PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
STAFF BRIEFING

Item No. 7a

Date of Meeting June 3, 2014

DATE: May 16, 2014

TO: Tay Yoshitani, Chief Executive Officer

FROM: Stephanie Jones Stebbins, Director Seaport Environmental & Planning
Marilyn Guthrie, Stormwater Program Manager
Bob Duffner, Senior Manager, Aviation Environmental Programs

SUBJECT: Stormwater Overview & Issues Briefing

SYNOPSIS

The purpose of this briefing is to summarize elements of both the Airport and Seaport stormwater programs and to highlight critical stormwater issues currently facing the Port, particularly issues facing Seaport tenant and Port maritime operations.

The Port has made significant investments in stormwater control measures for Seaport, Airport, and Real Estate operations in recent years. In the future, major capital investments will be needed for repair and maintenance of these stormwater systems, as well as compliance with future water-quality permit requirements.

BACKGROUND

- Washington State has extremely stringent stormwater regulations.
- An Individual NPDES (National Pollutant Discharge Elimination System) permit covers the Airport.
- The Port of Seattle (excluding the Airport) is covered by the Phase I General Municipal permit (Phase I), which requires a Port-wide stormwater program. Program requirements include source control, operation and maintenance of stormwater system, stormwater monitoring and reporting requirements, and Port/tenant education.
- Seaport/Real Estate industrial properties are also subject to the Industrial Stormwater General Permit (ISGP). Container facilities leased to marine terminal operators are being required to install sophisticated and expensive treatment systems to treat turbidity (suspended sediment), zinc, and copper concentrations to meet required benchmarks.
- The Port of Seattle and our tenants will be paying close to $4 million in 2014 to the City of Seattle to fund Seattle Public Utility's (SPU's) drainage and wastewater programs.

Century Agenda Goals and Green Port Principles

Stormwater is an important piece of the overall strategy to "be the greenest and most energy-efficient port in North America." The Century Agenda includes the following goal:

- To meet or exceed agency requirements for stormwater leaving Port-owned or operated facilities.

Environmental principles developed by expert panels to guide strategy development to meet commission Century Agenda goals include the following:

- Century Agenda Green Port Principle #2 - To allocate funds to those efforts that will yield the greatest environmental and water-quality benefits.
    - Increase effectiveness of the fees collected to support Port-related Water Quality goals and the Lower Duwamish Cleanup.
- Century Agenda Green Port Principle #4 - Implement stormwater-related policies and programs that enhance the Port's economic competitiveness.

NPDES Permits

The National Pollutant Discharge Elimination System (NPDES) permitting program has resulted in tremendous improvement to the quality of this country's water resources. Under the NPDES Program, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain an NPDES permit.

The Department of Ecology, in partnership with the EPA, uses a variety of permitting mechanisms to regulate stormwater discharges. Permits are a license for a facility to discharge pollutants into a receiving water under certain conditions. General Stormwater permits, such as the Phase I Municipal Stormwater Permit and the Industrial General Stormwater Permit are used for categories of dischargers having common characteristics and when generic, standardized conditions are considered sufficient to protect aquatic resources. Individual NPDES Waste Discharge Permits are issued for more complex industrial facilities with specifically tailored permit conditions. The Airport holds an individual NPDES permit.

Airport Individual Permit

The Airport's permit was first issued to the Port in 1988 for discharges to Puget Sound. The early permit focused on controlling potential impacts related to aircraft fueling operations, which are treated by the Airport's Industrial Wastewater Treatment Plant (IWTP). The current permit, which is renewed at least every five years, continues to regulate IWTP discharges to Puget Sound; however, it now also regulates construction stormwater and non-IWTP stormwater. The Airport permit covers Port and tenant operations.

Upgrades at the IWTP completed over the past 18 years at a cost of over $63 million have provided expanded containment and treatment capacity, and the ability to segregate stormwater impacted by aircraft de-icing operations for further treatment. As a result, the

Port is reducing over 2.0 million pounds per year of biochemical oxygen demand which would otherwise be released to Puget Sound.

