

# Building Cities in the Rain

NEP Watershed  
Core Team

*October 22, 2014*



*Photo: SvR Design*

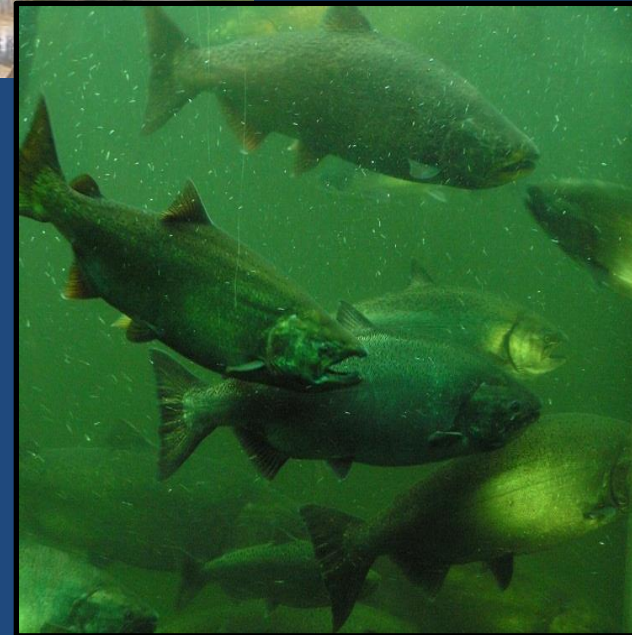
**Commerce:** Heather Ballash  
**City of Redmond:** Andy Rheume  
**PSRC:** Erika Harris

# Overview

1. Context – project origin/desired outcomes
2. Project Accomplishments
3. Permit Flexibilities:  
Regional Facilities/Shared  
Solutions
4. On the Ground Examples
5. Next Steps



*Photo: SvR Design*



# Context – Project Origin

# Growth Management Policy Board

## “NPDES v. GMA”

**NPDES v. GMA:** Stormwater regulations are often more costly in ultra-urban areas than in green-fields.



**NPDES & GMA/Regional Growth Strategy:** How to encourage development in designated urban centers while meeting stormwater requirements?





# VISION 2040: Jobs & Housing for 1.7 Million



2 more Seattles + 2 more Tacomas

Central Puget Sound Region



# VISION 2040

Focus on designated centers linked by transit:

