

COMMISSION AGENDA

Item No: 5A

Meeting: 09/21/17

DATE: September 6, 2017

TO: Port Commission

FROM: John Wolfe, Chief Executive Officer
Sponsor: Jason Jordan, Director, Environmental and Planning Services
Project Manager: Deanna Seaman, Environmental Senior Project Manager

SUBJECT: General Business: Stormwater Update Briefing

A. ACTION REQUESTED

No Action is requested at this time. Port environmental staff will provide a general overview of the Port's ongoing stormwater program, recent successes, and our approach for next year.

B. BACKGROUND

The purpose of this briefing is for staff to present the current status of our water quality program including: permit management, recent successes, how we are tracking and managing the specific state and federally targeted pollutants, and solicit Commission feedback.

Stormwater is the main contributor of pollutants to Puget Sound and is the Department of Ecology's top priority. Untreated stormwater runoff threatens our waterway and Puget Sound clean-up efforts by transporting zinc, copper, oils, and other road pollutants to creeks, rivers, lakes and bays. Risks associated with untreated runoff include:

- Environmental degradation;
- Operational constraints triggered due to benchmark exceedances;
- Expensive retrofits; and
- Potential citizen lawsuits.

The Department of Ecology develops and administers National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits in Washington State via US EPA's Clean Water Act. The Port of Tacoma is subject to several types of stormwater permits determined by specific activities on Port-owned properties.

C. TYPES OF PERMITS AND HOW THE PORT MANAGES THEM

Phase I Municipal Stormwater Permit

Urban areas that collect stormwater runoff in municipal separate storm sewers (MS4s) and discharge to surface waters are required to have a permit under the federal Clean Water Act. Typically, cities, counties and special purpose districts are subject to this permitting program. Ecology considers the Port of Tacoma as large discharge contributors to state waters, and decided to specifically include the ports in the MS4 permit program. The ports do not have the same responsibilities as the cities and counties and the Ports do not have enforcement or code writing obligations. This is a Port-wide permit; every parcel owned by the Port is subject to the terms of this permit. Those parcels with tenants who perform activities that trigger the industrial stormwater general permit are additionally subject to those permit terms.

The MS4 permit requires the Port to develop a Stormwater Management Plan and Program (SWMP) that includes the following elements:

- Education program for Port staff and tenants.
- Public involvement and participation: Solicit public review of its SWMP. Make the latest updated version of the SWMP available to the public.
- Illicit Discharge Detection and Elimination: a program to detect, remove and prevent illicit connections and illicit discharges, including spills, into the municipal separate storm sewers owned or operated by the Port.
- Mapping of all outfalls, land uses, tributary conveyance and associated drainage areas with 8" or larger diameter pipes and equivalent cross section of open channels.
- Construction Stormwater Source Control.
- Post-construction Stormwater Management: Coordinate with the local jurisdiction. The Port and the City of Tacoma together have developed an Inter-local Agreement which outlines each party's responsibilities and coordinated activities.
- Minimum technical requirements for development and redevelopment: if the size of a development project exceeds specific parameters, long-term stormwater treatment must be implemented.
- Operations and Maintenance Program for all stormwater treatment and flow control facilities, and catch basins to ensure that Best Management Practices (BMPs) continue to function properly.
- Source Control in existing developed areas: Stormwater Pollution Prevention Plans are required to be implemented for all Port-owned lands.
- Annual monitoring program implementation and reporting.
- Annual Stormwater Management Program update must be submitted to Ecology and posted on the Port's website.

Construction Stormwater General Permit

Construction site operators are required to be covered by a Construction Stormwater General Permit (CSW) if they are engaged in clearing, grading, and excavating activities that disturb one or more acres and discharge stormwater to surface waters of the state.

The CSW requires weekly monitoring for turbidity and pH, weekly inspections, and monthly reporting to Ecology. The contractor or owner is also required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to ensure erosion and sediments are controlled during construction. On average the Port manages approximately 6 of these per year; typically the Port applies for the permit, transfers it to the contractor at the start of work, and monitors contractor activities for compliance.

Industrial Stormwater General Permit

Facilities that engage in industrial activities and discharge stormwater to surface waters of the state are subject to the Industrial Stormwater General Permit (ISGP). This permit started in 2015 and typically is renewed every five years. The current version of the permit expires December 31, 2019. The ISGP is issued to an operator at a specific facility because the operator performs specific activities that trigger permit coverage. When the operator stops operating or performing the activities that trigger the permit, the permit can be terminated.

