e-filed in the stormwater folder on the PDXEnv-Pvt network, \\pdxfs\PDXEnv-Pvt\Storm Water\Analytical.
  - Files are maintained in the Stormwater Monthly Industrial & Outfall Inspections binder located at Environmental Specialist's work area July 1 through June 30. Records may also be kept in Veoci.
  - After the tracking year, records are transferred environmental files along with annual report documentation and maintained per the Port's Record Retention Schedule.

1.0 VERIFICATION AND CORRECTIVE ACTION

1.1. This procedure is to be reviewed on a periodic basis by the Environmental Operations EMS Manager. If deficiencies are discovered in this procedure, corrective action will be taken.

1.2. Port conformance with this procedure is to be reviewed on a periodic basis by the Environmental Operations EMS Manager. If nonconformance is discovered, corrective action will be taken.

2.0 REFERENCES, RELATED POLICIES AND GUIDELINES

2.1. Environmental Water Resource Policy <7.4.16>

2.2. 1200-Z permits < HIO, NAV, TTD, T2, T6>

2.3. PDX individual NPDES permit

2.4. SWPC Plans < HIO, NAV, PDX, TTD, T2, T6>

2.5. Monitoring Protocol for the 1200-Z and PDX Individual stormwater permits

2.6. Inspection Forms and Monitoring Records

3.0 ATTACHMENTS

3.1. None

4.0 REVISION HISTORY

WI-AVI-WTR-001 Stormwater Monthly Inspections	
Date	**Description**
11/18/2010	This is the original version of this Work Instruction.
03/16/2016	Updates made for the 1200-COLS 2016 permit renewal. Aviation Environmental Specialist was changed to either Environmental Operations Specialist or Water Quality Manager. Under Record Keeping and Reporting, Monthly Monitoring, the following statement was removed, “A copy is submitted to DEQ as part of annual reporting.”
10/08/2018	Updates made to include Terminal 2, 6 and the Navigation Base. The 1200-COLS references removed. The 1200-COLS no longer exists DEQ now issues just one general industrial stormwater permit, the 1200-Z. PDX is now under an Individual stormwater permit, that combines the industrial stormwater run-off and deicing discharges.

Section 1: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREAS

SITE	*AREA DESCRIPTION*	**DEBRIS OR TRASH PRESENT?**	**ARE INDUSTRIAL MATERIALS STORED UNDER COVER?**	**EVIDENCE OF LEAKING DRUMS, VEHICLES, TANKS OR OTHER EQUIPMENT?**	**EVIDENCE OF SPILLS?**	*CONTENT OF DRUMS AND CONTAINERS LABELED?*	**SECON-DARY CONTA-INMENT**	**FOLLOW UP/COMMENTS**
PDX Maintenance Facility	Vehicle Storage Area (Open Bay)	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	HAZMAT Building and loading dock	NO YES explain:	NO explain: YES N/A	NO YES explain: *6.1.1.1.1.1*	NO YES explain:	NO YES N/A	NO YES N/A	
	Buildings 7111/7115/7113/7119 General	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Catch Basin Filters	NO YES explain:			NO YES explain:			
	Fuel Island	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Covered Dumpsters & Recycling Area (by Sweeper Debris)	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Vehicle Wash Rack	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	

Section 1: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREAS

	Sweeper & Catch Basin Debris Containment area	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES *N/A*	NO YES N/A	
	Bone Yard	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	

Section 1: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREAS

Site	6.1.1.1.1.1.1 REA DESCRIPTION	DEBRIS OR TRASH PRESENT?	ARE INDUSTRIAL MATERIALS STORED UNDER COVER?	EVIDENCE OF LEAKING DRUMS, VEHICLES, TANKS OR OTHER EQUIPMENT?	EVIDENCE OF SPILLS?	6.1.1.1.1.1.2 ONTENT OF DRUMS AND CONTAINERS LABELED?	SECON-DARY CONTA-INMENT	FOLLOW UP/COMMENTS
QTA	Trench Drains	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Dumpster Areas	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Fuel Island	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
CUP	Bldg # 7110 7320 NE Airport Way	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Dumpsters	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	

Section 1: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREAS

Taxi Hold Area	Dumpsters & Parking	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	

Section 1: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREAS

Site	6.1.1.1.1.1.3 REA DESCRIPTION	DEBRIS OR TRASH PRESENT?	ARE INDUSTRIAL MATERIALS STORED UNDER COVER?	EVIDENCE OF LEAKING DRUMS, VEHICLES, TANKS OR OTHER EQUIPMENT?	EVIDENCE OF SPILLS?	6.1.1.1.1.1.4 ONTENT OF DRUMS AND CONTAINERS LABELED?	SECON-DARY CONTA-INMENT	FOLLOW UP / COMMENTS
Terminal	Dumpsters	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
	Environmental Lab (lower C18)	Emergency Shower & Eyewash Inspection: Unit Inspected Following PDX Operations SOP? YES NO						
Fire House	Building 5250	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	
Fire Training Facility	Burn Pit Recycling System	NO YES explain:	NO explain: YES N/A	NO YES explain:	NO YES explain:	NO YES N/A	NO YES N/A	