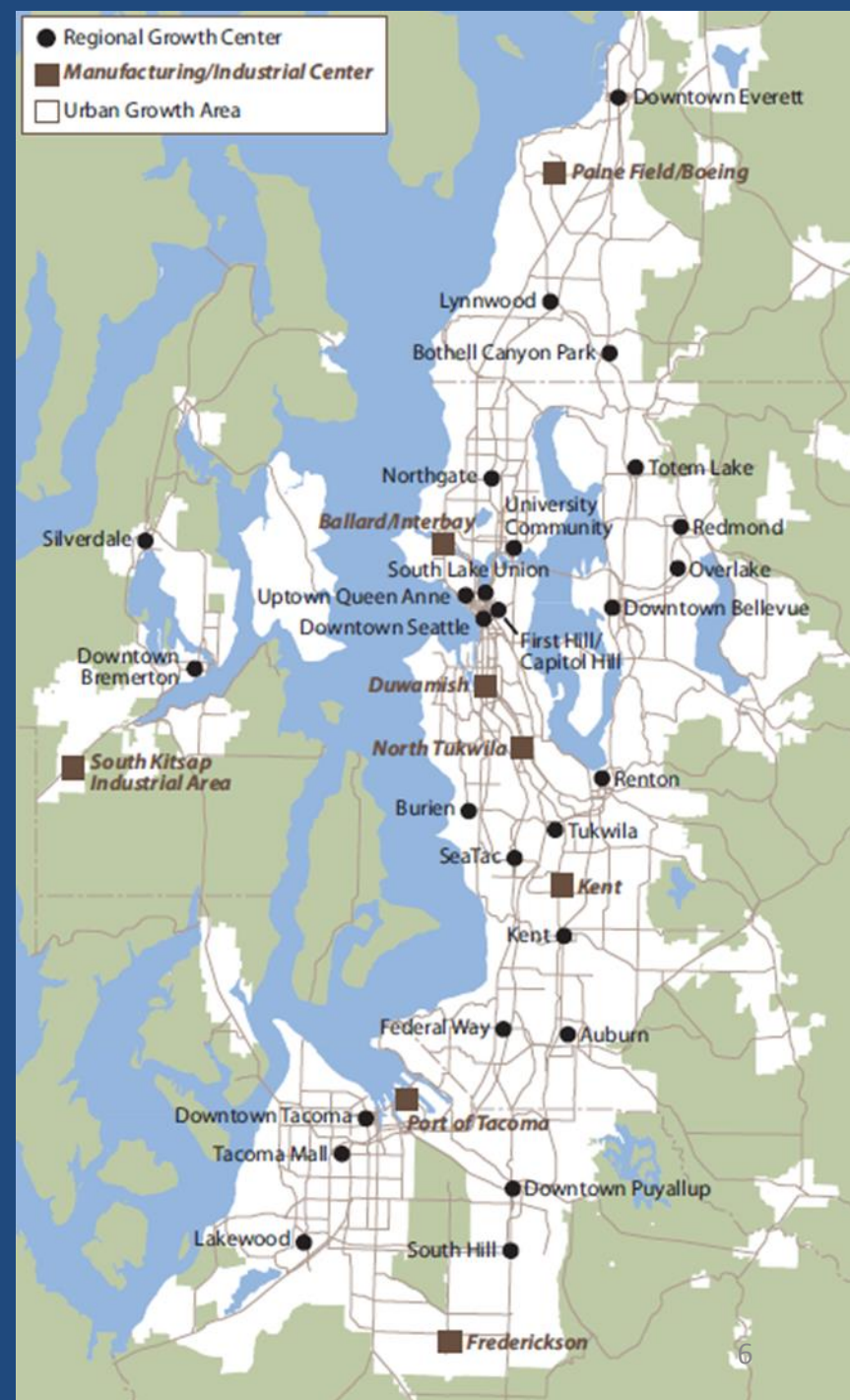
## 27 Regional Growth Centers

- 2.5% of total UGA ( $\approx 25$  sq mi)
- Currently 29% of region's jobs

## 8 Manufacturing/Industrial Centers

- 3.7% of total UGA area

Transportation-Oriented Development (TOD) = compact urban form; mostly *redevelopment*; less cars, roads and parking per capita



The logo for the Puget Sound Partnership is centered within a light orange oval. It consists of a dark grey rectangular box containing the text "PugetSoundPartnership" in a bold, blue, sans-serif font. Below this, in a smaller, white, all-caps sans-serif font, is the phrase "LEADING PUGET SOUND RECOVERY".

