



PORT of
vancouver

Stormwater Pollution Prevention *in the Port of Vancouver*

Presentation to the Burrard Inlet Science
Symposium, Stormwater Edition

May 13, 2019

Jurisdiction



Stormwater Management

- Manage flood risk
- Reduce pollution and improve water quality (cumulative effects)



Stormwater Pollution Prevention

Industrial use increases risk for pollution in extremely close proximity to receiving waters (point and non-point source pollution)

- Ongoing, day-to-day operations
- Construction activities: short periods of elevated risk

Stormwater pollution



Stormwater characterization study

- Goal: capture worst-case scenario (first flush)
- Approximately 30 outfalls at 12 industrial and commercial sites through Burrard Inlet each in 2017 and 2018
- Analyzed for total metals, polycyclic aromatic hydrocarbons (PAHs), nutrients (e.g., phosphorous, nitrogen), petroleum hydrocarbons, general chemistry parameters (e.g., pH, conductivity) and bacteria (e.g., E. coli).
- Compared against CCME and BC MOE water quality guidelines for marine aquatic life, and BC Contaminates Sites Regulations

Stormwater characterization study

- Total Suspended Solids
- Metals: Copper, Lead, Zinc, etc.
- Hydrocarbons
- pH
- Nitrogen
- Phosphorous
- Bacteria

Stormwater Pollution Prevention

Our sites: [Port of Vancouver](#)





PORT METRO
vancouver

Project & Environmental Review

Guidelines – Construction Environmental Management Plan (CEMP)

July 2015



EN FR Canada

Development and Permits

Environment

Development and Permits

Environmental Planning

Authority Development

of Permit Applications

and Environmental

Guidelines

Primary Project Inquiry

Project Permit Application

Extensions and Extensions

Permits

ional Docks

and Marine Event Permits

ITEMS

act Us

Purpose of Effective SPPP

- Design systems appropriate for the site
- Prevent or reduce pollutant loading of stormwater
- Treat or otherwise manage stormwater if pollutant loading cannot be prevented
- Reduce the amount of stormwater discharged to the environment

Stormwater pollution prevention

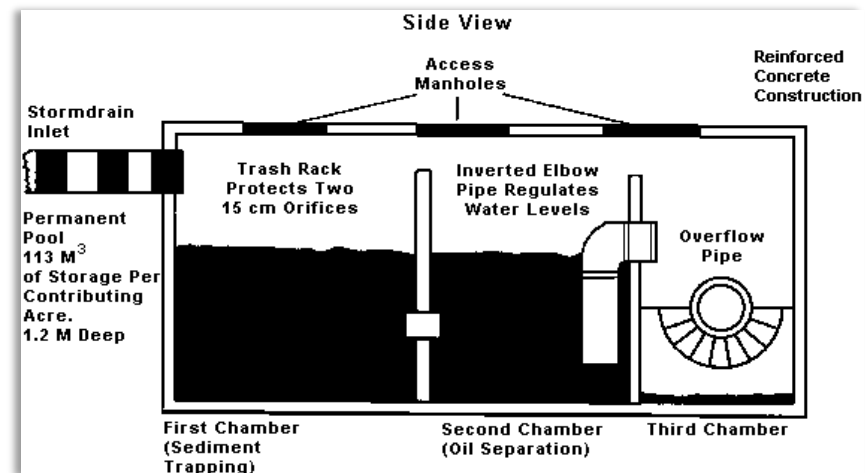
Prevent



Contain/reduce



Treat





EXAMPLE 1 (2014)



EXAMPLE 1 (2018)



EXAMPLE 2



EXAMPLE 3