

**STORMWATER MANAGEMENT PROGRAM
NPDES PHASE II MUNICIPAL PERMIT**

**SECONDARY PERMITTEE
WAR045201**

12/2018

Stormwater Management Program

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I INTRODUCTION

A. PURPOSE

Stormwater management is a critical municipal responsibility. The effectiveness and efficiency of stormwater management have a direct impact on public health and safety, surface water quality, wildlife habitat, and future development. Consequently, the Federal government amended the Clean Water Act (CWA) in 1987 to regulate the management of stormwater runoff from municipalities and specific industrial classifications. State and federal regulations (“Phase II”) promulgated in response to those amendments require that designated municipalities obtain coverage under the Western Washington Phase II Municipal Stormwater Permit. The Port of Vancouver has prepared this Stormwater Management Program (SWMP) in fulfillment of the requirements of a Secondary Permittee as defined in that permit.

The purpose of this document is to describe efforts proposed by the Port of Vancouver as part of its Storm Water Management Program. The SWMP includes a general outline of stormwater management activities, which began in February 2007 and continue through the current August 1, 2013 – July 31, 2018 Phase II Western Washington Municipal Stormwater Permit. The program has been built around a suite of programmatic elements that the Port developed during the first permit cycle and continues to implement and develop further. These programmatic elements address the six minimum control measures required under the Western Washington Phase II Municipal Stormwater Permit (S6.):

- Public Education – The Port must educate tenants in its permitted jurisdiction about the importance of the storm water program and the tenant’s role in that program.
- Public Involvement / Participation – The Port must comply with all state and local notice requirements when implementing a public involvement/participation program.
- Illicit Discharge Detection and Elimination – The Port must develop and adopt appropriate policies to prohibit illicit discharges. The Port must also implement a program to detect illicit discharges and train all relevant staff.

· Construction Site Stormwater Runoff Control – The Port must develop a program to control the discharge of pollutants from construction sites greater than one acre in size within its permitted jurisdiction.

· Post-Construction Storm Water Management in New Development and Redevelopment - The Port must require long-term post-construction best management practices (BMPs) that protect water quality and control runoff flow be incorporated into development and significant redevelopment projects.

· Pollution Prevention and Good Housekeeping for Municipal Operations – The Port must examine its activities and develop a program to prevent the discharge of pollutants from these activities. At a minimum, the program must educate staff on pollution prevention and minimize pollutant sources.

This program is designed to reduce the discharge of pollutants from the Port’s municipal separate storm sewer system (MS4) to the maximum extent practicable (MEP) and to protect water quality. There are no residential areas located within Port jurisdiction, so the Port’s efforts will focus primarily on commercial and industrial activities within its boundaries, although neighboring residents may be included in some educational campaigns regarding stormwater pollution prevention. Based on the activities that occur within the Port, the pollutants of concern targeted by the Port’s Stormwater Management Program include, but are not limited to:

- Suspended Solids (e.g., sediment)
- Heavy Metals (specifically Copper and Zinc)
- Petroleum Hydrocarbons

Section 303(d) of the federal Clean Water Act requires Washington State to periodically prepare a list of all surface waters in the state for which beneficial uses – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are water quality limited estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years.

Based on 2015 Washington State Water Quality Assessment approved by EPA on July 22, 2016, the portions of the Columbia River to which Port stormwater discharges are 303 (d) listed as impaired bodies of the state of Washington as defined by the Washington Department of Ecology (Ecology) for Dissolved Oxygen and Temperature. However, at this time there are no federally mandated total maximum daily loads (TMDLs) or Water Quality Improvements (WQI) assigned to storm water discharges for those pollutants.

For TMDLs that are approved by EPA after this Permit is issued, Ecology may establish TMDL related permit requirements through future permit modification if Ecology determines implementation of actions, monitoring or reporting necessary to demonstrate reasonable further progress toward achieving TMDL waste load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued.

II BACKGROUND

A. REGULATORY BACKGROUND

In 1972, the Federal Water Pollution Control Act (subsequently referred to as the Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the Clean Water Act added Section 402(p), which established a framework for regulating storm water discharges under the NPDES Program. Consequently, in 1990 the United States Environmental Protection Agency (USEPA) promulgated regulations for permitting storm water discharges from specified types of industrial sites, including construction sites that disturb five acres or more and municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain permits for the discharge of storm water runoff from municipal collection systems to receiving waters. In 1997, the EPA issued NPDES Phase II rules regulating small municipally-owned separate storm sewers systems within census-defined urban areas.

In the *Statewide Strategy to Recover Salmon: Extinction is Not an Option* (strategy) (GSRO 1999), the State of Washington identified stormwater runoff as a major factor in the degradation of salmon streams in developed areas. The strategy recommended that the Department of Ecology (Ecology) update its 1992 *Stormwater Management Manual for the Puget Sound Basin (The Technical Manual)* to “provide guidance for applying most recent stormwater management science and technology to new development and redevelopment.” New federal regulations under the Clean Water Act and the Safe Drinking Water Act, as well

as state regulations under the Growth Management Act, made it necessary to expand the scope of the manual to include regions outside Puget Sound. In 2001, Ecology completed the *Stormwater Management Manual for Western Washington*. The manual provides guidance for new development and redevelopment regarding control of the quantity and quality of stormwater to comply with water quality standards and contribute to the protection of beneficial uses of the receiving waters. A subsequent revision was made in 2005 and 2012. The manual's requirements and BMPs became mandatory through the Western Washington Phase II Municipal Stormwater Permit issued by the Department of Ecology in February 2007.