**PugetSoundPartnership**

LEADING PUGET SOUND RECOVERY

## Action Agenda

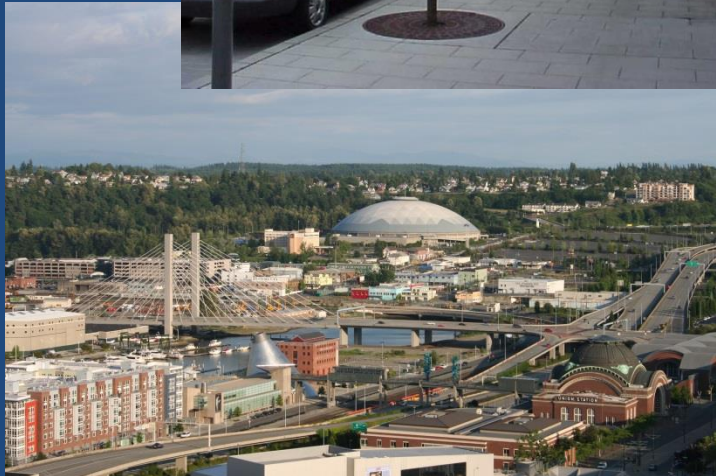
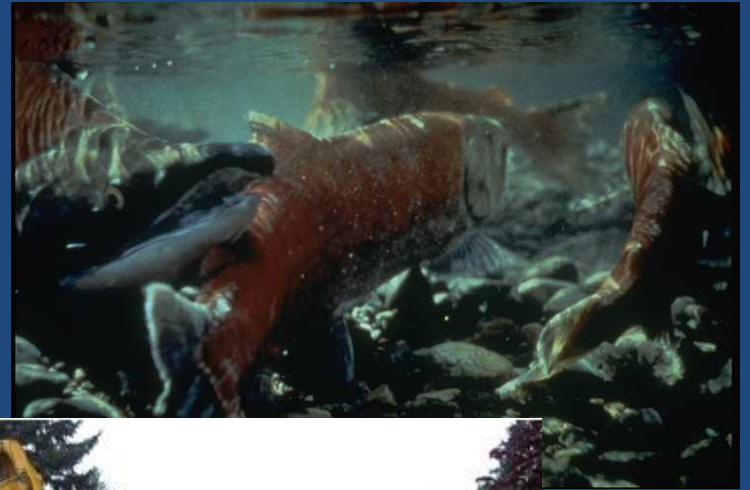
### **Commerce Near Term Action A1.2.1:**

“Land Use Planning Barriers, BMPs and Example Policies”: address barriers to policies that encourage compact growth, increased density, water quality standards, redevelopment.....”

**South Central LIO Near Term Action SC13:** “Develop recommendations for incentives and cost effective tools to meet stormwater management and GMA ... to encourage infill... in urban centers instead of greenfield... and to improve water quality.”



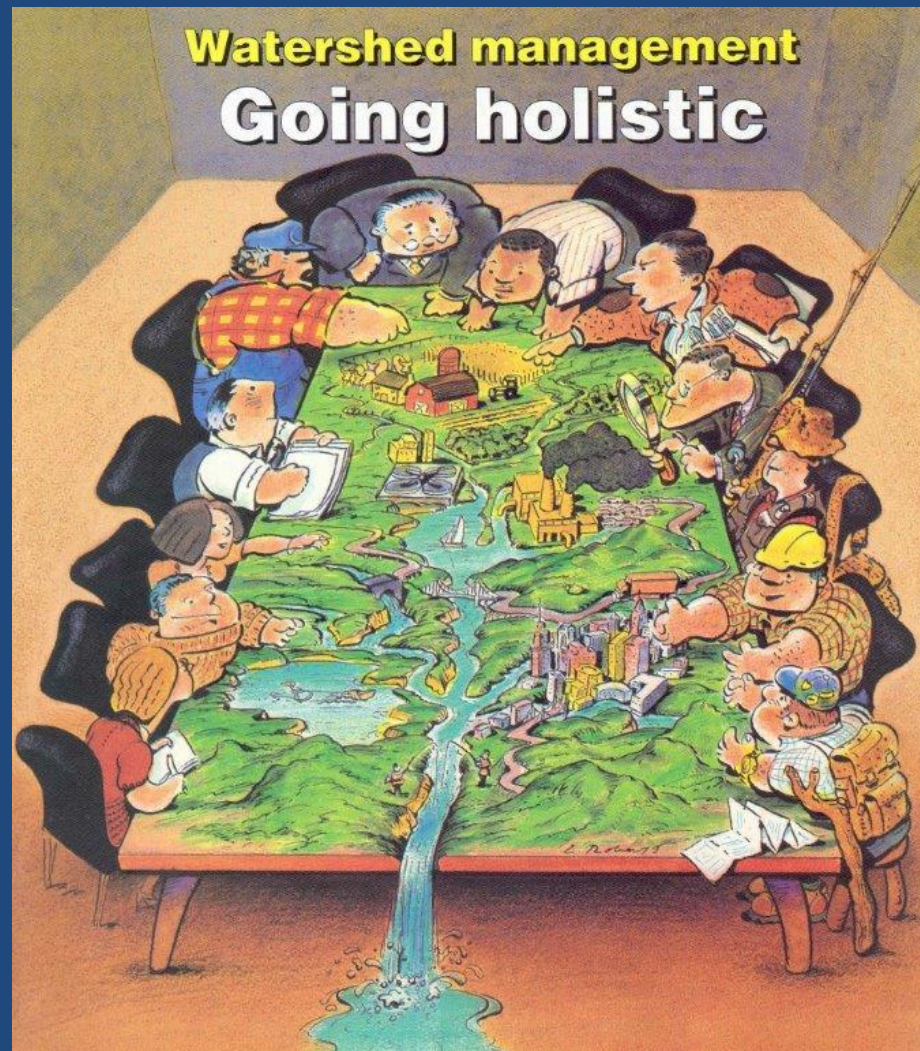
# Desired Outcome = Vibrant Designated Urban Centers + Clean Water and Restored Fish Habitat