WEATHER FOR PAST 3 DAYS (Circle all that apply): COLD WET RAINY DRY OTHER:_____

INSPECTED BY: _____ DATE TIME: _____

Section 3: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREA BOOMS

BOOM LOCATION	DESCRIPTION	EVIDENCE OF SPILLS	BOOM CONDITION	GENERAL HOUSEKEEPING	FOLLOW UP / COMMENTS
Basin1 booms	1E Outfall 1 Boom Set Culvert to the Elrod Ditches E. of Elrod S of the 47th Intersection	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	1S Outfall 1 Boom Set PS-S West of SM56	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	1N 1 Boom Set S. of PS-N	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 2 Booms	West Quiescent Pond 3 Boom Sets	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	West Detention Pond 1 Boom Set	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 3	SE of the Boeing Hangar off Cornfoot RD 1 Boom Set	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin4	Outfall 1 Boom Set Air Trans South of FedEx	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	

Section 3: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREA BOOMS

	Quiescent Pond 3 Boom Sets Air Trans South of FedEx	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 5	Outfall 1 Boom Set West of the Air Trans/ Cornfoot Intersection	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
BOOM LOCATION	**DESCRIPTION**	**EVIDENCE OF SPILLS**	**BOOM CONDITION**	**GENERAL HOUSEKEEPING**	**FOLLOW UP / COMMENTS**
Basin 6	Outfall 1 Boom Set East of the Air Trans/ Cornfoot Intersection	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	East Quiescent Pond 3 Boom Sets	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 7	Outfall 7a 1 Boom Set Ped Gate SP19 PMF	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	Outfall 7b 1 Boom Set Ped Gate SP18 PMF	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	007C 1 Boom Set South of the LSG Sky Chefs/ Alderwood Intersection	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	

Section 3: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREA BOOMS

	Vault Located at the end of 28L. Just West of Perimeter Rd. 2 Boom Sets	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 8	Boom 8a 1 Boom Sets PIC west of 92nd behind Building 6327	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	Boom 8b 1 Boom Set Culvert under Cascade Parkway South of Bldg 7515	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
Basin 9	Culvert South of Airport Way and I205 Next to IKEA	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	
	Outfall 9B 1 Boom Set Alderwood & Glass Plant Rd	NO YES explain:	NEW GOOD REPLACE	GOOD NEEDS ATTENTION	

WEATHER FOR PAST 3 DAYS (Circle all that apply): COLD WET RAINY DRY OTHER:_____

INSPECTED BY: _____ DATE TIME: _____

Section 3: PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS – INDUSTRIAL AREA BOOMS

PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS- OIL WATER SEPARATORs

OIL/WATER SEPARATOR LOCATION	CONDITION OF STRUCTURE	EVIDENCE OF SPILLS?	CLEANING REQUIRED?	COMMENTS/ FOLLOWUP
Fire Training Facility	GOOD NEEDS MNTC EXPLAIN:	NO YES explain:	NO YES explain:	
Fire House	GOOD NEEDS MNTC EXPLAIN:	NO YES explain:	NO YES explain:	
PMF Fuel Island	GOOD NEEDS MNTC EXPLAIN:	NO YES explain:	NO YES explain:	
PMF Hazmat Loading Dock	GOOD NEEDS MNTC explain:	NO YES explain:	NO YES explain:	

WEATHER FOR PAST 3 DAYS (Circle all that apply): COLD WET RAINY DRY OTHER:_____

INSPECTED BY: _____ DATE TIME: _____

PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS- ASTs

TANK #	DESCRIPTION/ CONTENTS	LOCATION	LEAKS	EVIDENCE OF SPILLS	CONDITION OF BOOM	CONDITION OF PUMP	
AST # 22	2000 Gallon JP-4 (North of AST 23)	Live Fire Training Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 23	2000 Gallon JP-4 (South of AST 22)	Live Fire Training Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 24	400 Gallon JP-4 + water (No longer in use, empty disconnected).	Live Fire Training Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST	20,000 Gallon JP-4 + Water Fire Pit Training Reclamation	Live Fire Training Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST	20,000 Gallon JP-4 + Water Fire Pit Training Reclamation	Live Fire Training Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 272	2000 Gallon Diesel	Firehouse	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 273	500 Gallons Waste Oil	Port Maintenance Facility SE of bldg.	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:

PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS- ASTs

TANK #	DESCRIPTION/ CONTENTS	LOCATION	LEAKS	EVIDENCE OF SPILLS	CONDITION OF BOOM	CONDITION OF PUMP	
AST # 279	500 Gallons Diesel (for emergency generator)	Port Maintenance Facility Loading dock area	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 390	110 Gallons (higher during use) Mobile Fuel Polishing Trailer	Port Maintenance Facility Equipment Storage	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
Pavement Anti-icing AST # 350	Magnesium Chloride	Port Maintenance Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
Pavement De-icing AST #347, 348, 349	Potassium Acetate (3 tanks)	Port Maintenance Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # NA (temp. tank)	Rubber Removal	Port Maintenance Facility	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 384	500 Gallons Diesel	Under gate C4 Gray generator on top of black tank	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST # 389	980 Gallons Deicing Treatment Plant Emergency Generator Diesel	East of the deicing treatment plant building 10150	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:

PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS- ASTs

AST # 0505	232-gallon oil filled transformer	PS-A	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST# 0507	175-gallons oil filled transformer	SW corner of the Employee Parking Lot	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
	683-gallon oil filled transformer	NW corner of the QTA	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
	oil filled transformer	SE corner of the QTA	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:
AST# 0506	202-gallon oil filled transformer	PS-L	NO YES	NO YES	NEW GOOD REPLACE NONE	GOOD NEEDS MNTC NONE	Note Tank Integrity: Note 2º containment:

PDX MONTHLY INDUSTRIAL STORMWATER INSPECTIONS- USTs

TANK #	DESCRIPTION/ CONTENTS	LOCATION	LEAKS	EVIDENCE OF SPILLS	CONDITION OF PUMP	Comments
UST # 1	6,000 Gallons Unleaded gasoline Used for Port vehicle refueling	7111 NE Alderwood Port Maintenance Facility	NO YES	NO YES	GOOD NEEDS MNTC NONE	
UST # 2	6,000 Gallons Diesel Used for Port vehicle refueling	Port Maintenance Facility	NO YES	NO YES	GOOD NEEDS MNTC NONE	
UST # 3	10,000 Gallons Diesel Used for Port vehicle refueling	Port Maintenance Facility	NO YES	NO YES	GOOD NEEDS MNTC NONE	
UST # 18	30,000 Gallons Fuel Oil	7320 NE Airport Way Central Utility Plant	NO YES	NO YES	GOOD NEEDS MNTC NONE	
UST # 19	30,000 Gallons Fuel Oil	Central Utility Plant	NO YES	NO YES	GOOD NEEDS MNTC NONE	

PDX MONTHLY STORMWATER INSPECTIONS- OUTFALLS

Outfall Inspections Associated with Industrial Activity									
BASIN 1E 001E Time:	Culvert to the Elrod ditch just south of the intersection of 47th and Elrod on the east side of the street	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 1N 001M Time:	South of PS-N	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 1S 001S Time:	South of PS-S and West of SM56	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 2 Pond Time:	West Detention Pond	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	

PDX MONTHLY STORMWATER INSPECTIONS- OUTFALLS

BASIN 3 Outfall Time:	Gravel road off intersection of 47th & Cornfoot	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 4 Pond Time**:**	Central Quiescent Pond	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 5 Outfall Time:	Intersection of AirTrans Way & Cornfoot Rd	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 6 6G Time**:**	Outlet of the East Quiescent Pond	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	

PDX MONTHLY STORMWATER INSPECTIONS- OUTFALLS

BASIN 6 6H Time:	STSMH1266 Located next to hangar 7759	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 6 6J Time:	STSMH1206 Located in the landscaped area just south of the hangar 7759 parking lot.	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 7 7A Time:	South side of PMF, by Ped. Gate SP19	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 7 7B Time:	South of Wash Rack, east of Ped. Gate SP19	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	

PDX MONTHLY STORMWATER INSPECTIONS- OUTFALLS

BASIN 7 7C Time:	Located before the culvert under Alderwood just SE of the MX Facility Compound (Sky Chefs OF)	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
BASIN 8 8a Time:	Culvert under Cascade Parkway	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	
Outfall Inspections NOT Associated with Industrial Activity									
BASIN 9 9b Time:	Near Glass Plant Road	TRICKLE LOW MEDIUM HIGH VERY HIGH NO FLOW	GREEN BROWN GRAY YELLOW ORANGE NO COLOR OTHER NO FLOW	CLEAR CLOUDY TURBID NO FLOW	LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	VERY LIGHT LIGHT MEDIUM HEAVY NO VISIBLE NO FLOW	NO YES, describe: NO FLOW	NO VISABLE YES, describe: NO FLOW	

WEATHER FOR PAST 3 DAYS (Circle all that apply): COLD WET RAINY DRY OTHER:_____

INSPECTED BY: _____ DATE TIME: _____

BASIN 1						
3271 PDX Fire Station	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	Old #: 6023
3261 BPA	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	Old #: 0803
BASIN 4						
1792 FedEx (Airtrans Way)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
1795 FedEx (Airtrans Way)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
BASIN 6						
561 QTA	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	Note: CB 3205 drains to sanitary sewer, Old #: 3206
499 NE corner of QTA Near garage exit ramp	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
511 NE Corner of QTA E of trench drain	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	

626 NW of building next to curb	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
BASIN 7						
374 CUP N. of the 6,000 gallon UST	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
372 CUP W. Auto-gate between P2 & CUP	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
351 CUP Base of FAA Tower	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
328 CUP Crt yd. NW gate	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
271 CUP Crt yd. center	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
270 CUP Crt yd. North Covered	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
235 CUP Crt yd. SE gate Covered	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	

4409 PMF	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4415 PMF	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4360 PMF	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4372 PMF	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4330 PMF NE of Fuel Island	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4335 PMF MX Crt yd	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
4365 PMF S. of Vehicle Wash Rack	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	
9335 just north of sweeper debris area	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	

