

Urban Watershed Strategy



Watershed Forum
June 8, 2011

Presentation Overview

- Urban Watershed Vision
- Goals and Strategies
 - Stream Flow/
Rainfall Runoff
 - Water Quality
 - Physical Habitat
- What is next?



Vision: **Improve the health** of Seattle's creeks, wetlands, lakes, the Duwamish River and Puget Sound, including **improvements to water and sediment quality, stream flow, and habitat** for the protection of **public health and aquatic life**.



**Stream Flow/
Rainfall Runoff**



**Water
Quality**



**Physical
Habitat**

Goals and Strategies



**Stream Flow/
Rainfall Runoff**



**Water
Quality**



**Physical
Habitat**

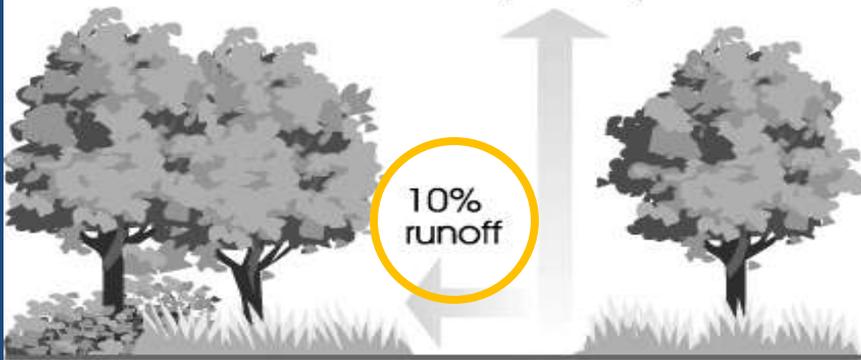


Stream Flow and Rainfall Runoff

Goal:

Preserve public health and aquatic life by
creating a more natural, habitat-promoting stream
flow pattern.