*Photo: SvR Design*



# Desired Outcome = An Interdisciplinary Approach



# Link to Salmon Recovery

## Outcomes:

- No loss of function in redeveloped sites
- Improvement in function in receiving basins
- Focuses development in designated urban centers/slow sprawl/reduces conversion of habitat

## Benefits:

- Achieves improvement in salmon habitat and prevents loss of habitat
- Provides flexibility in meeting stormwater requirements
- Helps ensure stormwater mitigation funds are spent wisely in a manner that helps achieve salmon recovery

# Project Accomplishments



# Background report

Summarizes GMPB sessions, literature review, interviews & meetings with:

- American Public Works Association
- NPDES Permit Coordinators
- MBA-Pierce County
- Pierce County Growth Management Coordinating Committee
- Olympic Peninsula Planners Forum

## *Building cities in the rain: background memo*

### Introduction

Consistent with the Growth Management Act, [VISION 2040](#) sets forth a vision and strategy for accommodating growth in the central Puget Sound region by concentrating housing and jobs in designated growth centers. In most areas, reaching population and employment targets will require substantial infill development. In addition to encouraging efficient use of urban land through infill, VISION 2040 encourages maintaining hydrological functions, and where feasible, restoring them to a more natural state. The [Puget Sound Partnership Action Agenda](#) also calls for concentrated growth in UGAs and improved stormwater controls.

However, the Puget Sound Regional Council [Growth Management Policy Board](#) (GMPB) has heard concerns from cities that the high cost of site-by-site stormwater regulations, in combination with other costs such as demolition, brownfield remediation, historic preservation, and aging infrastructure repairs, may stifle redevelopment of urban areas. If costs are too high developers may look outside concentrated growth centers for lower cost strategies or options for their projects, or downsize redevelopment projects to avoid triggering thresholds for expensive stormwater requirements to the detriment of desired density.

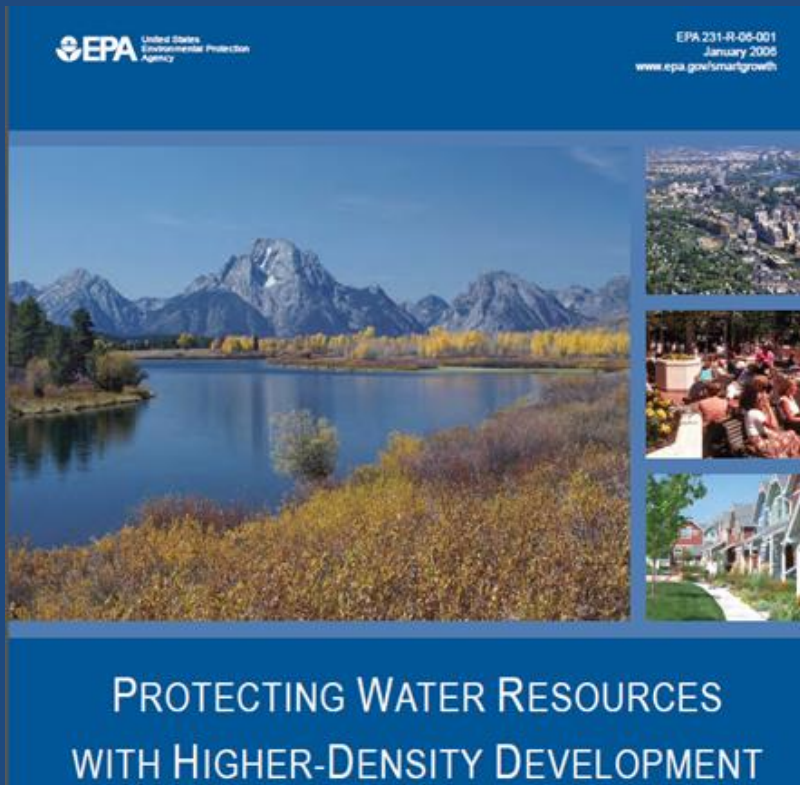
Some areas have found regional stormwater facilities can help address the challenges of infill development, but those approaches may not work in all cities depending on local real estate markets, or constraints of local geology or hydrology.