In the mid-1990s, the Airport's NPDES permit was expanded to regulate nearly all stormwater discharges including those from roads, runways, and taxiways. The Airport permit became much more stringent in 2003 in association with project-specific requirements imposed on the Third Runway (16R). These new requirements included numeric effluent limitations for zinc and copper as well as whole effluent toxicity limits. Ecology views the Airport's permit as one of the most comprehensive and stringent industrial stormwater permits issued in the state. In order to comply, the Port constructed a series of detention and water-quality treatment facilities for all runoff leaving the Airport at a cost of over $80 million. As a result of these efforts, measurable water-quality improvements are seen in Miller, Walker, and Des Moines Creeks.

Phase 1 Municipal General Permit (Phase I)

The Port of Seattle (excluding the Airport) is covered by the Phase I Municipal General Permit, which applies to municipalities with populations of 100,000 or more, and to any governmental entities located within the municipality's boundaries that own and operate stormwater discharge pipes. The City of Seattle is likewise subject to the Phase I Permit. The Permit requires that each municipality develop and implement a stormwater program including requirements such as source control, O&M, reporting, monitoring and education. The Port's Phase I permit applies to "all Permittee [Port] owned lands."

Most property managed by the Seaport and Real Estate Divisions is leased to commercial and industrial tenants. Approximately 65% of these properties are **also** covered by tenant-held Industrial Stormwater General Permits (ISGPs). The majority of acreage under ISGP is property leased to Marine Terminal Operators (MTOs). Generally, ISGP requirements will govern, if lands are within the boundaries of both.

Industrial Stormwater General Permit (ISGP)

The ISGP requires that the permittee develop a Stormwater Pollution Prevention Plan (SWPPP) that identifies potential sources of pollution and describes the practices that will be used at the facility to eliminate or reduce pollution in stormwater discharges (called "best management practices" or "BMPs").

In addition, the ISGP requires that the permittee conduct quarterly monitoring for certain pollutants commonly found in stormwater. The ISGP establishes certain "benchmarks" for these pollutants. Failure to achieve these benchmarks does not mean the permittee is in violation of the permit or water-quality standards. Instead, failure to achieve the benchmarks triggers the need for the permittee to perform certain types of actions (called "Corrective Actions").

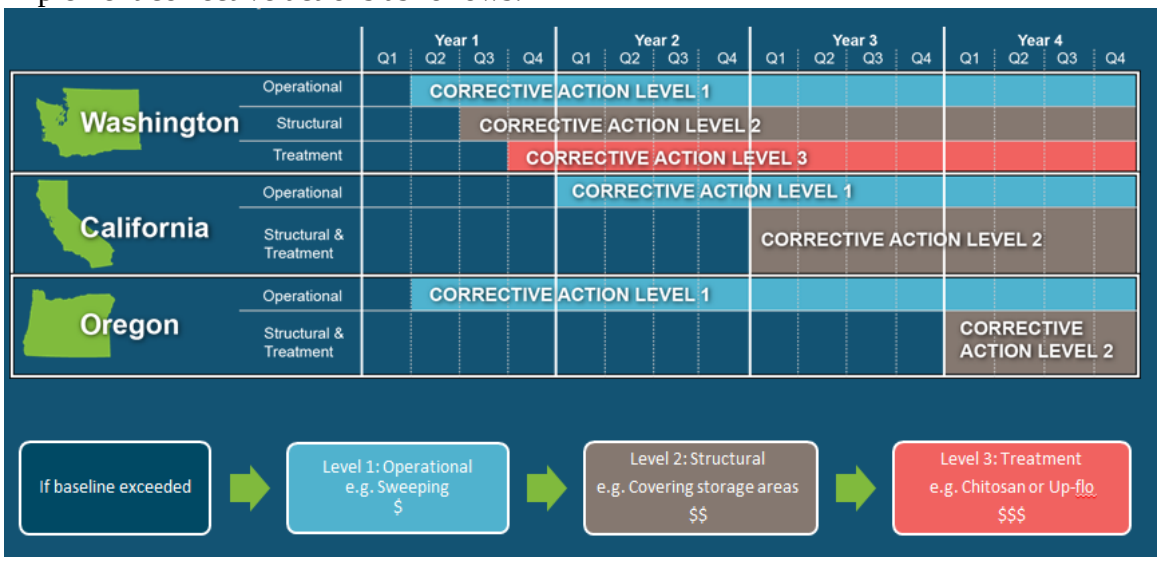
The benchmarks for pollutants as established by the ISGP permit are the most stringent in the Country. Depending on the nature of operation of the facility, it can be difficult or impossible for a permittee to meet these benchmarks.