The ISGP requires the operator to develop a Stormwater Pollution Prevention Plan that includes implementation of the following BMPs and other conditions:

- Operational Source Control BMPs such as good housekeeping, preventative maintenance, which includes cleaning catch basins, jetting lines, sweeping, and spill control to include placing drip pans and spill kits in visible locations.
- Structural Source Control BMPs such as secondary containment, lids on dumpsters, storing materials inside buildings, covered washing and maintenance areas.
- Treatment BMPs such as oil water separators, filtration systems, and chemical treatment systems.

The permit requires the operator to sample and monitor, on a quarterly basis, for the following pollutants:

Pollutant	Benchmark
Zinc	117 µg/L
Turbidity	25 NTU
pH	5.0-9.0
Copper	14 µg/L
Chemical Oxygen Demand	120 mg/L
Total Suspended Solids	100 mg/L
Oil Sheen	No visible

Benchmarks are not water quality criteria, but serve as an indicator that water quality may be impacted if the discharges contain pollutants above the established benchmarks.

If benchmarks are not met, specific Corrective Action(s) are required until benchmarks are achieved:

- **Level One Corrective Action** – additional operational source control BMPs implemented within 14 days of lab results. Implemented with every occurrence above benchmarks, these are actions an operator does to prevent pollution.
- **Level Two Corrective Action** – additional structural source control BMPs implemented no later than September the year following the exceedance. Implemented when 2 consecutive quarters above benchmarks. These are projects the operator completes to physically separate pollution from stormwater.
- **Level Three Corrective Action** – additional treatment BMPs implemented no later than September of the following year. Implemented when 3 consecutive quarters above benchmarks. **May require significant capital expenditures to retrofit existing facilities with treatment.**

The Port of Tacoma currently manages 6 Industrial Stormwater Permits for the following sites:

Permitted Facility	2017 Permit Status
East Blair One Terminal	This site meets benchmarks
Maintenance	This site is currently in consistent attainment. It has a media filtration unit installed.
OCT	The site has installed treatment and we continue to improve the system. We are not yet at consistent attainment.
SIM	This site has a membrane filtration system for solids and is now in consistent attainment.
NIM/T7	We have treatment installed and like OCT, continue to improve the system to achieve consistent attainment. The North end of NIM is meeting benchmarks.
West Sitcum Terminal (formerly APMT)	We are installing treatment on a voluntary basis to ensure the successful operation of our new tenant. Construction will be complete in 2019.

D. RECENT SUCCESSES

Earlier this year, we successfully transferred the Log Yard Permit to Merrill Ring. This completes a five-year design, build, commission, and transfer process. This is an award winning treatment system that has been recognized in two states, California and Washington, the Washington Public Ports Association, and the California Stormwater Quality Association.

Awards the Port of Tacoma Program has received include:

1. California Stormwater Quality Association's award for outstanding stormwater project for the West Hylebos Pier Log Yard in 2017.
2. APPA 2016 Environmental Improvement Award for the Port's Stormwater Management Guidance Manual.

3. Northwest Construction Consumer Council's 2015 Green Project of the Year recipient for the General Central Peninsula Stormwater Infrastructure Improvement Project.
4. APPA 2015 Environmental Improvement Award for Port of Tacoma General Central Peninsula Stormwater Improvements Project.
5. AAPA 2014 Environmental Improvements Project for the West Hylebos Pier Log Yard.

A few other successes without awards include completion of our retrofit at the East Blair breakbulk yard. The Port installed a proprietary filter vault (14'x10'x8') that used cartridge style filters to remove solids. The system did not perform. Rather than pull out the vault, the water quality team removed the cartridge system and re-worked the vault into a bulk media filtration unit with excellent results. Staff expects this demonstration project to be repeated by our customers in both harbors.

Another success included the retrofit of a proprietary vault at OCT which also did not function well in a tidal zone. Our team modified the weir walls, changed out the media and added a pre-treatment polishing step to knock down total suspended solids and prolong the life of the media treatment.

Perhaps our greatest contribution was to create a Stormwater Working Group for Tacoma customers with the intention of sharing our lessons learned and best management practices that have worked at the Port and for our customers. We have seen some great sharing of lessons learned between our customers at these meetings and, when surveyed, our customers placed a high value on these meetings and the FAQ developed as a result of the meetings placed on the NWSA website. Port staff also conducts an annual water quality workshop. This year's workshop was held on Friday, September 8, 2017. This year's theme was a "Do it yourself" approach to Stormwater. Our other environmental groups also participated.