The South Central Action Area Caucus Group *Subcommittee on Stormwater and Infill Development* is building on Growth Management Policy Board discussions with help from Commerce (see sidebar). This memo provides background information on stormwater management challenges in infill situations based on information presented to the GMPB as well as preliminary input from interviews and meetings with builders, planners and state and local stormwater managers.<sup>1</sup>

*Who, What and Why: The [South Central Action Area Caucus Group](#) is a regional "Local Integrating Organization" (LIO) designated with advancing the [Puget Sound Action Agenda](#). This project is intended to further one of the group goals: "Better alignment of land use planning with conditions for, and implementation of, municipal NPDES permits to reduce stormwater impacts."*

*This memo was prepared by Department of Commerce with a grant from the National Estuary Program directed at promoting regional collaboration efforts that advance protection of Puget Sound. For information visit the project [EZ](#). [View website](#) or contact [Tim Gates](#), Commerce, at 360.725.3058; or [De'Sean Quinn](#), Caucus Group Coordinator, at 206.263.3420.*

# National Conversation – Density as BMP?



# Innovative Practices in Puget Sound – SvR Design



*Schematic: SvR Design*

## Key Messages:

- Integrate stormwater and LID into comprehensive land use plans and development plans **early**
- Public/private partnerships are important
- Consider regional facilities rather than site-by-site mitigation



# Flexibility in the Permits: Regional Facilities/Shared Solutions

# Flexibility in the Permit: Regional Facilities/Shared Solutions

Centralized mitigation projects  
(big ponds/vaults, or pipes to  
exempt waters)

Escapes the “tyranny of site  
constraints”

Scalable: can treat large areas or  
small neighborhoods

Concerns:  
Need the right geography.  
How to pay for facilities?

Redmond: example  
alternative to site-by-  
site flow controls

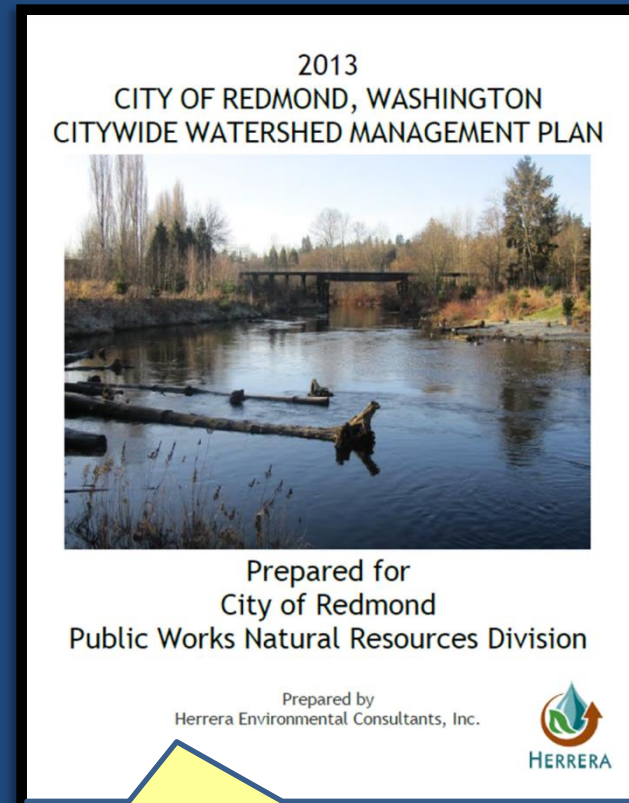


# Flexibility in Permit: Watershed Planning

Redmond approach approved February 2014.  
Template for other cities.