4398 SE Cargo (landside)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4650 USPS -1 (bldg. 7640 east)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-12
4678 USPS – 2 (bldg. 7640)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-12
898 USPS - 3 (west)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-12
614 A Gates (Horizon) Trench Drain	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-4C
505 A Gates (Horizon)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-11
9048 Atlantic (north of gate NA15 airside)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4763 Atlantic (bwtn bldgs. 7615 & 7705)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5

4764 Atlantic (bwtn bldgs. 7615 & 7705)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4725 Atlantic (bwtn bldgs. 7705 & 7777)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
3189 Atlantic (bwtn bldgs. 7705 & 7777)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4724 Atlantic (bwtn bldgs. 7705 & 7777)	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4506 N of N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4507 N of N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4472 N of N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4473 N of N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5

1373 N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
1372 N. Cargo	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4407 NE of bldg. 8119, gate NA37, UAL MX	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4391 E of UAL MX, landside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4385 SW Corner of bldg. 8215, landside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4440 W of UAL MX, landside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4311 (old A-92) E of Gate Gourmet gate NM38 landside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4344 West of Sheraton airside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5

4342 West of Sheraton airside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5
4325 West of Sheraton gate NM38 airside	GOOD NEEDS MNTC EXPLAIN:	LEAVES SILT GRASS SAND TRASH NONE OTHER	NO YES EXPLAIN:	MUSTY PETROLEUM OTHER NONE	LIGHT MEDIUM HEAVY NONE	C-5

WEATHER FOR PAST 3 DAYS (Circle all that apply): COLD WET RAINY DRY OTHER:_____

INSPECTED BY: _____ DATE TIME: _____

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Appendix E
Illicit Discharge Detection and Elimination Procedure

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WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *1 of* 10
	Rev. #1

On March 11, 1992, the Port Commission adopted Ordinance No. 361, which provides the Port with the legal authority to prohibit illicit discharge into the storm sewer system owned or operated by the Port. Section 4 of the Ordinance requires written permission from the Port before connection to a Port storm sewer. Section 5 of the Ordinance authorizes the Port to inspect the land and storm sewers for violations of the Ordinance or applicable law that governs the conveyance or disposal of stormwater. The Ordinance allows the Port to control the contribution of pollutants into storm sewers owned or operated by the Port; the quality of stormwater discharged from the sites of industrial activity on land owned by the Port; and the discharge into storm sewers owned or operated by the Port of pollutants from spills, dumping, or the disposal of materials other than stormwater.

1.0 SCOPE

This work instruction applies to all Port-owned properties at the Hillsboro Airport

2.0 DEFINITIONS

2.1 *Illicit Discharge* - any discharge to a MS4 that is not composed entirely of stormwater, except as specifically exempted by the MS4 permit or authorized pursuant to an National Pollution Discharge Elimination System (NPDES) permit.

2.2 *Putrid odor* – odor that is associated with decomposing garbage, sewage, or \other non-chemical waste, characteristically sweet, rotten, or indicative of human waste.

3.0 RESPONSIBLITY

3.1 *The Water Resources Program Manager* is responsible for overall coordination of the Port-wide MS4 Permit, the Illicit Discharge Detection and Elimination Program and the annual reporting to the Department of Environmental Quality (DEQ).

3.2 *Environmental Operations* is responsible for illicit discharge inspections, investigations and documentation of the Port-owned oufalls at Swan Island, Rivergate, and all marine terminals.

3.3 *Environmental Operations* is responsible for illicit discharge inspections, investigations and documentation of the Port-owned oufalls at Portland International Airport (PDX), Portland International Center (PIC), Hillsboro Airport (HIO) the Troutdale Airport (TTD), the marine Terminal 2 (T2) Terminal 4 (T4) Terminal 6 (T6) and the Navigation Base.

4.0 PROCEDURE

Inspections at all Port-owned outfalls will be conducted between June and August of each year. The inspector will observe each stormwater outfall as identified on a current Port of Portland Storm Sewer System maintainable drawing. At least 72 hours (3 days)

of dry weather should precede the inspections. This procedure will also apply to any investigation of an illicit discharge to the Port's MS4 or storm sewer system.

4.1 Field Equipment

The following field equipment items are needed to conduct illicit discharge inspections:

- Illicit Discharge Inspection and investigation Forms
- Infrastructure Maps
- pH meter
- Thermometer
- Multi-probe for pH, Temp., Conductivity (if applicable)
- Sampling scoop/bucket
- Cellular phone
- Pens
- Gloves
- Digital Camera
- Required safety equipment (hard hats, ropes, safety vest, life vest, etc.)
- Laboratory sample coolers containing ice, sample containers, preservatives and chain of custody forms
- Emergency response phone list

4.2 Documentation

The Illicit Discharge Inspection and Investigation Form will be used to guide the inspector through all of the necessary observations. Any potential illicit discharge must be documented using this form. Additionally, each outfall will be photo documented to supplement the information captured on the form.