Parameter	Units	Washington	California	Oregon (Z)
Zinc, Total	µg/L	117	260	120
Copper, Total	µg/L	14	33.2	20
Turbidity	NTU	25	n/a	n/a
TSS	mg/L	n/a	100	100

Another aspect of the ISGP that makes compliance difficult is the accelerated schedule for meeting benchmarks. The ISGP requires that if **any** benchmark is exceeded in **any** of the quarterly sampling events, corrective action levels are triggered as follows:

- If 1 exceedance per year: Level 1 (Operational BMPs)
- If 2 exceedances per year: Level 2 (Structural BMPs)
- If 3 exceedances per year Level 3 (Treatment BMPs)

In comparison, other states allow ISGP permittees much more time to ramp up and implement corrective actions as follows:



All of the Port's MTOs have triggered Level 3 Corrective Action. Level 3 Corrective Action consists of the design and construction of treatment systems to treat zinc, copper, and turbidity. These systems are often required to be sophisticated and are expensive. In addition to installing treatment systems, permittees must also install or enhance site-wide operational and structural source controls to achieve benchmarks.

The IGSP is reissued by Ecology every 5 years; this permit was re-issued on May 7, 2014, and is currently in the public comment stage.

MTO Stormwater Treatment Installations

The following chart identifies the stormwater treatment systems that are either planned or installed at the Port's MTO facilities.

Terminal	Treatment System
TTI/Hanjin – T-46	UpFlow System
SSA – T-18	Modular Wetlands System with roof down spout treatment
T-115	Chitosan treatment system

- **TTI at T-46**: As part of lease commitments at T-46, the Port committed to installing stormwater treatment on three of the four outfalls at T-46. (The fourth outfall drains the area occupied by the WSDOT, and will be addressed once their occupancy is ended). The Ecology order originally required TTI to complete this work by end of September 2014; however, they subsequently issued an extension until December 2014 for two outfalls, and until June 2015 for the third outfall. This work is required by lease requirements, Ecology order, and legal settlement between Puget Sound Keepers and TTI.
- **SSA at T-18**: Tenant has developed a proposal to install the Modular Wetlands treatment system on target areas (generally, where maintenance or fueling activities occur).
- **Northland at T-115** is installing a Chitosan treatment system.

AKART

The Port joined with other Washington State ports under WPPA sponsorship, to prepare a joint "AKART" study (**A**ll **K**nown, **A**vailable and **R**easonable methods of prevention, control, and **T**reatment Study). It was this group's intention to provide a roadmap for permit compliance, including predictable and reasonable required stormwater treatment actions. This group collaborated with the Department of Ecology, PMSA, and NGOs including Puget Sound Keeper and Washington Environmental Council to prepare the document. The AKART was published for public review and comment on May 7, 2014, at the same time as the draft updated ISGP.

Stormwater Fees

Since 1989, the City has operated a Stormwater Management (SWM) Utility, funded through annual drainage fees, to pay for its program and stormwater management services within the City. The Port and its tenants pay drainage fees to the City. Fees are based on intensity of use and extent of impervious surface.