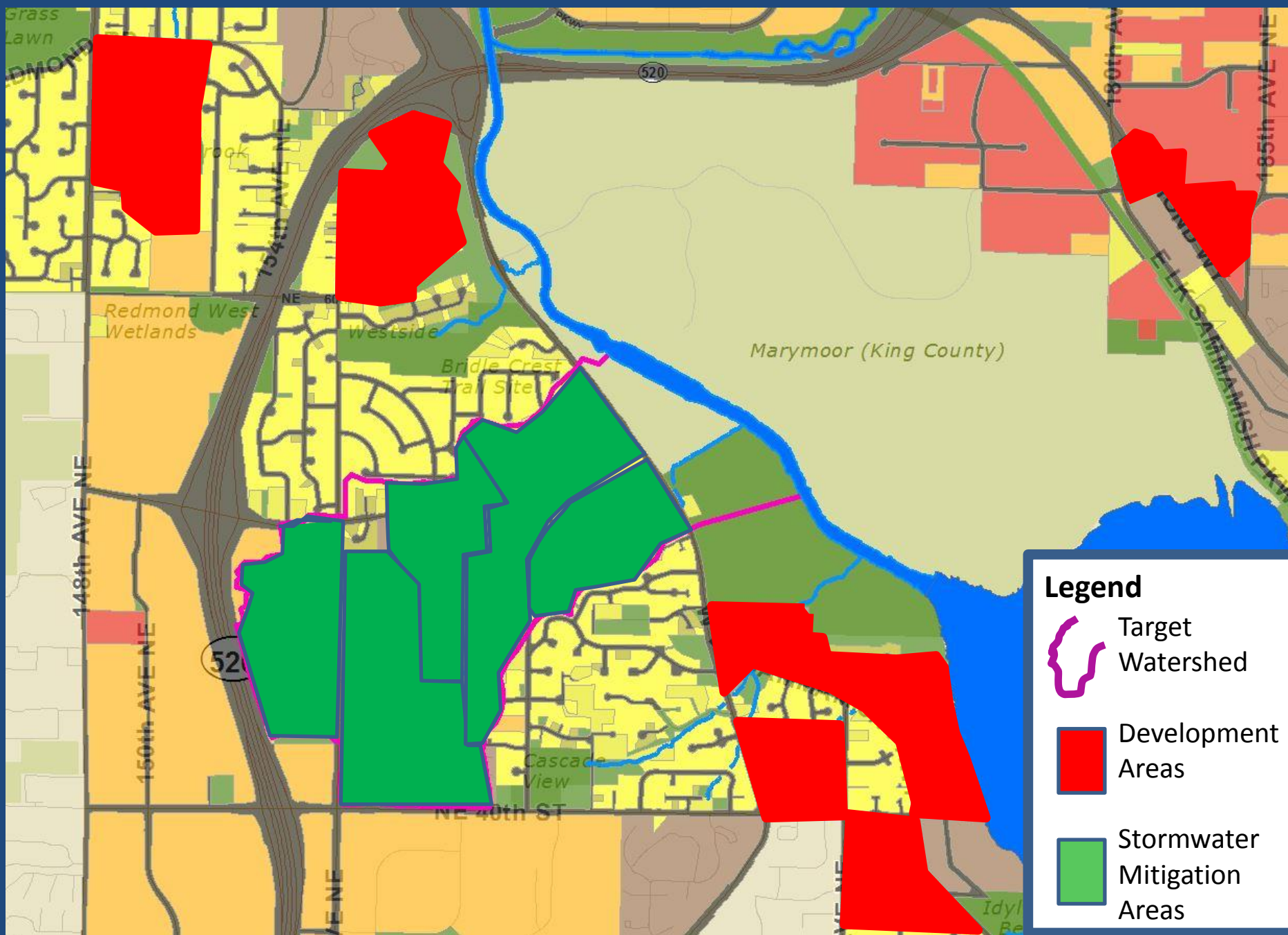
## Basic approach:

