Item No.: 5A
September 21, 2017

General Business
Stormwater Update Briefing

Port of Tacoma

People. Partnership. Performance.

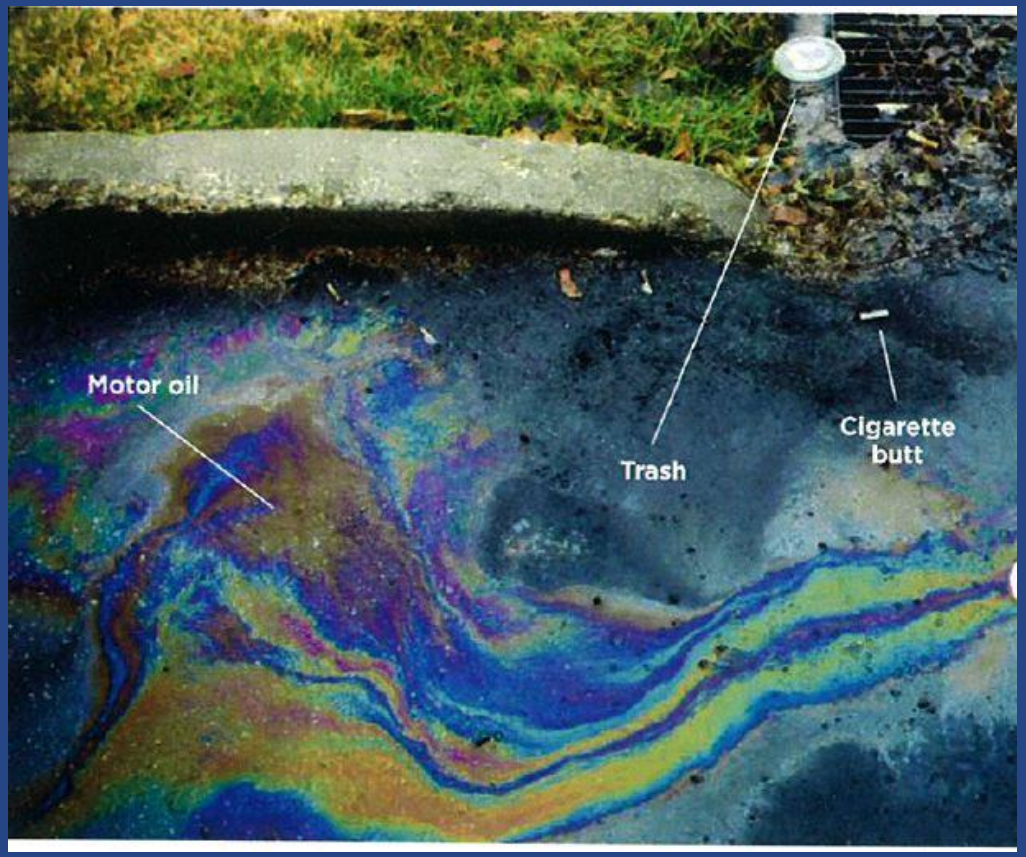
Introduction

- Current Status of Water Quality Program
  - Background
  - Permit Types
  - Recent Successes
  - Tracking and Managing Pollutants
  - Permit Approach
  - Next Steps

Background

Untreated Stormwater Runoff Risks:

- Environmental Degradation
- Operational Constraints
- Expensive Retrofits
- Potential 3rd Party Lawsuits



Background – Permit Types

Three Types of Permits

- Construction (Project Driven)
- Industrial (Operational Activity Driven)
- Municipal (Port Owned Property)

Permit Types – Phase 1 Municipal Permit

Governs discharges to municipal separate storm sewer systems (MS4)

- Given to Municipalities, Colleges, Special Taxation Districts, and Ports
- Many permit requirements like education, illicit discharge detection, mapping, O&M inspections, source control, redevelopment requirements, public involvement, …

Permit Types – Construction Stormwater General Permit (CSW)

Need this permit to disturb more than one acre

Monitor weekly for turbidity and pH

Permit is concerned with housekeeping measures – sweep, cover, maintain controls, prevent erosion

Permit Types – Industrial Stormwater General Permit (ISGP)

- 5 Year permit
- Given to Operations with specific activities known to generate stormwater pollution

ISGP Requirements

- Operational source controls – Stormwater Pollution Prevention Plans, drip pans under parked equipment, close lids on dumpsters, sweeping, sweeping, sweeping
- Structural source control – secondary containment, store materials inside, cover wash and maintenance areas
- Treatment controls – oil water separators, filtration systems

ISGP – Quarterly Sampling and Monitoring

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

ISGP – What If Benchmarks are Exceeded?

- First Exceedance – Level 1: Implement more sweeping, check facility for hot spots
- Second Exceedance – Level 2: Separate pollution from rain with lids, use catch basin socks, down spout treatment boxes

- Third Exceedance – Level 3: Install Treatment such as media filtration, sand filtration, active pump systems

Industrial Permits the Port Manages

Permitted Facility	2017 Permit Status
East Blair One Terminal	This site meets Benchmarks
Maintenance	The site is currently meeting benchmarks. It has a media filtration unit installed.
OCT	The site has installed treatment and we continue to improve the system.
SIM	This site has a membrane filtration system for solids and is meeting benchmarks.
NIM / T7	We have treatment installed site is meeting benchmarks.
West Sitcum Terminal	We are voluntarily installing treatment to ensure our next tenant will be successful. Construction complete in 2019.

Recent Successes

- Log Yard Permit transferred to Merrill Ring 2017
- Award from a California Association for the log yard treatment system 2017
- Multiple Public Ports Association Awards

OUTSTANDING INDUSTRIAL STORMWATER BMP PROJECT

West Hylebos Pier Biofiltration Stormwater Treatment Project

Port of Tacoma

In 2010, to comply with Washington state's tough Industrial Stormwater General Permit stormwater requirements, the Port of Tacoma faced the choice of coming up with cost-effective treatment for its West Hylebos Log Yard or shutting down the line of business that supports 40 direct jobs at the Port and hundreds of jobs in logging, trucking and associated services. The Port and Kennedy/Jenks Consultants considered a range of runoff treatment approaches, and the aggregate results of the comprehensive evaluation indicated that a biofiltration treatment system would most effectively manage stormwater discharges from 25 acres of paved log yard and best achieve the combined project goals. The Port chose to design (actually invent) and build a $2.7 million treatment facility utilizing a four stage filtration system employing physical, chemical and biological processes – each stage with pollutant-specific targets. The treatment system immediately reduced pollutant loads by 92% and continues to improve over time.

Right: Vegetated swale – the final stage of stormwater biofiltration

Working with Real Estate

- Exhibit B – Tenants must coat galvanized surfaces, replace fencing with coated fencing
- Goal is to minimize zinc migration to stormwater

Permit Approach

- Stormwater Working Group
  - Gather tenants in one room for information sharing, permit updates
- Maintenance Group Focus Meeting
- Cover weekly tasks, schedule compliance work for industrial and municipal permits
- Ecology Workgroups
- Stay informed of next permit cycle changes

Next Steps

- Salish Sea Ports Initiative
  - Vancouver Canada, Seattle
- Acres under Source Control
  - 25 additional this year so far
- Tenant contact and outreach
  - 35 Tenants so far of 105 total

The End