Mason Flats Stormwater Project
Flexible Design for Beaver Modification

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You are here
3 Types of Stormwater Systems

- Combined System (CSO)
- Sumped System (UIC)
- Separated System (MS4)
Combined System

- Sewage and Stormwater combined in the same pipe
- Mixed water used to overflow into the Columbia Slough and Willamette River during medium to heavy rains
- Columbia Slough overflows controlled in 2001
- Willamette River overflows controlled in 2011
- The water in these pipes goes to the Treatment Plant and then the Columbia River
Combined System
Sumped System (UIC)

- Collects only stormwater runoff (no sewage!)
- The water soaks into the ground
- Regulated by Safe Water Drinking Act
Sumped System
Separated System (MS4)

- Collects only stormwater runoff (no sewage!)

- The water in these pipes goes to the nearest stream, slough or river

- In the process of providing stormwater treatment for prioritized drainage basins
Outfall #113
~ 300 acres of drainage
Mason Flats Project: Multiple Goals

Protect and improve water quality through stormwater management

Protect and enhance wetland habitat for sensitive native species

Increase off-channel floodplain functions

Incorporate flexible design for beaver modification
Pre-Construction
Pre-Construction Drainage
Pre-Construction Beaver Dams
Selected Design Concept
West Weir Beaver Dam, February 2015
Pre-Construction Beaver Dams
Beaver Dams as of January 2015
Conclusions

Beaver modification is:

Increasing stormwater treatment and improving water quality

Increasing aquatic habitat for sensitive native species

Increasing floodplain function
Thanks to the Project Team and Partners

City of Portland Environmental Services
City of Portland Parks and Recreation
Army Corps of Engineers
Multnomah County Drainage District
Columbia Slough Watershed Council
Questions?
Stormwater Management Manual

- Pervious Paving
- Ecoroof

30% Evaporation

Street Trees

Parking Lot Swales
Streetside Planters
Downspout Disconnection