- Identify areas where dense development is desired; and “stormwater mitigation areas” where stormwater retrofits will have near term ecological benefits
- City builds stormwater retrofits to address hydrology and water quality issues caused by development
- Developers pay fee-in-lieu to pay back stormwater retrofits



Carefully decouples mitigation from project site





# Watershed Management Plan Monitoring Program



# On the Ground Examples



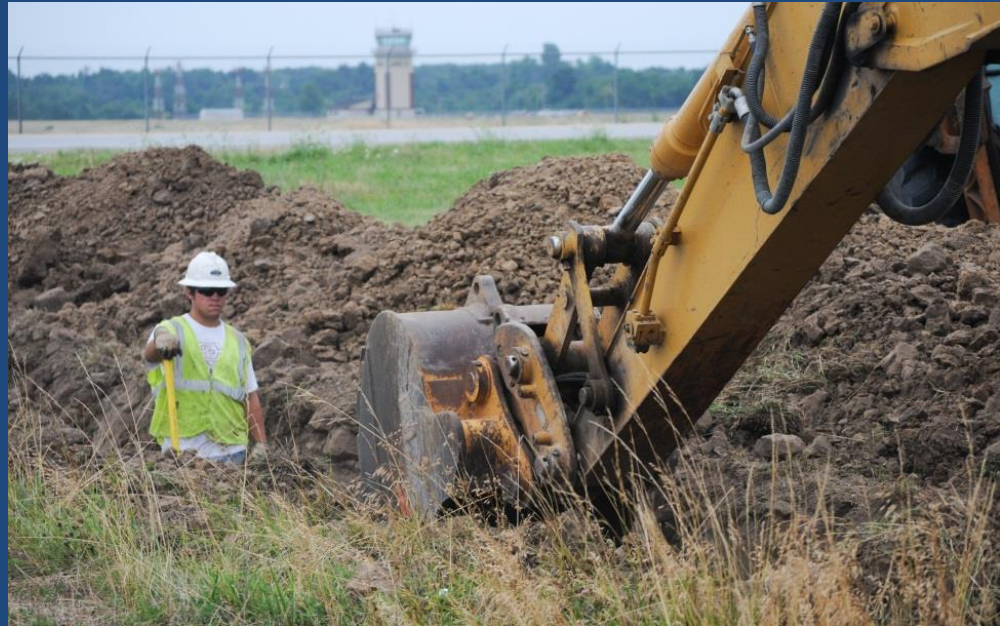
# Problem Statement-Scenario to Avoid

**Parking Lot remains in Urban Center**



*Photo by A. Easton*

**Development pushed out to urban fringe**



*Photo by US ACOE*

# Effects on Stormwater Quality and Quantity of Urban Infill Redevelopment

**Before: little or no water quality and flow controls, pollutant generating impervious surface**



*Photo by A. Easton*

**After: less impervious surface and some green infrastructure, little or no pollutant generating impervious surface**



*Photo by Brett VA*



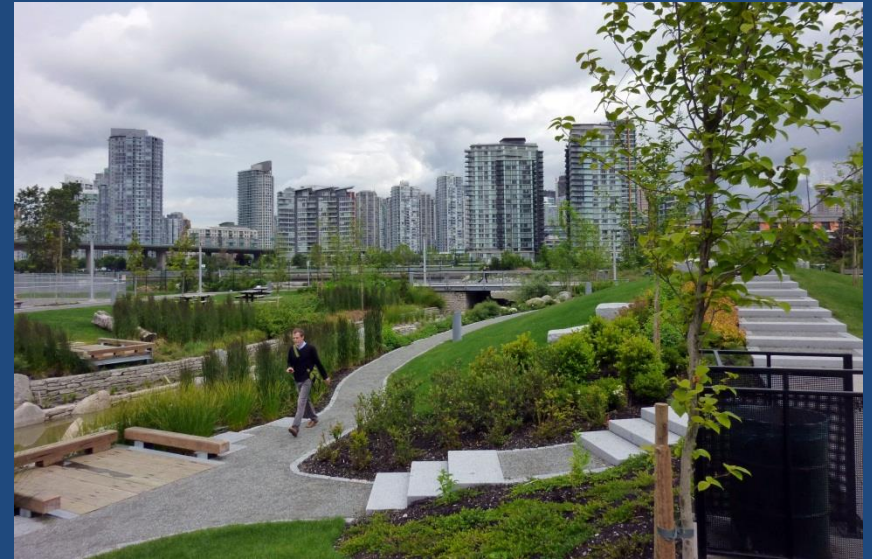
# Onsite or Offsite Stormwater Mitigation

**Large vault on site**



*Photo by King County*

**or retrofit of high-priority area  
(stormwater control transfer  
program receiving area)**



*Photo by P. Chung*