40% evapotranspiration

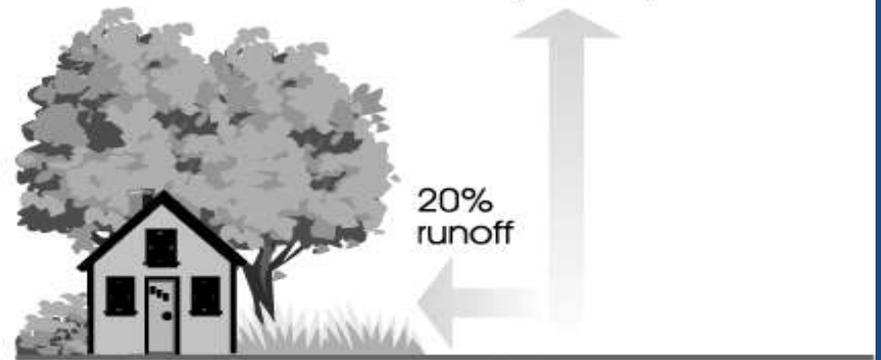


25% shallow infiltration

25% deep infiltration

Natural Ground Cover

38% evapotranspiration



21% shallow infiltration

21% deep infiltration

10%-20% Impervious Surface

35% evapotranspiration



20% shallow infiltration

15% deep infiltration

35%-50% Impervious Surface