The Western Washington Phase II Municipal Stormwater Permit requires the Port of Vancouver to obtain coverage under the permit as a Secondary Permittee since the Port meets the following three criteria:

1. The port owns and operates a stormwater drainage system; and
2. The drainage system eventually discharges to surface waters of the state; and
3. There are over 1,000 people per day using the area that is drained.

The Port of Vancouver has prepared this Stormwater Management Program (SWMP) in fulfillment of the requirements of a Secondary Permittee as defined in the Western Washington Phase II Municipal Stormwater Permit.

B. PORT JURISDICTION

The Port of Vancouver has handled a variety of bulk and break bulk cargoes since 1912 including general break-bulk, project and direct transfer cargoes, containers, automobiles, forest products, steel and aluminum products, liquid bulks, and a number of dry bulk commodities such as bauxite, urea, ceramic propants, mineral ores, concentrates, fertilizers, sands, clays, grains and other bulk agricultural commodities.

The Port currently has approximately 800 acres of developed industrial and marine property, which includes an average of 52 tenants and the Port's own maintenance facilities. This area also includes 1,034,610 square feet of dockside warehousing for general cargo and 160,000 square feet of bulk storage warehouses. In addition, the Port maintains 280 acres of open storage and marshalling yards adjacent to the docks.

The majority of the impervious area's stormwater are currently treated at the Port. The number and variety of treatment methods utilized at the port are extensive and include stormwater detention ponds, bio-filtration swales, bio-retention systems, hydrodynamic separation units and filter vaults.

The Port also includes another 500+ acres of land which includes Parcel 3. This acreage is collectively known as Columbia Gateway and will potentially be developed within the next 8-12 years. Since development of Columbia Gateway is not expected to begin before the end of the permit cycle for the Port's Municipal NPDES MS4 Permit and all stormwater currently infiltrates, no time will be spent discussing management of its stormwater in the SWMP.

Other areas of the Port that do not drain into the Port's MS4 are the Port's wetland properties. Stormwater from these properties infiltrates and therefore will not be included in the stormwater activities management described in the SWMP. These properties include the following:

- Parcel 2 Wetland, 31 acres of existing environmental mitigation on the south side of SR501, north of the Alcoa/Evergreen properties;
- Parcel 6 Wetland Mitigation Bank, located on approximately 165 acres north of SR501, the mitigation bank site plan includes enhancement of approximately 82 acres of wetlands, creation of an additional 27 acres of wetlands, and improvement of other natural areas, including songbird habitat;
- Parcel 1A Wetland, located on the south side of SR501 is approximately 10 acres.

Additional property located north of SR501, known as Parcels 7 and 8, includes 100+ acres of light industrial zoned property. The port has begun preparing approximately 50 acres for near-term development, with the remaining acres expected to be developed later. Currently the property is for lease or sale. If the property remains in Port ownership after development, the stormwater from these areas, which currently infiltrates or is attached to the bioretention system, will be need to be included in the SWMP.

The Port purchased 218 acres of land in 2009 formerly owned by Alcoa Incorporated and Evergreen Aluminum LLC, located next to the Columbia River at the west end of the Port's Terminal 4. The Port is currently developing the land for maritime and industrial use. A rail loop track has been constructed on

this site. Thirty acres of graveled project cargo laydown area has also been developed. The existing settling ponds adjacent to the site are used to manage stormwater from the site. The Port has named this newly acquired property as Terminal 5. Notification of this jurisdictional boundary change occurring in 2009 was submitted in 2010 with the 2009 annual report.

C. HISTORY OF PORT'S STORMWATER PROGRAM

The Port of Vancouver was issued an Industrial Stormwater General Permit (previously under the baseline general permit) to cover stormwater from all impervious areas of Port property in 1992 in response to federal Clean Water Act and state Water Pollution Control Act which require the discharge of wastewater, including stormwater, to be permitted. The Code of Federal Regulations (CFR) Title 40, Part 122.1 (b) (40 CFR 122.1 (b)) requires permits for the discharge of pollutants from any point source into waters of the United States. The Port's current Industrial Stormwater General Permit is set to expire on December 31, 2019.

Recent state and federal regulations, promulgated in response to amendments to the Clean Water Act (CWA) require designated municipalities, including ports, obtain coverage under the Western Washington Phase II Municipal Stormwater Permit. As required, the port obtained coverage as a Secondary Permittee under the Western Washington Phase II Municipal Stormwater Permit. This permit became effective September 1, 2012 and scheduled to expire on July 31, 2018. The Western Washington Phase I and Phase II permits expire on July 31, 2018. Currently, the Department of Ecology has decided to extend the current (2013-2018) Western Washington Permits for one year. The permits will reissue on July 1, 2019, and become effective Aug. 1, 2019 through July 31, 2024.

III PROGRAM ELEMENTS

A. SWMP COMPONENT: PUBLIC EDUCATION AND OUTREACH

1. GENERAL PERMIT SECTION: S6.D.1.

Overview:

The Port of Vancouver administers an active tenant outreach effort. The Port regularly inspects tenant facilities during scheduled tenant audits. Outreach via printed material occurs regularly on our website and through regular newsletter publications and emails.

