

Port of Vancouver USA 

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

**SECONDARY PERMITTEE  
WAR04-5201**

**Issue No. 4  
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## Stormwater Management Program

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# I INTRODUCTION

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## 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 that will be undertaken during the first cycle of the permit, which began in February 2007 and extends through August 1, 2013. 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 2008 Washington State Water Quality Assessment approved by EPA on January 29, 2009, the Port does not need to comply with federally mandated total maximum daily loads (TMDLs) assigned to storm water discharges for certain pollutants since the portions of the Columbia River to which it discharges are not listed as impaired water bodies of the state of Washington 303(d) as defined by the Washington Department of Ecology.

## II BACKGROUND

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### 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. 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, 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.

Approximately 99% 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 1,100+ acres of land which includes Parcels 3, 4 and 5. This acreage is collectively known as Columbia Gateway and will potentially be developed within the next 8-12 years. Future Columbia Gateway development plans include approximately 534 acres of new maritime and industrial development and more than 540 acres of wetland and habitat enhancement. 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 proposed 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, 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 January 1, 2015.

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 February 16, 2007 and was administratively continued to expire on August 1, 2013.

### **III PROGRAM ELEMENTS**

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#### **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

#### **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-programs/stormwater-protection>

## **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-programs/stormwater-protection>

#### **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 - b.**

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:

- 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.
- This O&M plan establishes maintenance standards meeting the requirements of the Stormwater Management Manual for Western Washington, Volume V, Chapter 4.
- Roads, highways, and parking lots.
- Port of Vancouver's vehicle fleet (in areas not subject to the POV's Industrial Stormwater General Permit).
- External Building Maintenance.
- Open Spaces.
- Material Storage Areas, Heavy Equipment Storage Areas, and Maintenance Areas (in areas not subject to the POV's Industrial Stormwater General Permit).
- Other facilities expected to discharge contaminated runoff.
- Training for employees whose construction, operations, or maintenance job functions may impact stormwater quality.

**Section: S6.D.6.c.**

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, Parcel 1D, Terminal 2, and Terminal 3.

**Section: S6.D.6.d.**

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.e.**

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.