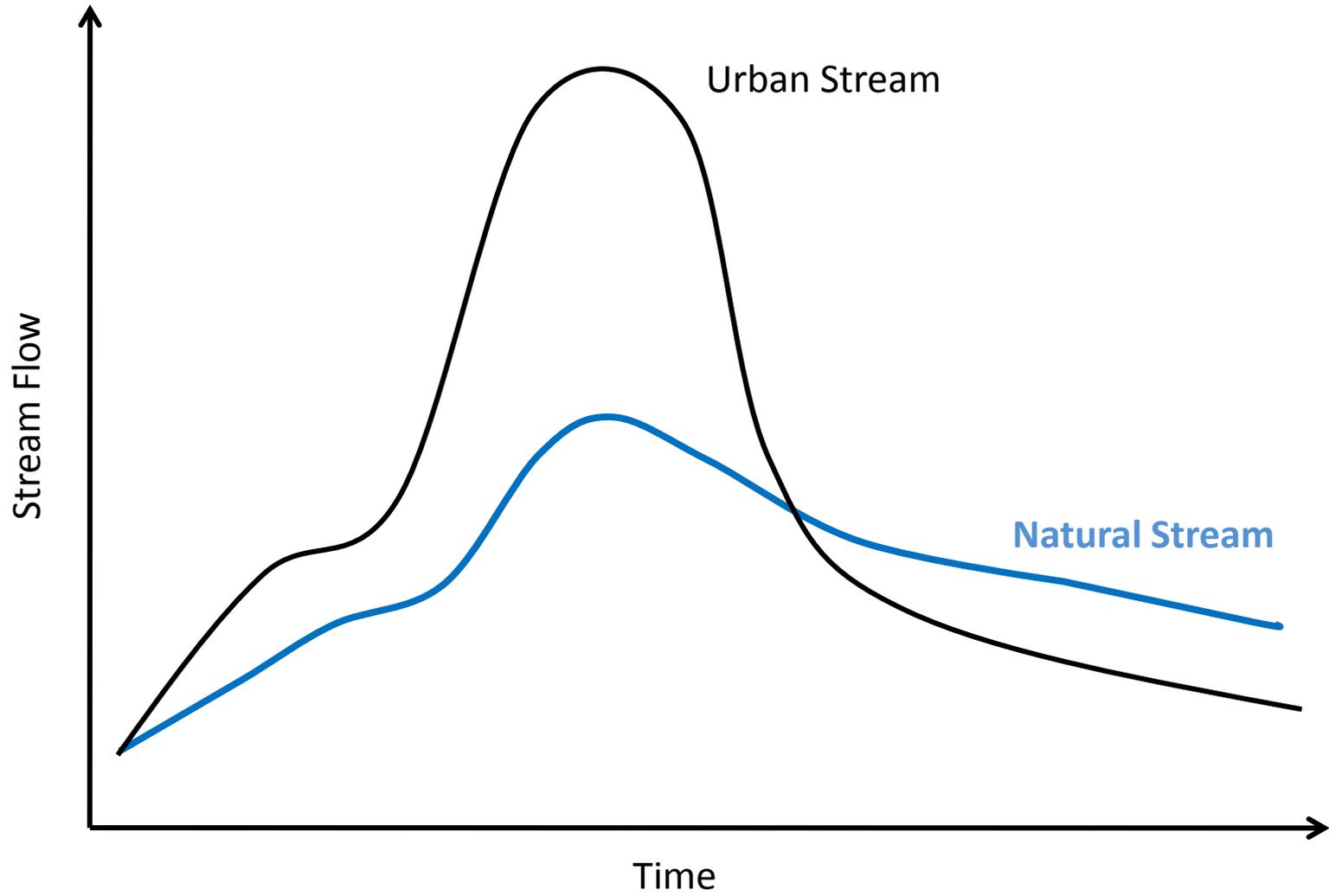
30% evapotranspiration

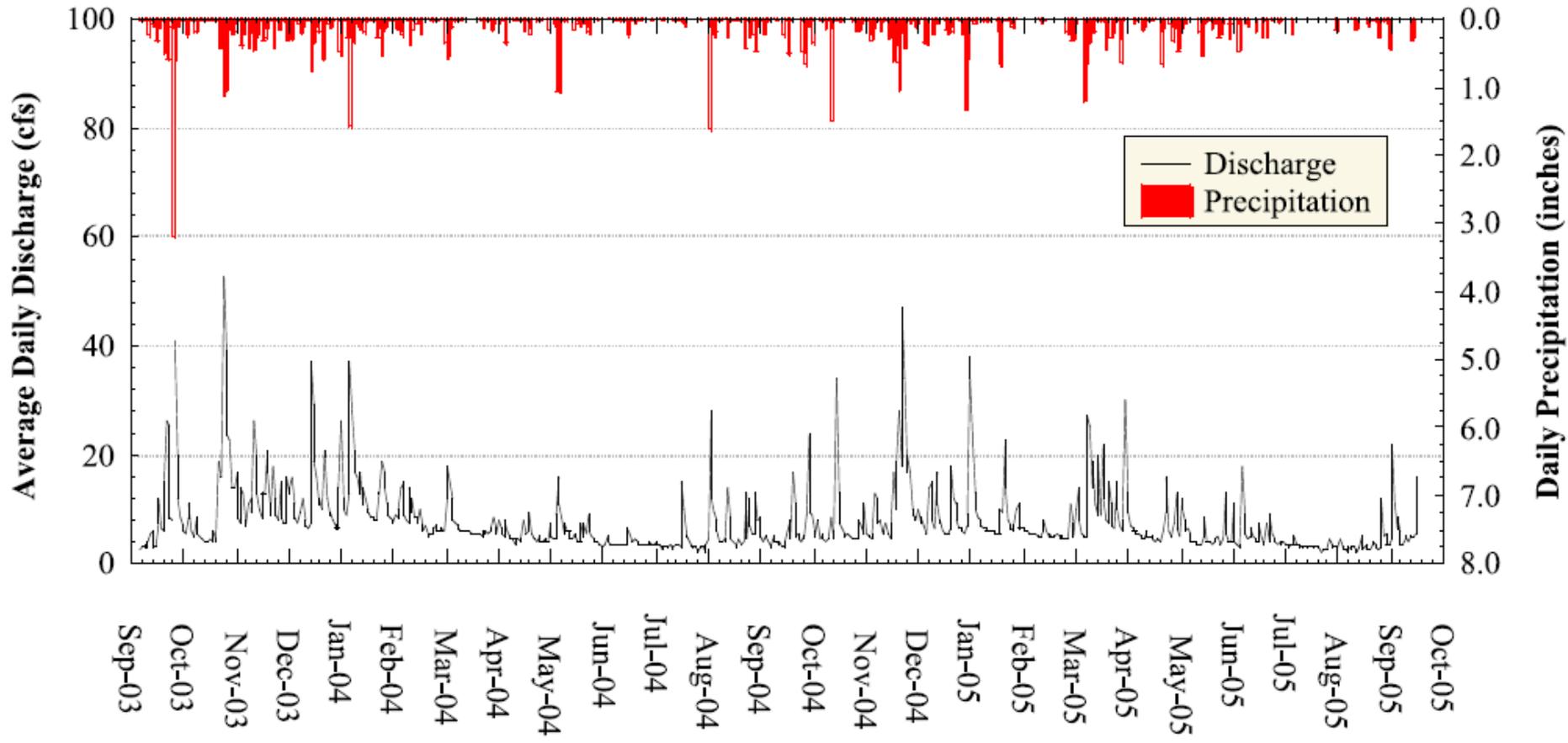


10% shallow infiltration

5% deep infiltration

75%-100% Impervious Surface







Stream Flow/Rainfall Runoff Strategies



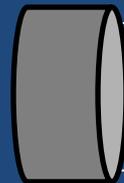
Reduce your footprint



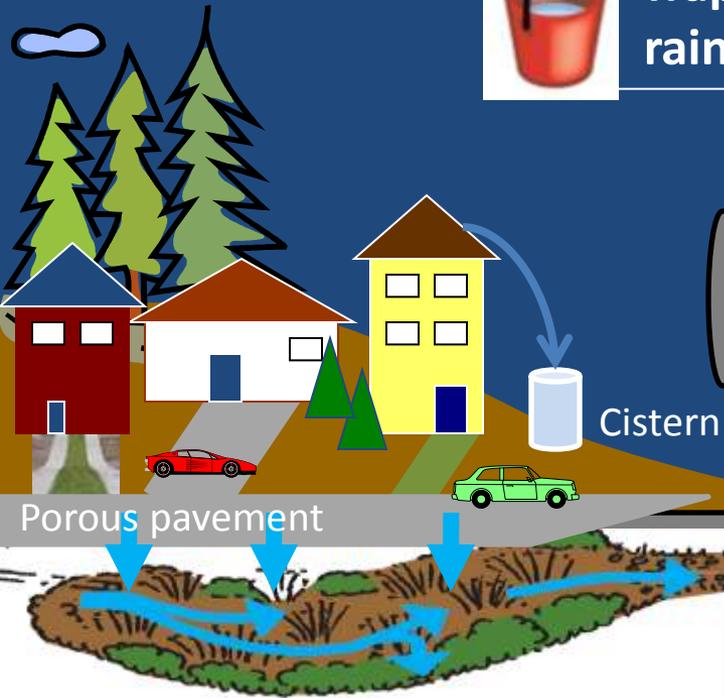