Section: S6.D.1.a.

The Port purchased custom drain markers which were imprinted with the message “Dump No Waste, Drains to Columbia River” (Figure 1). These markers were installed on all storm drains on Port property in 2008 that are located in maintenance yards, parking lots, along sidewalks and at pedestrian access points.

Drain markers are inspected annually to ensure drain markers are still in-place and visible. Any markers that become damaged or removed will be replaced within 90 days of becoming no longer clearly visible and/or readable.



Figure 1

Section: S6.D.1.b.

Beginning in 2008 and continuing into the future, the Port of Vancouver distributes educational information to its tenants through quarterly tenant newsletters. These are distributed through direct and electronic mailings to tenants and shipping agents.

Sponges in the shape of a water drop with illicit discharge reporting instructions were given to tenant attendees at both the 2008 and 2009 tenant annual forums (Figure 2).



Figure 2

In 2008, the port invited its Municipal Stormwater permit manager, Greg Winters, to speak to tenants at the tenant forum regarding the requirements of the permit and how it affects them. At the 2009 tenant forum, Port environmental staff updated tenants on the elements of the permit and how those elements relate to their businesses at the port.

In 2009 through present, the port distributed additional educational information to tenants and shipping agents through newsletters. Historically, the following information has been included:

- i. How stormwater runoff affects local water bodies
- ii. Alternative equipment washing practices including cars and trucks that minimize pollutants in stormwater
- iii. Benefits of proper vehicle maintenance and alternative transportation choices; proper handling and disposal of vehicle wastes,
- iv. Hazards associated with illicit connections

B. SWMP COMPONENT: PUBLIC INVOLVEMENT AND PARTICIPATION

1. GENERAL PERMIT SECTION: S6.D.2.

Overview:

The Port coordinates on environmental issues with a number of public advisory, stakeholder, and citizen volunteer groups, including those listed below. The Port will continue to work with these groups to ensure that tenants and surrounding residents are informed about and have the opportunity to participate in the development and implementation of the Port's stormwater program.

- Washington Department of Fish and Wildlife
- Lower Columbia Fish Recovery Board
- Washington Department of Ecology
- Washington Department of Health
- U.S. Army Corps of Engineers
- City of Vancouver
- Clark County
- Vancouver Lake Watershed Partnership
- Audubon Society
- Vancouver Wildlife League
- Fruit Valley Neighborhood Association
- Vancouver Watershed Council
- Southwest Washington Stormwater Partners

Section: S6.D.2.a.

The Port published a public notice on the our website (<http://www.portvanusa.com>) and solicited public review for the SWMP within the required 180 day timeframe before the expiration the Western Washington Phase II Municipal Stormwater Permit.

Section: S6.D.2.b.

The Port posts the most recent updated SWMP on its website that is available to all tenants and the general public. Tenants were informed through the port’s monthly tenant newsletter, *Portfolio*, on how to access this information as well as provided the link at past Tenant Environmental Forums. The link to the website where this information can be found is:

<http://www.portvanusa.com/environmental-services/water-quality/>

C. SWMP COMPONENT: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

GENERAL PERMIT SECTION: S6.D.3.

Overview:

The Port of Vancouver has developed a formal policy prohibiting illicit discharges following the requirements of the Western Washington Phase II Municipal Stormwater Permit. The Port of Vancouver has historically administered an equivalent program through its leasing contracts. All Port leases

include provisions requiring Port tenants comply with all federal, state and municipal laws, ordinances and regulations. When an illicit discharge is found, the Port Property Manager is informed and initiates enforcement of the lease provisions.

Section: S6.D.3.a.

It is Port of Vancouver policy to comply with all relevant ordinances, rules and regulations of the local jurisdictions in which the Port is located that govern non-stormwater discharges.

Section: S6.D.3.b.

The Port has developed and adopted appropriate policies prohibiting illicit discharges and illegal dumping. This policy addresses illicit connections; non-stormwater discharges; and spilling, dumping, or otherwise improperly disposing of: hazardous materials, pet waste and litter. It also includes an enforcement plan to ensure that illicit discharge policies are enforced.

The Port of Vancouver's Illicit Discharge Detection and Elimination (IDDE) Policy is attached to this document as Appendix A. It is also available on the ports website to tenants and the public at:

<http://www.portvanusa.com/environmental-services/water-quality/>

Section: S6.D.3.c.

As required by the permit, the port has developed a storm sewer system map showing the locations of all known storm drain outfalls, labeled receiving waters and delineated areas contributing runoff to each outfall. The map will be available on request to the Department of Ecology or to other Permittees or Secondary Permittees.

Section: S6.D.3.d.

The Port conducts field inspections and visual inspections for illicit discharges at all known port outfalls that discharge into the Columbia River. Records of the inspections and follow-up activities are kept on file at port offices. A blank inspection form used for these inspections is attached as Appendix B. A summary of illicit discharges occurring during each calendar year is generated annually and attached to each annual report for the corresponding calendar year. A blank Illicit Discharge Summary form is attached here as Appendix C.

Section: S6.D.3.e.

As required by the Permit, the Port has developed and implemented a spill response plan that includes coordination with a qualified spill responder. The port maintains an emergency response plan for the entire port. This plan covers spill response procedures and notifications. In addition, the port maintains a Spill Prevention Control and Countermeasure Plan (SPCC) that covers the port's maintenance facility which includes the ports fueling station.