In 1997, the Port signed two interlocal agreements (ILAs) with the City that dealt with stormwater management. In summary, these agreements do the following:

1. Requires that Port, rather than the City, conduct stormwater code construction review on Port construction projects.

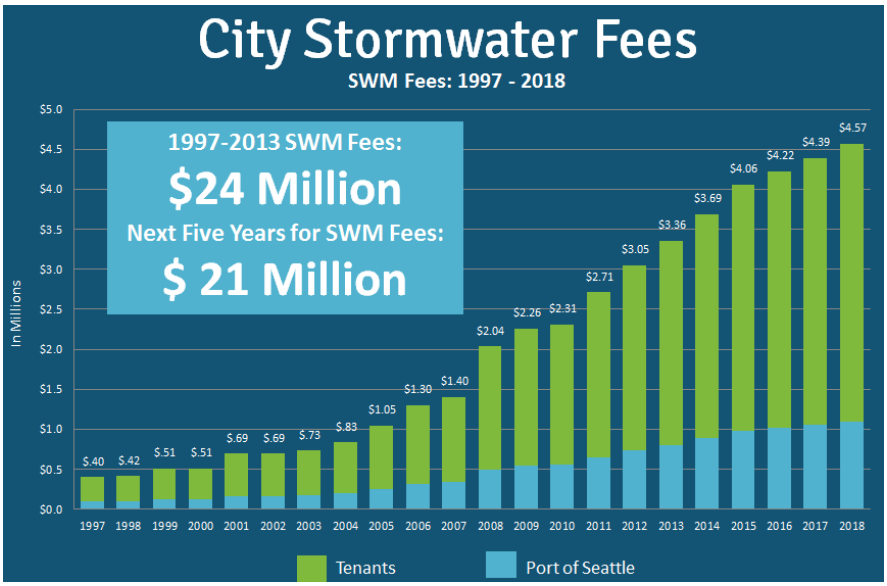
2. Requires substantive compliance with the City's redevelopment stormwater code for Port construction projects.
3. Provides for a fixed $100,000 reimbursement of SWM fees back to the Port for stormwater service rendered.

By and large, the Port's stormwater infrastructure is physically independent of and separated from City stormwater infrastructure, with stormwater from most Port properties discharging directly from Port-owned pipes through Port-owned outfalls into adjacent receiving waters.

The Port is responsible for maintaining its own stormwater infrastructure on Port owned and operated properties. The Port manages nearly every aspect of the Stormwater Management Program with little reliance on the City for program support.

In 2013, the Port and its tenants collectively paid the City approximately $3.4 million in drainage fees. However, the Port received minimal services in return for the payment of these fees. Drainage fee rates have increased significantly and thus the total fees paid to the city have continued to increase dramatically. Meanwhile, the Port's stormwater program costs have also increased significantly.

- Currently the cost of the Port's SW Phase I program costs (permit compliance and O&M costs) is close to $2 million annually.
- The 1997 ILA fixed the reimbursement at $100,000, although the costs for the Port's stormwater responsibilities have grown substantially.
- The total drainage fees paid to the City will have increased to almost to $4 million in 2014. Rates are increasing at about 10% a year.



For several years, the Port has discussed its concerns with the City regarding the growth of fees and lack of benefit provided to the Port's stormwater program. Other jurisdictions have reached amenable resolution to these concerns. For example, the Port of Tacoma has successfully negotiated an agreement with the City of Tacoma and reducing stormwater fees from approximately $480,000 to $212,000 by reclassifying certain port parcels as "direct discharging parcels" with lower associated per acre fees.

The monies that the Port and its tenants are currently paying to the City could be more effectively used to clean, repair, and upgrade the Port-owned stormwater facilities. This would improve water quality entering Puget Sound and would facilitate tenant compliance with ISGP permits. This work is currently unfunded.

FUTURE STRATEGIES

- Continue to discuss stormwater fees with City of Seattle and return to Commission in late summer with options.
- Continue compliance of our Phase I municipal permit.
- Provide comment with WPPA and industrial partners to the Department of Ecology on the new ISGP (out for public comment now) and the AKART.
- Continue to look and demonstrate innovative and cost effective solutions, like the Splash Boxx and plan for opportunities to support Port stormwater needs.

ATTACHMENTS TO THIS BRIEFING

- Presentation slides.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- None