Capture rainfall



Trap/infiltrate rainfall runoff



Maintain the drainage system



Rain garden



Green Roof



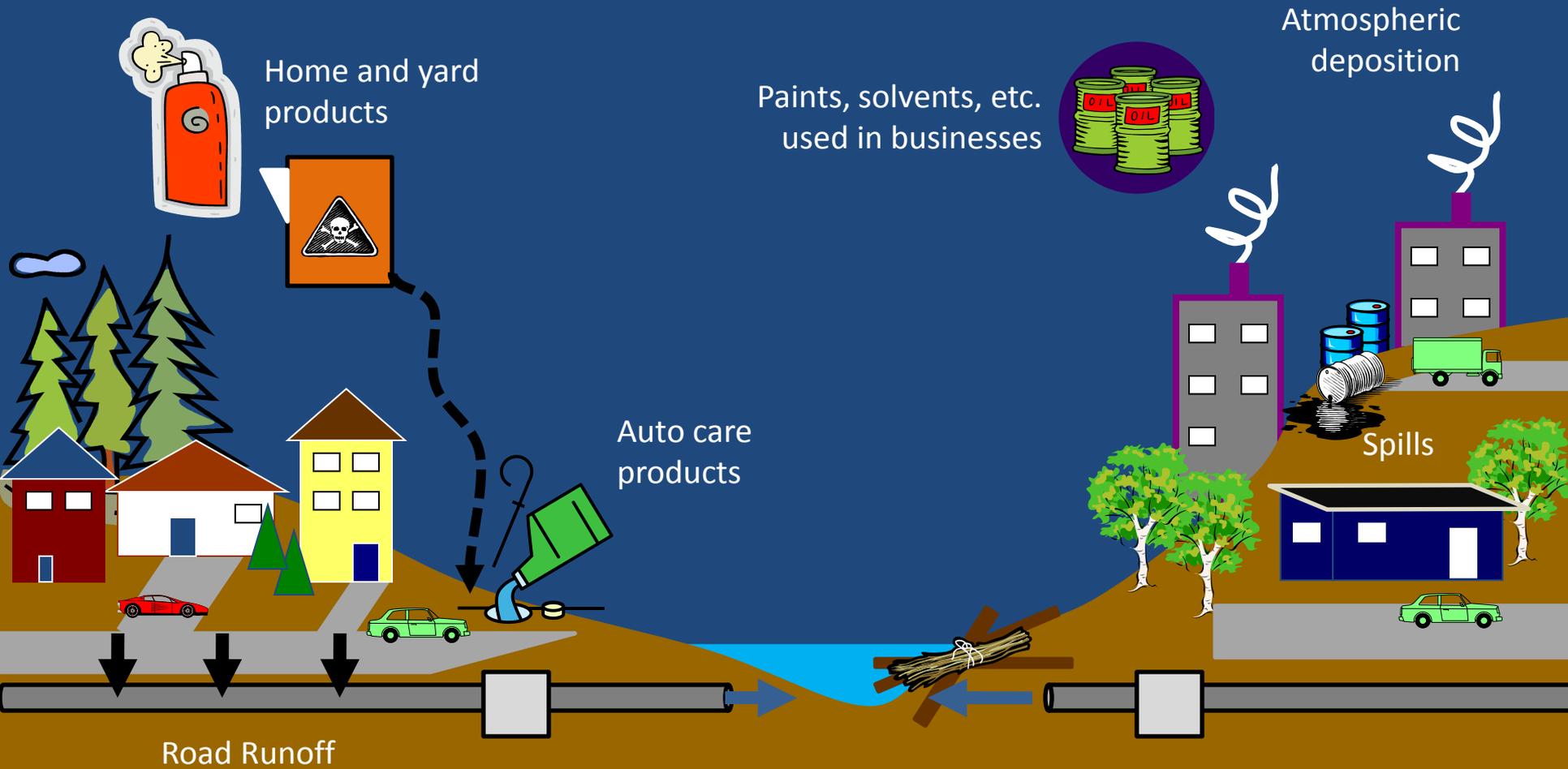


Water Quality

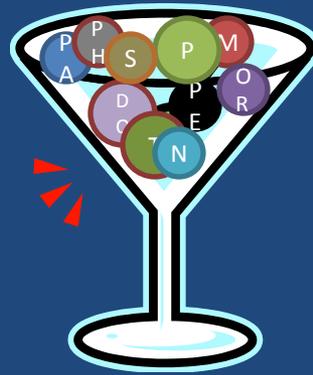
Goal:

Protect and improve the water quality of Seattle's lakes, creek, the Duwamish River and Puget Sound.