Section: S6.D.3.f.

The port provides annual training to educate relevant staff on proper best management practices for preventing spills and illicit discharges. The training is performed at safety and/or department meetings of the maintenance, marine and security staff at a minimum. Others are trained as necessary.

D. SWMP COMPONENT: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

GENERAL PERMIT SECTION: S6.D.4.

Overview:

The Port realizes that pollutants from construction activities can enter into the MS4 system if not managed properly. Construction activities on port property that require a Construction NPDES permit are required to obtain a Construction NPDES Permit with the Washington Department of Ecology. If the port project requiring the permit will be performed by port crews, the port will obtain the permit and continue to be the permit holder throughout the construction project, following the conditions of the permit. On construction projects requiring a Construction NPDES Permit that will be performed by a contractor, the port will obtain the permit prior to construction and then transfer the permit to the awarded contractor for the construction phase of the permit if warranted until the construction project is concluded at which time the permit will be terminated or transferred back to the port. While the contractor is the Permittee, the contractor is responsible for meeting the permit conditions per the language in port contracts for such construction projects. The construction project's Project Manager will oversee the contract language which includes requirements for the contractor to provide a Certified Erosion and Sediment Control Lead (CESCL) for the project.

Section: S6.D.4.a.

The Port complies with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Port is located that govern construction phase stormwater pollution prevention measures. In most construction projects, it is the contractual responsibility of the port's contractors to obtain and comply with NPDES General Construction Stormwater permits. Port Project Managers oversee contract compliance with such contractors to ensure conditions are met.

Section: S6.D.4.b.

For all construction projects under the control of the Port which require a construction stormwater permit, the Port or its contractor obtains coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activities or an alternative individual NPDES permit prior to discharging construction related stormwater.

Section: S6.D.4.c.

When necessary and/or approved by the Port, the Port will coordinate with the City of Vancouver and other local jurisdictions regarding projects owned and operated by other entities which discharge into the Port's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules, and regulations of the local jurisdiction(s).

Section: S6.D.4.d.

The Port coordinates and provides training to educate relevant staff in erosion and sediment control BMP's and requirements, or hires trained contractors to perform the work. The Port has obtained certification for three Environmental staff as Certified Erosion and Sediment Control Leads (CESCL) through a Washington Department of Ecology approved course through the Building Industry Association of Washington (BIA). The primary focus of certifying the port staff members is to provide more oversight involved with the compliance of the MS4 permit as well as other stormwater permits.

Section: S6.D.4.e.

The Port has in the past and will continue in the future to provide access for inspection of construction sites or other land disturbances, which are under the control of the port during the active grading and/or construction period.

E. SWMP COMPONENT: POST -CONSTRUCTION STORMWATER MANAGEMENT FOR NEW DEVELOPMENT AND REDEVELOPMENT

GENERAL PERMIT SECTION: S6.D.5.

Overview:

Port leases include provisions requiring that port tenants comply with all federal, state and municipal laws, ordinances and regulations. In addition, contractors that are awarded construction bids on Port property are required to obtain the appropriate permits prior to construction, per port standard contract language.

Section: S6.D.5.a.

Port tenants and contractors are required to comply with all relevant federal, state and municipal ordinances, laws, and regulations of the local jurisdictions through lease and contract language.

Section: S6.D.5.b.

Project and property managers for the Port are responsible for coordinating with tenants and contractors whose post-construction stormwater may pose a threat to water quality if left untreated. Tenant audits serve as a detection device to stormwater management from post-construction tenant-controlled projects. Tenant audits also allow the port a mechanism to assist tenants and contractors achieve compliance with all relevant ordinances, rules and regulation of local jurisdictions.

F. SWMP COMPONENT: POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

GENERAL PERMIT SECTION: S6.D.6.

Overview:

This section describes permit requirements related to the Port of Vancouver's Operation and Maintenance program to ensure that BMPs continue to function properly.

Section: S6.D.6.a.i-vii

The Port has developed and implemented a municipal operation and maintenance (O&M) plan to minimize stormwater pollution from activities

conducted by the Port and its tenants (Appendix D). This Operation and Maintenance (O&M) Plan includes pollution prevention and good housekeeping procedures for all of the following operations, activities, and types of facilities subject to the Phase II Permit:

- i. Port of Vancouver's stormwater collection system, including catch basins, stormwater sewer pipes, open channels, culverts, structural stormwater controls, and structural runoff treatment and/or flow control facilities.
- ii. This O&M plan establishes maintenance standards meeting the requirements of the Stormwater Management Manual for Western Washington, Volume V, Chapter 4.
- iii. Roads, highways, and parking lots.
- iv. Port of Vancouver's vehicle fleet (in areas not subject to the POV's Industrial Stormwater General Permit).
- v. External Building Maintenance.
- vi. Open Spaces.
- vii. Material Storage Areas, Heavy Equipment Storage Areas, and Maintenance Areas (in areas not subject to the POV's Industrial Stormwater General Permit).
- viii. Other facilities expected to discharge contaminated runoff.

Section: S6.D.6.b.

The Port of Vancouver is covered under the Industrial Stormwater General Permit #WAR000424 based on the Port's SIC code 4491 for Water Transportation and Marine Cargo Handling. This permit provides the pollution prevention actions necessary for industrial activities at the port's vehicle maintenance facility, Terminal 2, and Terminal 3.