The following is required to be submitted to the Water Resources Environmental Program Manager by September 1 of each year to be included in the MS4 Permit annual report:

- A summary of the investigations: indicate the number of outfalls inspected, the number of outfalls that were discharging (include outfall ID number), and a description of follow-up actions and resolutions;
- Copies of the Illicit Discharge Inspection and Investigation forms;
- Copies of laboratory reports; and
- Labeled photographs of outfalls.

4.3 Procedures if a Dry-Weather Flow is Observed (or if an illicit discharge is suspected)

If a dry-weather flow is observed at an outfall, the inspector will proceed with the investigation of the discharge immediately. The Illicit Discharge Inspection & Investigation Form is completed as part of the investigation. Even if the source is

known when a discharge is discovered, the investigation form is completed as a record of the information and the corrective actions.

If possible, to determine the source of a potential illicit discharge, the inspector will track the flow as far as possible along the conveyance away from the outfall or point of observation referring to the storm sewer system map of the drainage basin. At a point where the storm system intersects the conveyance containing the flow and both conveyances have a flow, both conveyances are then tracked. This will be done by driving the basin at the time of discharge, or if access is not available at that time, further investigation of the site will be conducted at a later date when access has been secured. Follow up investigations will occur when a discharge is present.

The inspector must determine if the flow is from a permitted non-stormwater discharge as specified in the MS4 Permit. This characterization is based on the following regulatory list of allowable or permissible discharges identified below (40 CFR 122.26 (d) (2) (IV) (B) (l)):

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water
- Infiltration to separate storm sewers
- Individual residential car washing
- Flows from riparian habitats & wetlands
- Dechlorinated swimming pool
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Street wash water discharges

Based on this list, the inspector will determine if the discharge is permissible. If the source is not permissible, the investigator will ensure that the Port responds within the provisions of Ordinance 361 to terminate the flow. All action taken will be documented on an Illicit Discharge Inspection/Investigation Form. A Notice of Non-Compliance or Notice of Violation will be issued depending on the circumstances. *If the flow appears to be a spill of significant material, the inspector will activate the emergency spill response by calling the contacts on the emergency phone list.

Investigations into dry-weather flows or other reported illicit discharges will follow the IDDE Action Levels flow chart (attached). In addition, the following techniques may also be implemented to track sources of discharges: tenant and employee interviews, dye testing, conveyance videotaping and smoke testing. If the outfall is submerged and

access is available, the inspector shall track back up the conveyance system away from the outfall to a point where an observation can be made. The point of observation may be a manhole, inlet grate, catch basin, curb grate, etc.

Once the source of an illicit discharge is determined, the Port's response timing is dictated by specific MS4 Permit requirements as follows. The inspector must conduct an initial evaluation of the feasibility to eliminate the discharge, within 5 working days. If it is determined that the elimination of the illicit discharge will take more than 15 working days due to technical, logistical or other reasonable issues, an action plan to eliminate the illicit discharge in an expeditious manner must be developed. The action plan must be completed in 20 working days of determining the source of an illicit discharge. The action plan, response procedures, response plan or similar document developed for each illicit discharge must include an as soon as is practicable timeframe for elimination of the discharge.

The MS4 Permit also requires timely notification be made under the following circumstances. If a suspected illicit discharge is detected that originates from another jurisdiction's MS4 they must be notified within one day. Likewise, if an illicit discharge originating in the Port's storm sewer system flows into another jurisdiction's system, that municipality must be notified of the situation within one day. Contact the City of Portland's Bureau of Environmental Services Industrial Stormwater Program Supervisor to report discharges on properties not owned by the Port or for tenants holding stormwater permits issued by the City. Forward all documentation regarding City notifications to the Water Resources Program Manager.

4.4 Sampling and Analysis

Certain water quality parameters can serve as indicators of the likely presence or absence of illicit discharges. Some can be measured in the field. However, if the inspector deems it necessary to collect water samples for laboratory analysis (based on the attached IDDE Action Level Flow Chart or the inspector's knowledge of the industrial activities in the drainage area) to aid in determining the source of the potential illicit discharge, samples shall be collected. Sample collection, transport, and analysis will be conducted following the requirements of 40 CFR 136 (*Guidelines Establishing Test Procedures for the Analysis of Pollutants*).

Field analysis will be conducted using accurate and efficient hand held meters or test kits following established QA/QC procedures. The results from the field screen must be documented on the Illicit Discharge Inspection and Investigation Form.
If samples are taken for analysis by an Oregon-certified laboratory, they shall be labeled with the time, date, sample location and outfall identification number and prepared for shipment to ensure sample integrity is maintained. A chain of custody form shall be completed for every sample shipped. The laboratory must conduct all analysis according to requirements outlined in 40 CFR 136. If requested, the laboratory will provide the

inspector with sample containers, preservatives, and coolers prior to the field observations. The collected samples will be chemically preserved according to EPA approved methods. The samples shall be immediately placed in a laboratory cooler with ice. The suggested analytical methods to investigate discharges identified for sampling through the pollutant action level flow chart are provided in Table 1.