Some Pollutant Pathways



Pollutant “Cocktail”



- PA Pathogens
- M Metals
- PE Petroleum Hydrocarbons
- P Pesticides
- OR Other Organics
- N Nutrients
- S Sediments
- T Temperature
- DO Organic Matter (DO)
- PH pH

Water Quality Strategies

Product Stewardship

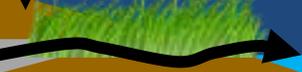
Prevent pollution



Clean up our waters

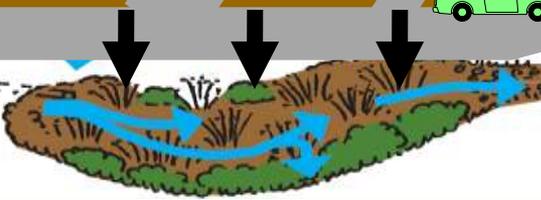


Plant buffers



Reduce/remove pollutants

Rain garden



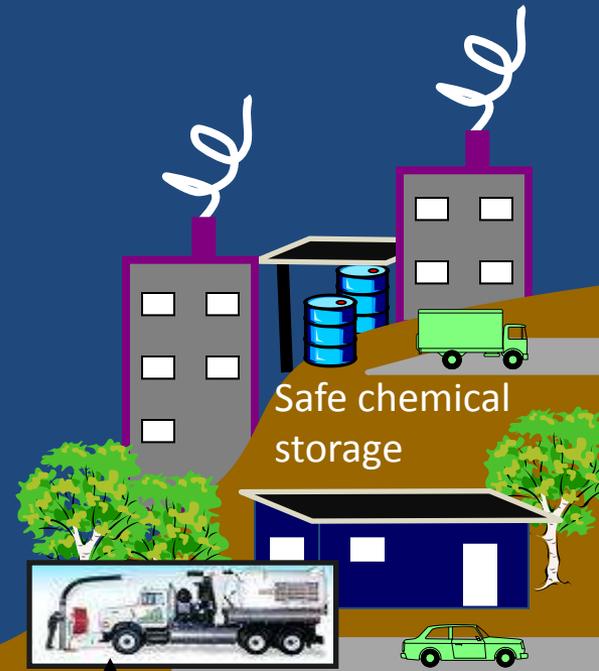
Filters



Catch basin cleaning



Safe chemical storage





Street Sweeping




Oil and Water Don't Mix!

Every year oil and other automotive fluids find their way to Puget Sound and other waterways, hurting wildlife and habitat.

What's the solution?




Programs




Business Inspections

HOTLINE

Only Rain Down the Drain
Stormdrains are for stormwater
Please report violations
(206) 684-7587
City of Seattle



Spill response



CSO Retrofit

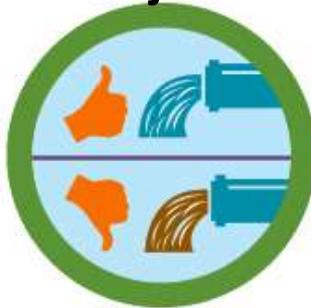


CSO Storage



Swale on Yale

Projects



Midvale Treatment



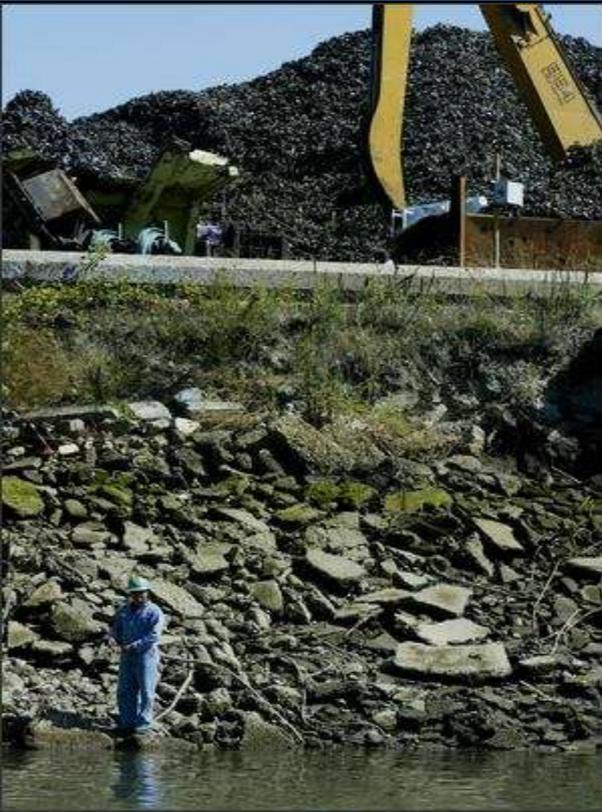


Physical Habitat



Goal:

Protect and improve physical habitat to promote sustainable aquatic communities and public health in Seattle's waters.