Section: S6.D.6.c.

Sufficient documentation and records will be kept when work has been completed pursuant to S6.D.6.a.i through vii. .

Section: S6.D.6.d.

As required, all employees whose construction, operations, or maintenance job functions may impact stormwater quality receive annual pollution prevention training. The training includes, at a minimum, the following topics:

- i. The importance of protecting water quality

- ii. The requirements of this permit
- iii. Operation and maintenance requirements
- iv. Inspection procedures,
- v. Ways to perform their job activities to prevent or minimize impacts to water quality, and
- vi. Procedures for reporting water quality concerns, including potential illicit discharges.

APPENDIX A

Illicit Discharge Detection and Elimination Policy

Port of Vancouver Illicit Discharge Detection and Elimination (IDDE) Policy

Purpose

Under the Western Washington Phase II NPDES Municipal Stormwater Permit (S6.D.3.b), the Port of Vancouver (POV) is required to develop and adopt appropriate policies prohibiting illicit discharges and illegal dumping to POV's separate storm sewer system. The permit also requires the POV to develop and implement an enforcement plan using identified enforcement mechanisms to ensure compliance with the illicit discharge policy.

The purpose of this IDDE policy is to protect the water quality and public health and safety on and around the Port of Vancouver, and to meet all requirements of the POV's Phase II Municipal Stormwater Permit. This policy addresses the following discharges to the POV's separate storm sewer system: illicit connections and non-stormwater discharges including spills of hazardous materials and improper disposal of pet waste and litter.

Illicit Connections

Illicit connections include any manmade conveyances connected to the POV's municipal separate storm sewer system without a permit, excluding roof drains and all other similar type connections. Examples of illicit connections include, but are not limited to: sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the POV's municipal separate storm sewer system.

It is POV policy that no illicit connections to the POV's municipal separate storm sewer system are permitted. This includes, but is not limited to, the construction, use, maintenance or continued existence of illicit connections to the storm drain system. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or prevailing policy at the time of connection.

Illicit Discharges

Illicit discharges are any discharges to the POV's municipal separate storm sewer system that are not composed entirely of storm water, except discharges pursuant to an NPDES stormwater permit (other than the NPDES permit for discharges from the POV's municipal separate storm sewer system) and discharges resulting from fire fighting activities.

This policy prohibits the following categories of non-stormwater discharges unless the stated conditions are met:

- Discharges from potable water sources, including water line flushing, hyper chlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.

- Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities and water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction.
- Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.
- Street and sidewalk wash water, water used to control dust, washdown of equipment, and routine external building wash down that does not use detergents. The POV shall reduce these discharges through, at a minimum, public education activities and/or water conservation efforts conducted by the POV and/or the local jurisdiction. To avoid washing pollutants into the MS4, the POV shall minimize the amount of street wash and dust control water used. At active construction sites, street sweeping shall be performed prior to washing the street.
- Other non-stormwater discharges shall be in compliance with the requirements of a stormwater pollution prevention plan reviewed by the POV which addresses control of such discharges.

The POV's policy does not prohibit the following categories of non-stormwater discharges:

- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped ground water
- Foundation drains
- Air conditioning condensate
- Irrigation water from agricultural sources that is commingled with urban stormwater
- Springs
- Water from crawl space pumps
- Footing drains
- Flows from riparian habitats and wetlands

Provisions to Require Access

Lease language and access requirements may differ from tenant to tenant and will be addressed on a case by case basis, but at a minimum provides access to the POV to all leased property.

Monitoring & Enforcement Procedures

The POV monitors for illicit connections and illicit discharges in the following manner:

1. By comprehensively mapping the POV's stormwater system, including maintaining a database of all known storm drain outfalls, labeling receiving waters, and delineating areas contributing runoff to each outfall. This map is made available on request to the Department of Ecology and other Permittees or Secondary Permittees.
2. By providing POV Environmental staff with regular training and education on best management practices for preventing and identifying illicit discharges, including spills.
3. By conducting yearly field inspections of at least one-third (on average) of all known outfalls. Inspection reports are recorded and filed in the relevant database or with Ecology. In the event of the discovery of an illicit discharge, the discharge is recorded and analyzed by a POV Environmental Specialist to determine the source, extent, and substance of the discharge. Enforcement procedures, as outline below, are implemented as necessary.
4. By auditing and inspecting tenant leaseholds through the POV environmental audit program and advising tenants of relevant stormwater requirements. Enforcement procedures, as outlined below, are implemented as necessary.

In the event of an illicit discharge the POV shall implement the following enforcement procedures:


1. Contact the responsible party immediately to inform party of the illicit discharge and establish corrective action in cooperation with the POV. Ecology and all relevant entities shall be contacted when required.
2. Upon repeat or continued illicit discharges, the POV shall promptly dispatch a POV environmental employee to conduct an assessment to determine the source of the discharge and risk of reoccurrence. Upon determination of the severity of the discharge and risk of occurrence, the environmental employee, in conjunction with the Environmental Director, may contact the POV Property Manager to report the discharge as a potential violation of the tenant's lease.
3. Upon continued violations after implementation of the above steps, the Environmental Director and Facilities and Economic Development Director shall investigate whether the offending tenant is in breach of their lease. If such a determination is made, the Environmental Director and the Facilities and Economic Development Director shall recommend an appropriate remedy to the Executive Director, up to and including eviction of the tenant in question and cancellation the lease, dependent on the default language of the offending tenant's lease and whether the tenant is in material breach.