The water quality team deployed an electronic inspection tracking tool this summer with the Maintenance group. This tool allows maintenance to log which properties and which specific catch basins have been inspected and which need maintenance.

Continuing our work with Real Estate this year, we have standardized lease Exhibit B for stormwater compliance. We have also updated the property use document so that tenants can look at their Standard Industrial Classification (SIC) code and the permit requirements by SIC code to determine whether their operations could trigger the need for an ISGP.

Exhibit B is a standard document included with all leases. For stormwater issues specifically, the document puts the tenant on notice the property is subject to water quality regulations from the local, state, and federal agencies which may or may not trigger an operating permit. The document calls out a requirement for coating galvanized metal objects including buildings, light poles, and fencing. The tenant is also required to use coated fencing if the tenant takes down non-coated fencing for a project or repair. Coatings on galvanized surfaces must be maintained to minimize zinc migration into stormwater.

We continue to work with our tenants to assist with permit compliance. Our programmatic goals include requiring tenants to hold and manage their own permits. Separation of permit liability from operations creates a conflict point between the Port and the tenant; therefore, we continue to advocate for the tenant to hold their own operating permit.

E. TRACKING AND MANAGING POLLUTANTS

The pollutants of concern for this permit cycle (2015–2020) include Zinc, Copper, pH, Total Suspended Solids, and oil sheen. Terminal operations generate Zinc, Copper, TSS, and oil sheen in the course of everyday operations. Zinc enters the environment from tires and galvanized metal including fencing, roofing, and metal siding. Copper enters the environment from brakes. TSS is essentially dirt but is monitored because copper and zinc travel with dirt. Oil sheen is generated by small drips and leaks from vehicles and equipment.

Industrial permit holders are responsible for sampling facility discharge at least once per quarter and reporting those results to the state. If a discharge exceeds a benchmark for one or more pollutant, the site operator has to increase BMPs, source control, or in the case of three quarters of elevated pollutants above benchmarks, treatment.

Sometimes the source of contamination is unknown; as a cost-effective measure we design small treatment solutions that can be placed at the suspected source to reduce the amount of pollution entering the stormwater system and ultimately discharged. These treatment solutions include the downspout treatment boxes, oyster shell barrels, and rigid catch basin insert baskets that hold treatment media. Our lease language requires customers who move and replace fencing to do so with coated fencing.

F. PERMIT APPROACH

The Port of Tacoma manages seven ISGPs and the MS4 Program. We retain a “hands on” approach with our customers helping find solutions to compliance issues. As customers request our assistance, we provide source control evaluations, pilot projects, and downspout treatment boxes. Via the Working Group, we highlight BMPs, permit strategies, and upcoming changes to permits.

The Water Quality group relies on our Maintenance Group for Permit required annual inspections and maintenance activities. We have a good partnership.

A new MS4 permit is currently under development at Ecology and the ISGP is due for reissuance in 2019. The WQ team participates via various workgroups to ensure our requirements under this permit do not increase. There are a number of other issues we watch closely including:

1. Landlord – Tenant responsibility;
2. Sampling projects in the regional monitoring program in which we participate;
3. Parameters for which sites must monitor; and
4. Other as yet to be discovered permit conditions.

G. NEXT STEPS

NWSA Strategic Plan initiatives and 2017 Port of Tacoma Performance Goals and Expectations work is well underway and includes:

1. Acres under source control. The Acres under source control is a cumulative sum of acres on which we place treatment devices like media or membrane filtration units. Last year we put 70.6 new acres under treatment, and this year we are on target to put an additional 50 acres under source control plus some acreage at the West Sitcum Terminal. In 2018 we will see both the Husky and the West Sitcum Terminal implement treatment on their terminals as well as 23 acres at the NIM yard.
2. We have increased outreach to Port of Tacoma tenants. Port of Tacoma 2017 Performance Goals request we reach 10% of those tenants and we are on track to exceed that performance expectation this year with 35 individual tenants contacted of 105 total.
3. Salish Sea Ports Initiative. We continue to locate partnerships for water quality, we have reached out to the Port of Vancouver Fraser River. They desire to have more underwater noise partners and need to know more about water quality. We are exploring the possibility of an informational sharing forum to move these initiatives forward for the benefit of the Puget Sound/Salish Sea. Our participation with Green Marine via the NWSA encourages us to engage with underwater noise initiatives.