Table 1. Suggested IDDE Analytical Parameters and Methods

Parameter	Method	Detection Limit	Hold Time	Sample Container	Possible Sources
pH	EPA 150.1	--	15 min.	Field test	Detergents, washing, soda ash, acid, ***Normal range: 5.5 - 9.0***
Temperature	EPA 170.1	--	--	Field test	***High limit: 24° C/75°F***
Conductivity	EPA 120.1	--	--	Field test	***Normal range: 50 to 1500 µmhos/cm***
E. Coli	SM 9223	1 MPN/ 100 ml	6 hours	Bacteria bottle 100 ml, cooled to 4° C	Animal waste, failing septic systems, sanitary discharge
Total Chlorine	SM 4500-CLB	0.10 mg/L	24 hours	Glass 40 ml bottle unpreserved	Hydrant flushing, water line leak, washing
Ammonia Nitrogen	EPA 350.1	0.01-2.0 mg/L	28 days	1 L plastic or glass, with H_2SO_4 and cooled to 4° C	Industrial waste, sanitary discharge
Oil and Grease	EPA 1664	5.0 mg/L	28 days	1 L amber w/ HCl	Fueling, equipment leaks, spills
NWTPH/- HCID	EPA 3510	0.25 mg/L	7 days	1 L glass jar with Teflon coated lid, with HCL and cooled to 4° C	Wash water, fueling, spills, leaks, dumping.
Total Suspended Solids (TSS)	EPA 160.2	10 mg/L	7 days	500 ml poly unpreserved	Construction, erosion, poor housekeeping

4.5 Reporting Requirements

Environmental Operations staff must submit the following to the Water Resources Program Manager by September 1 of each year:

- An illicit discharge inspection summary noting the specific outfall IDs for each outfall inspected, number of outfalls inspected, number of outfalls observed with discharges, number of follow-up investigations, the outcome of the investigations;
- Copies of the Illicit Discharge Inspection and Investigation Forms, any Notices of Non-Compliance, Notices of Violation issued; and
- Labeled outfall photographs.

4.6 Records Retention:

WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *6 of* 10
	Rev. #1

Environmental Operations staff shall maintain all documentation related to the Illicit Discharge Detection and Elimination Program for a minimum of 6 years after the date of the MS4 permit expiration. Summary records will be retained as part of the Municipal Stormwater Permit documentation. Confirm retention timelines with the Port's Records Retention Calendar, accessible on Navigator.

5.0 VERIFICATION AND CORRECTIVE ACTION

5.1 This work instruction is to be reviewed on a periodic basis by the Water Resources Program Manager or designee to verify the purpose and scope is applicable to Port needs and the steps within adequately support the purpose and scope. If deficiencies are discovered, corrective action will be taken.

5.2 Port conformance with this work instruction will reviewed on a periodic basis by Water Resources Program Manager or designee. If nonconformance is discovered, corrective action will be taken.

6.0 REFERENCES

6.1 40 CFR 122.26 (d)(2)(iv)(B)

6.2 Port of Portland Ordinance 361

6.3 Port of Portland Municipal Separate Storm Sewer System Permit Number 101314

6.4 Port of Portland Stormwater Management Plan

7.0 ATTACHMENTS

7.1 Illicit Discharge Inspection and Investigation Form

7.2 IDDE Action Level Flow Chart

WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *7 of* 10
	Rev. #1

9.0 REVISION HISTORY

WI-POR-WTR-011 Illicit Discharge and Elimination System Program	
Date	**Description of Changes**
07/21/06	Original version
11/21/11	Updated per the requirements of the 2011 MS4 permit, IDDE Action Level Flow Chart added.
01/30/2017	Changed *Aviation and MID Environmental to Environmental Operations*

WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *6-8 of* 10
	Rev. #1

PORT OF PORTLAND

ILLICIT DISCHARGE INSPECTION & INVESTIGATION FORM

This form is to be completed following the protocol in the Port of Portland's Municipal Stormwater Permit
Illicit Discharge Detection and Elimination Work Instruction

Date: _____ Time: _____ Inspection Team: _____

Operating Area: ☐ PDX ☐ Marine Terminal: _____ ☐ Properties: _____

Time since last rain (≥ 0.1"): ☐ within the last 72 hrs. ☐ over 72 hrs.
(Note: Inspections should only be conducted if only 72 hours has elapsed since last measurable rain)

Outfall ID: _____ Photo #: _____
Location: _____

Outfall Type: _____ Channel/Pipe Diameter: _____

Flow Observed: ☐ Yes ☐ No Describe Flow: _____

If yes, complete remainder of form. If no, form is complete. Submit copies to Water Resources Program Manager.

Describe discharge in as much detail as possible (color, odor, sheen, solids, foam, etc.):
_____
_____
_____
_____
_____
_____

WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *6-9 of* 10
	Rev. #1

Evidence of permitted flow (40 CFR 122.26 (d)(2)(iv)(B)(1)): Is the source of the flow an obvious discharge from the list of exempt discharges from Schedule A (4) of the MS4 Permit?
☐ Yes ☐ No
See reverse side for list of exempt discharges.

Describe discharge source:

_____
_____
_____
_____

Is there any exposure to potential contamination? ☐ Yes ☐ No Describe:

_____
___

If the source is not on the list of allowable discharges, or discharge shows signs of contamination, conduct an illicit discharge investigation and complete the back of this form.