Review of Policy

This policy shall be reviewed as deemed appropriate by the Environmental Director.

ADOPTED by the Environmental Director of the Port of Vancouver this 17 day of February, 2010.

PORT OF VANCOUVER, USA


Patty Boyden, Environmental Director

APPENDIX B

Outfall Visual Inspection Log Form

APPENDIX C

Illicit Discharge Summary Form

APPENDIX D

Operation and Maintenance Plan

Stormwater Management Program NPDES Phase II Municipal Permit

**POV Pollution Prevention and Good Housekeeping for
Municipal Operations
O&M Plan**

1.0 Overview - Pollution Prevention: Operation & Maintenance Plan

Under the Port of Vancouver's (POV) Western Washington Phase II Municipal Stormwater Permit § S6.D.6 (*Pollution Prevention and Good Housekeeping for Municipal Operations*), the POV is required - no later than three years from the date of permit coverage - to develop and implement a municipal operation and maintenance (O&M) plan to minimize stormwater pollution from activities conducted by the POV, a Secondary Permittee. The purpose of this O&M plan is to ensure that Best Management Practices (BMPs) are implemented in and around the Port of Vancouver. This plan applies to all stormwater treatment facilities, flow control facilities, and catch basins on properties operated by the POV, except where the Phase II permit requires otherwise. This O&M plan does not cover POV or tenant operations permitted under the Industrial Stormwater General Permit (ISGP).

The POV tracks and schedules all stormwater maintenance through the use of a Computerized Maintenance Management System (CMMS). Work orders are generated and entered into the port's CMMS. Stormwater maintenance work orders vary from monthly, quarterly, and annual maintenance depending on the location and type of maintenance that is required. Work orders in the CMMS are electronically documented in the system for easy access and tracking capability.

This Operation and Maintenance (O&M) Plan establishes maintenance standards meeting the requirements of the 2012 SWMMWW, Volume V, Chapter 4. The O&M Plan includes pollution prevention and good housekeeping procedures for all of the following operations, activities, and types of facilities subject to the Phase II Permit:

- i. Port of Vancouver's stormwater collection system, including catch basins, stormwater sewer pipes, open channels, culverts, structural stormwater controls, and structural runoff treatment and/or flow control facilities.
- ii. Roads, highways, and parking lots.
- iii. Port of Vancouver's vehicle fleet (in areas not subject to the POV's Industrial Stormwater General Permit).
- iv. External Building Maintenance.
- v. Open Spaces.
- vi. Material Storage Facilities and Heavy Equipment Maintenance or Storage Yards (in areas not subject to the POV's Industrial Stormwater General Permit).

- vii. Other facilities that would reasonably be expected to discharge contaminated runoff.

1.1 O&M Plan Development

This O&M plan was developed after a comprehensive documentation of stormwater facilities at the POV and review of existing operation and maintenance operations.

- General BMP information is available at <http://water.epa.gov/polwaste/npdes/swbmp/>
- General Pollution Prevention and Good Housekeeping resources are available at <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/pollutionPREVENTION.html>
- The Stormwater Management Manual for Western Washington (SWMM) is available at <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html> and in the POV Environmental Department.

Best Management Practices (BMPs) required by identified Port operations and the Phase II Permit are referenced below for each of the required elements of the Plan. Copies of the BMPs applicable to site operations from Ecology's Stormwater Management Manual for Western Washington are provide in Appendix A to this Plan.

1.2 Responsible Individuals

Responsibility for documentation, revision, and oversight of this O&M plan shall be vested in the POV's Director of Environmental Services. The Director may delegate such responsibility to POV staff or outside consultants. Plan implementation is generally the responsibility of the POV maintenance department, led by the POV Facility Manager. Any such person with delegated responsibility receives proper education and training with respect to the POV's Phase II Stormwater Permit and this O&M plan.

2.0 Pollution Prevention for Municipal Operations

2.1.1 Stormwater Collection and Conveyance System

- The POV has adopted the maintenance standards established in the 2012 SWMMWW, Chapter 4, Volume V.
- All POV stormwater maintenance is ordered and scheduled by using the POV's CMMS.
- Port maintenance staff inspect all stormwater collection system structures on at least an annual basis, remove trash, debris, and sediment, and perform necessary repairs in accordance with the requirements listed in Table 4.5 (Maintenance Standards) and Section 4.6 (Maintenance Standards for Drainage Facilities) of Volume V (Runoff Treatment BMPs) of Ecology's SWMM (Appendix A). Maintenance of the POV's stormwater and conveyance systems follow procedures outlined in *BMPs for Maintenance of Stormwater Drainage and Treatment Systems (S417)* and *BMPs for Maintenance of Roadside Ditches (S416)* and for *Landscaping and Lawn Vegetation Management (S411)* listed within the SWMMWW Vol. IV, Chapter 2.
- Regularly scheduled inspections and cleaning of catch basins, storm pipes, open channels, culverts, structural stormwater controls, and structural runoff treatment and/or flow control facilities according to the requirements of the Stormwater Management Manual for Western Washington are performed at the facilities identified in Table 1 & 2. If problems are observed or if catch basins are inspected for other purposes and are more than 60% full, then a work order for the cleaning will be initiated on the ports' CMMS. Inspections are also performed during and after construction of new stormwater collection and conveyance systems. Sediment cleaned from the storm system is disposed of offsite at an appropriate disposal facility.
- Spot checks of stormwater treatment and flow control facilities (Table 1) shall be conducted following a 24 hour storm event with a 10-year or greater recurrence interval. The 10-year, 24-hr storm depth for Vancouver is 3.0 inches. The Port will monitor local weather stations and conduct spot checks of required facilities following storm events exceeding 3.0 inches.
- Catchbasins, filter vaults, and vortech units (Table 2) on POV-operated parcels are inspected and cleaned annually or as needed. Port tenants are responsible for inspecting and cleaning catchbasins on the property they lease. Current lease language in port leases defines that tenants are responsible for compliance with the port's NPDES Municipal Stormwater permit. The environmental department is also part of lease negotiations in creating new leases as well as revising current