Physical Habitat Strategies



Protect/manage floodplains



Repair/replace stream culverts



Improve stream /shoreline habitat

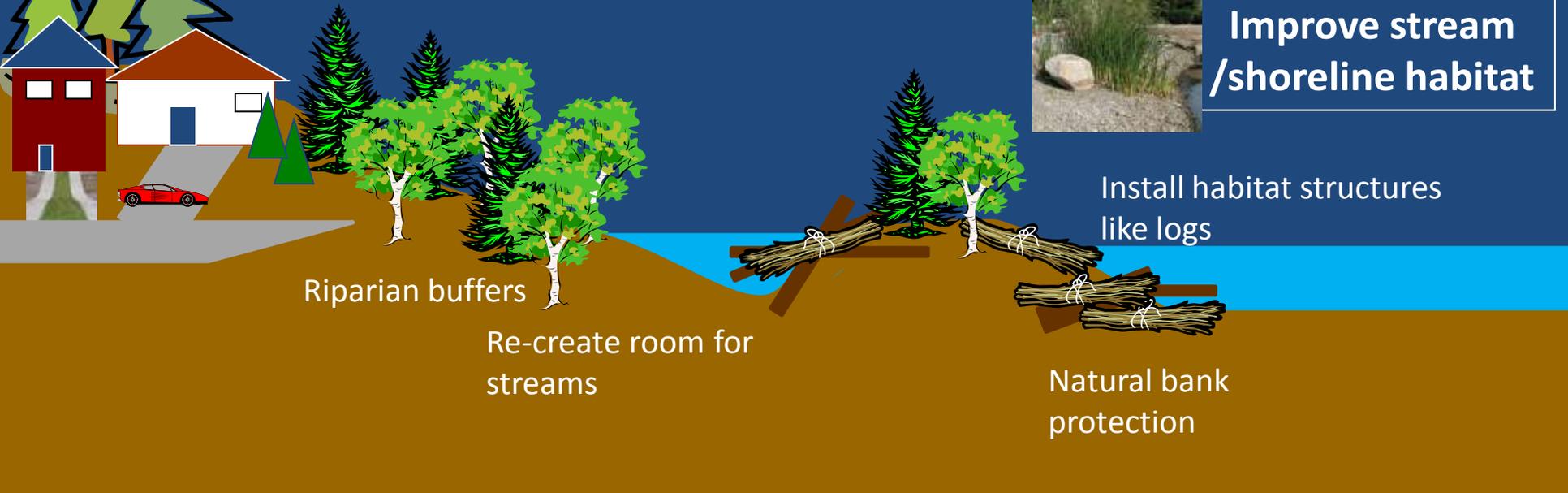


Riparian buffers

Re-create room for streams

Install habitat structures like logs

Natural bank protection





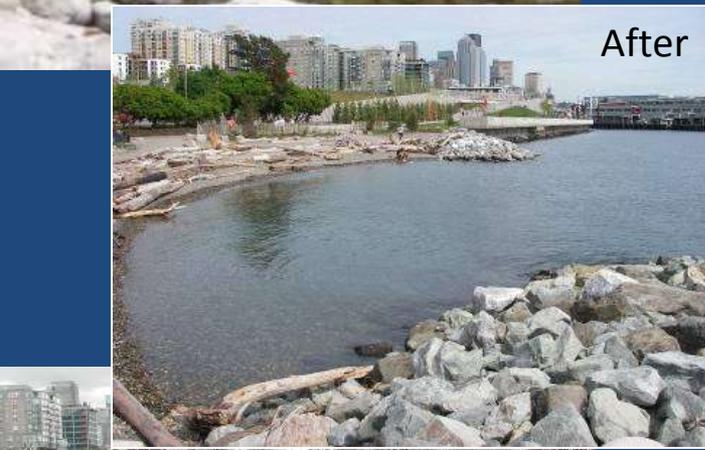
After



Before



After



After



Before



Mouth of Fautleroy



Before



Maple Leaf reach

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**Capture
rainfall**



**Prevent
pollution**



**Protect/manage
floodplains**



**Reduce your
footprint**



**Clean up our
waters**



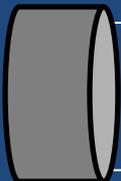
**Repair/replace
stream culverts**



**Trap/infiltrate
rainfall runoff**



**Reduce/remove
pollutants**



**Maintain the
drainage system**



**Improve stream
/shoreline habitat**



Questions?



Maintain the drainage system

Improve stream /shoreline habitat