Submit the following documents to the Water Resources Program Manager by September 1:
☐ Illicit Discharge Inspection & Investigation Forms, Notice of Non-Compliance, and Notice of Violation Forms
☐ Copies of any laboratory results
☐ Copies of labeled photographs
☐ Summary Report

WORK INSTRUCTION: ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
	Owner: -Water Quality Manager
	Page: *6-10 of* 10
	Rev. #1

PORT OF PORTLAND

ILLICIT DISCHARGE INSPECTION & INVESTIGATION FORM

This side is to be completed immediately as documentation of a potential illicit discharge.

Date: _____ Time: _____ Inspection Team: _____

Operating Area/Location: _____

Outfall ID: _____
Photo#_____

Outfall Type: _____ Channel/Pipe Diameter: _____

Activities occurring upstream of outfall: _____
_____
_____
_____
_____

List parameters analyzed (use action level flow chart to determine): _____
_____
_____

Analytical lab providing analysis: _____

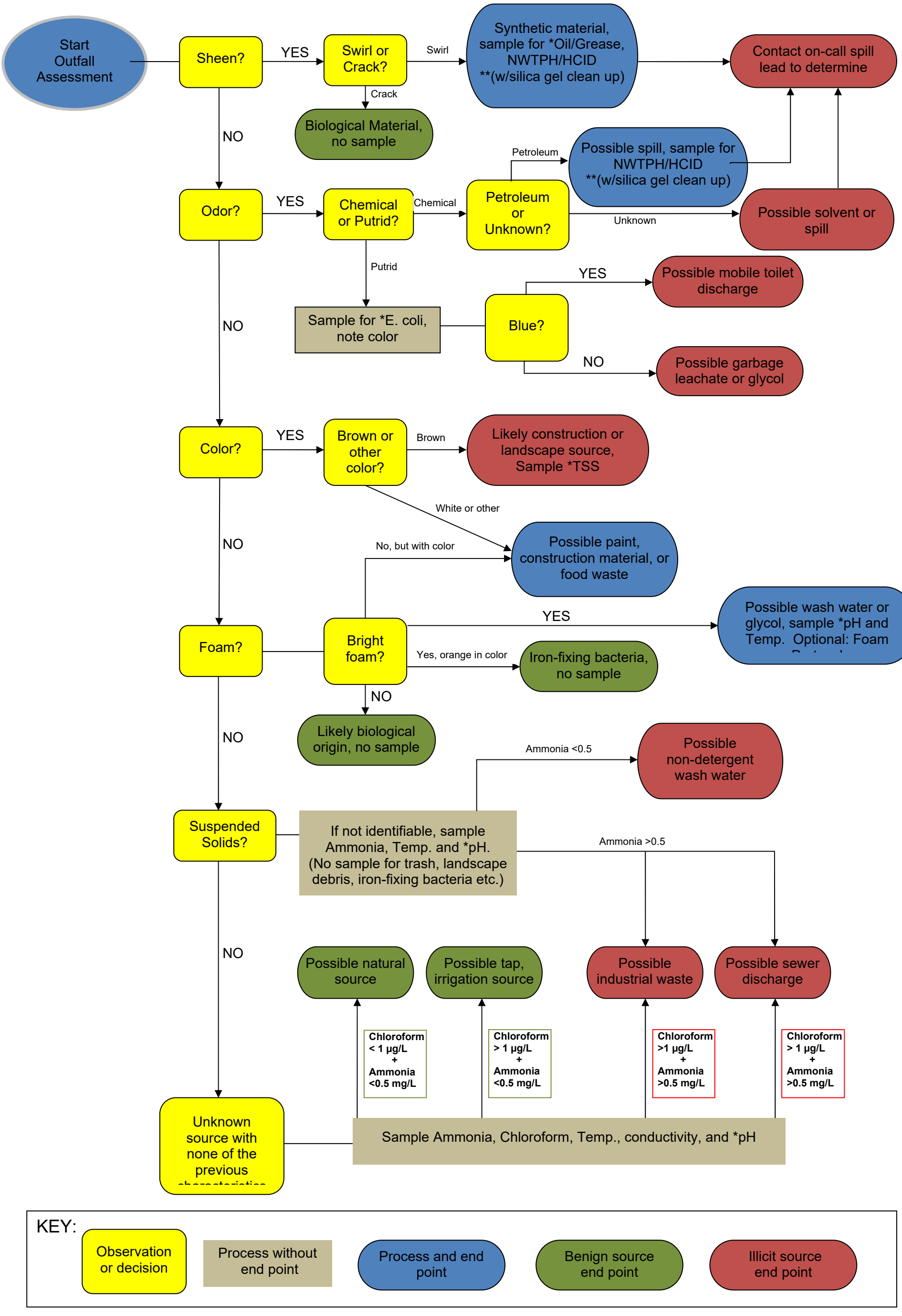
Temperature: _____ pH: _____ Conductivity: _____
Follow-up/corrective actions: _____
_____
_____
_____
_____