leases to ensure for adequate language for stormwater protection. Tenants are given the option of having the port conduct stormwater maintenance or hiring an outside contractor to perform the maintenance for them. The port will document and check for compliance through maintenance inspections, and environmental tenant audits.

Table 1

Stormwater Facility	Inspection Frequency
T2 Biofiltration Pond	Quarterly + Spot Inspections
T4 Retention Pond	Quarterly + Spot Inspections
T5 Lagoons	Quarterly + Spot Inspections
Subaru Bioswales	Quarterly + Spot Inspections
Gate 5 Bioswale	Quarterly + Spot Inspections
CIP Biofiltration Ponds	Quarterly + Spot Inspections
Parcel 1A Infiltration Swale	Quarterly + Spot Inspections

Table 2

Contech Stormfilter Inventory	Inspection Frequency
ELF	1 x year
Gate 5	1 x year
T3 Rail Access Crossing	1 x year
Decant Facility	1 x year
Farwest	1 x year

2.1.2 Roads, Highways, and Parking Lots

- Deicing and anti-icing operations shall follow procedures outlined in *BMPs for Deicing and Anti-Icing Operations (S405)* and *BMPs for Urban Streets (S430)* within the SWMM, Vol. IV, Chapter 2.
- Deicing, anti-icing, and snow removal practices at the POV include: application of de-icing/anti-icing agent to walkways and access roads on POV property, piling of snow in the event of significant snowfall, and all-season road and parking lot cleaning by an Elgin Crosswind regenerative air street sweeper to

reduce debris and other pollutants. Street sweeping occurs on an as needed basis in most areas. Specific areas on the terminals that see more traffic and cargo movement receive street sweeping service on a weekly to daily basis. Street sweepings are disposed at a landfill under a disposal permit with Waste Connections.

- Current practice by POV-managed labor forces involves minimal de-icing. De-icing is limited to weather events causing hazardous safety environments for POV personnel and equipment. Primary de-icing agent for terminal operations is limited to AWI "Roadrunner" De-icer. Primary de-icing agent for POV walkways is limited to sidewalks around the port administration office (Building 3103), terminal operations office (Building 2985), port maintenance shop (Building 3205) and the port security office (Building 2501). De-icing agents are stored indoors at the maintenance shop (Building 3205) prior to use.
- Snow piling is conducted only after significant weather events (generally over 3" of snow in a 24-hour period). Snow is piled by hand shovel and with equipment on to permeable biofiltration surfaces and allowed to infiltrate, wherever practicable.

2.1.3 Vehicle Fleet Maintenance

- Vehicle fleet maintenance shall follow procedures outlined in *BMPs for Maintenance and Repair of Vehicles and Equipment (S414)*, *BMPs for Parking and Storage of Vehicles and Equipment (S421)*, *BMPs for Spills of Oil and Hazardous Substances (S426)*, and *BMPs for Washing and Steam Cleaning Vehicles/Equipment/Building Structures (S431)* within the SWMM Vol. IV, Chapter 2.
- The POV maintenance vehicle fleet is maintained by POV Maintenance staff. Cleaning and washing takes place in areas permitted separately under the Port's Industrial Stormwater General Permit. Maintenance is performed in the maintenance shed, and all fuels, fluids, parts, and other materials are handled and disposed of according to BMPs identifies in the SWPPP prepared under the ISGP. Painting of fleet vehicles is conducted off-site by commercial contractors. POV terminal operations vehicle washing does not occur on port property. Port fleet vehicles are taken to a commercial car washing facilities in Vancouver, Washington. POV terminal operations equipment, including cranes and special-purpose haulers and trucks, are maintained and repaired by Ports America staff under the supervision of POV terminal staff. Staff is trained yearly on all

applicable BMPs (as listed above) for parking, storage, washing, maintenance, and repair of terminal equipment.

2.1.4 External Building Maintenance

- External building maintenance shall follow procedures outlined in *BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment (S420)*, *BMPs for Roof/ Building Drains at Manufacturing and Commercial Buildings(S424)*, and *BMPs for Washing and Steam Cleaning Vehicles/Equipment/Building Structures (S431)* within the SWMM Vol. IV, Chapter 2.
- POV buildings owned or operated by the port are maintained by POV maintenance staff. Exterior (including roofs, gutters, and siding) cleaning and washing is performed by trained technicians and direct wash water to appropriate treatment facilities that discharge to sanitary sewer or to a containment area for proper disposal offsite. Painting is performed by outside contractors who prepare and paint surfaces to manufacturer requirements and utilize secondary containment to prevent spills. BMPs are reviewed with these contractors are prior to commencement of work.

2.1.5 Open Spaces

- Open space maintenance shall follow *BMPs for Landscaping and Lawn/Vegetation Management (S411)* within the SWMM Vol. IV, Chapter 2.
- Open spaces at the Port of Vancouver include significant wetland and former farm acreage, as well as large bio-swales. Bio-swales were constructed in accordance with the current addition of the SWMM for Western Washington when they were constructed and are annually monitored for integrity. No significant operations occur on wetland or farm acreage, and these areas are monitored several times a day for unauthorized access and dumping by POV security. Violators are prosecuted and mitigation efforts are immediately implemented by POV security and Environmental staff.
- Landscape maintenance and vegetation disposal is conducted by port maintenance crews and contracted landscapers according to *BMPs for Maintenance of Roadside Ditches and for Landscaping and Lawn Vegetation Management* listed within the SWMM Vol. IV, and included in Appendix A. Vegetation is disposed off-site by port crews and contracted landscapers. Vegetation generated by port crews is disposed of at a Waste Connections transfer facility designed for such debris.

- The POV does apply pesticides on POV property. Pesticides are applied by port maintenance crew that are licensed by the State of Washington, Department of Agriculture as licensed pesticide applicators. The port applies pesticides where required by Clark County to control noxious weeds.
- Trash pickup is an ongoing task by POV maintenance staff, and disposal is performed by Waste Connections. Dumpsters lids are kept closed when not in use.

2.1.6 Material Storage Facilities and Heavy Equipment Maintenance or Storage Yards

- Material and heavy equipment storage areas owned or operated by the Port shall follow procedures outlined in *BMPs for Parking and Storage of Vehicles and Equipment (2-48)*, *BMPs for Loading and Unloading Areas for Liquid or Solid Material (2-29)*, *BMPs for Roof/ Building Drains at Manufacturing and Commercial Buildings (2-51)*, and *BMPs for Washing and Steam Cleaning Vehicles/Equipment/Building Structures (2-64)* within the Stormwater Management Manual for Western Washington, Vol. IV.
- Material storage areas and heavy equipment storage areas owned and operated by the port are stored at the POV Maintenance Shop, which is permitted under the ISGP.
- The port has conducted a review off all port tenants currently under lease, all tenants who trigger the need for coverage under a NPDES Industrial General Permit (ISGP) or a Sand and Gravel Stormwater Permit have coverage. The port reviews tenant operations during environmental tenant audits, redevelopment projects, and lease renewals to determine if tenants would require the need to have a Stormwater Pollution Prevention Plan (SWPPP) as required by the Municipal permit (S6.D.6.a.vi) for material /heavy equipment storage areas and maintenance areas. At this time tenants are either already have coverage under a General NPDES Permit or do not have material storage areas, heavy equipment storage areas, or maintenance areas. If tenants operations or procedures change, the port will re-evaluate the need for a SWPPP.
 - Parcel 1A PCS Temporary Premise. A SWPPP was developed for the temporary storage (and not processing) of (a) heavy melting steel, steel slabs, coils, plate, and structural and other prepared materials (excluding shredded materials) and (b) recycling containers so long as such containers are empty or contain only materials permitted under (a) above within port property located at Parcel 1A.

Stormwater was infiltrated via a bioinfiltration trench and inspections were conducted monthly. Operations terminated Dec. 2013.

2.1.7 Other Facilities Expected to Discharge Contaminated Runoff

The operation of other facilities that may discharge contaminated runoff as described below:

- The Port does not operate any other facility that is expected to discharge contaminated runoff that is not addressed herein (or permitted under another Ecology stormwater permit).

3.0 ISGP Permit Coverage for Port Operated Facilities

The only facility that is owned and operated by the Port that requires ISGP coverage is the POV maintenance facility. This facility is currently permitted under the ISGP through permit No. WAR000424.

3.1 Documentation and Recordkeeping

Documentation of facility inspections and maintenance performed by Port personnel are maintained in the maintenance department CMMS database, SWMP, and with the environmental department. Copies of maintenance logs are kept with the facilities manager and/or port's sharepoint.

3.2 Training

- POV construction, operations, and maintenance staff receive a minimum of annual training in the following areas:
 - Protecting water quality
 - Requirements of the Phase II permit
 - Operation and maintenance requirements of this manual, including procedures outlined in the referenced BMPs.
 - Inspection procedures.

- Preventing and minimizing impacts to water quality.
- Procedures for reporting water quality concerns, including potential illicit discharges
- Training videos are also used during annual trainings, topic covered in videos include:

Municipal Storm Water Pollution Prevention - "Storm Watch - Everyday Best Management Practices"

- Good Housekeeping and Spill Prevention
- Vehicle and Equipment Washing
- Vehicle and Equipment Maintenance
- Spill Reporting and Response
- Street Maintenance
- Outdoor Storage of Materials and Wastes
- Landscaping and Lawn Care

Storm Water Pollution Prevention - "Storm Warnings-Everyday Best Management Practices"

- Good Housekeeping
- Materials Management
- Spill Response
- Vehicular Fueling and Maintenance
- Outdoor Manufacturing
- Preventative Maintenance
- Waste Management
- Dust Producing Processes

- The training program and reporting logs identifying training dates, content, and personnel are located on the port's sharepoint and could be made available upon request.