Persons Notified: _____

WORK INSTRUCTION:	Work Instruction #WI-POR-WTR-011
	Date: 01/30/2017
ILLICIT DISCHARGE DETECTION	Owner: -Water Quality Manager
AND ELIMINATION PROGRAM	Page: *6-11 of* 10
	Rev. #1

Authorized Non-Stormwater Discharges
These discharges are allowable or permissible discharges (40 CFR 122.26 (d)(2)(iv)(B)(1)) provided appropriate BMPs are used to minimize the impacts of pollutants: *water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, startup flushing of groundwater wells, aquifer storage and recovery (ASR) wells, potable groundwater monitoring wells, draining and flushing of municipal potable water storage reservoirs, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash waters, discharges of treated water from investigation, removal and remedial actions selected or approved by the Department pursuant to Oregon Revised Statute (ORS) Chapter 465, the state's environmental cleanup law; and discharges or flows from emergency firefighting activities.* ***For areas holding an 1200-Z permit the following additional discharges are authorized****;* Pavement wash waters where no detergents or hot water are used, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing; vehicle washing that does not use detergents or hot water unless the 1700-A NPDES permit is required for the discharge; routine external building wash down that does not use detergents or hot water; incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

WI-POR-WTR-011 Attachment B: Illicit Discharge Investigation Action Levels



***Sampling only conducted at outfalls regulated under an Industrial Stormwater General Permit as identified in the facility's Stormwater Pollution Control Plan (SWPCP). These sample results must be included in the facility's annual DMR report to DEQ.**

****If HCID results detect heavier fractions, re-analyze the sample with a silica gel clean-up to remove organic interference**

Appendix F
Spill Response Plan

Appendix G
Non-Airfield Deicing BMPs

PDX Pavement Deicing Best Management Practices (BMPs) for Port and Tenants

1.0 General BMPs

1.1 Proper Storage of Anti-icing and Deicing Materials

Pavement deicing and anti-icing materials must be stored in accordance with all applicable regulatory requirements. All permanent, aboveground deicing and anti-icing fluid storage tanks at the airport must be double-walled or equipped with secondary containment and undergo routine inspections. To prevent contamination of stormwater, tenant must use appropriate spill response techniques per their established spill response plan.

1.2 Weather Forecasting

The Port and tenants will obtain existing and forecasted weather conditions for T6 and existing conditions, to determine the timing and selection of anti-icing or deicing materials application. The overall goal is to contribute the lowest possible pollutant loading consistent with maintaining safe operating conditions.

1.3 Education and Training of Employees and Contractors

It is the responsibility of each tenant to develop and implement an employee and contractor education and training program about environmental requirements and proper application associated with the use of anti-icing and deicing materials, ensure awareness of best management practices and spill response procedures, and to inform and train personnel who are directly involved in anti-icing or deicing operations regarding required best management practices and operational procedures.

The training programs include (but are not limited to) the following:

- The requirements of the 1200-Z National Pollutant Discharge Elimination System permit
- Tenant best management practices
- Tenant operational procedures and requirements
- Tenant spill response plan and procedures
- Tenant material management practices

2.0 Pavement BMPs

2.1 Selection of Pavement Anti-icing and Deicing Materials

Tenants must select pavement anti-icing and deicing materials that provide the lowest pollutant loading. Sodium formate (solid) and potassium acetate (liquid) are recommended for pavement deicing because both products have a lower pollutant loading compared to other deicers. Anhydrous sodium acetate (solid) may be used as a backup product if sodium formate is temporarily unavailable.

2.2 Minimize Pavement Anti-icing and Deicing Area

Tenants and Port maintenance must apply deicing and anti-icing materials to the smallest possible area, consistent with safe operations, to minimize pollutant loading.

2.3 Recordkeeping

Each tenant is responsible for monitoring the types and quantities of airside pavement deicing and anti-icing materials used and purchased during the year. Tenants must also submit their usage to the Port annually.

T6 Maintenance monitors the types and quantities of airside pavement deicing and anti-icing materials used and purchased by the Port during.

3.0 Summary

To reduce pollutant loads to surface waters, tenants will implement BMPs, during the winter season as summarized below.

Table 1: Summary of Deicing Best Management Practices (BMPs)

BMP	Implementation
General	
Proper storage	All permanent, aboveground ADF storage tanks will be double-walled or equipped with secondary containment. Aboveground tanks will be routinely inspected. Spill response plans will be followed to minimize stormwater impacts.
Forecasting of anti-icing and deicing weather	Weather forecasting will be used to minimize deicing material usage while maintaining safe operating conditions in compliance with applicable regulations.
Education and training	Tenants will conduct permit, best management practice and spill management training for their employees and contractors.
Pavement	
Material selection	Select materials that provide the lowest pollutant loading conditions consistent with safe flight. Liquid potassium acetate and solid sodium formate will be used airside, unless sodium formate supply limitations warrant use of hydrated sodium acetate.
Reduce application amounts	Flow-controlled application equipment will be used to maximize material application and reduce volume of applied material.
Minimize pavement applications	Deicing and anti-icing material are applied to the smallest area practicable.