# Next Steps



# Developing Guidance and Outreach

Task	Action	Notes
<b>Guidance</b>	Develop guidance for identifying priority “stormwater mitigation areas” for stormwater facilities	Develop prioritization guidance that compliments/integrates with Ecology’s (developing) guidance on a stormwater control transfer program
<b>Outreach</b>	Communication with and engagement of stakeholders	Tribes, environmental community, cities/counties, building community, etc.

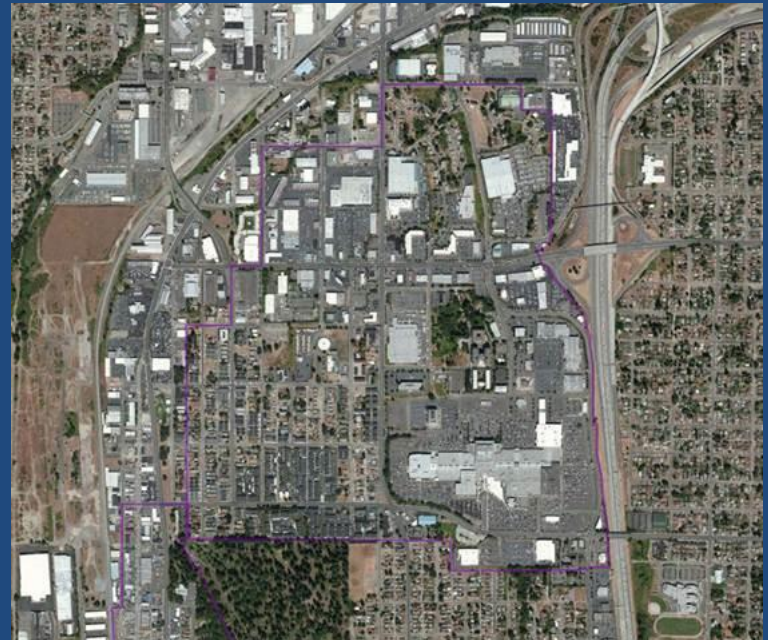
# City of Redmond

Redmond received two NEP Watershed grants for implementation of its Watershed Management Plan



# City of Tacoma

Tacoma received an NEP Watershed grant for a Tacoma Mall Subarea Plan, including an areawide stormwater strategy



*Tacoma Mall Subarea*

# Action Agenda

## Ecosystem Targets, or *Vital Signs*

The Partnership uses 21 Indicators and Targets arranged into a Vital Signs Dashboard to help us track and communicate our efforts toward Puget Sound recovery



Of the Vital Signs, which are most closely linked to Encouraging Infill Development, Protecting Greenfields, and Managing Urban Stormwater?

These six:

Protecting Habitat:

1. **Land development & cover** (including UGA target)

Water Quality:


2. **Freshwater quality**
3. **Marine sediment quality**
4. **Toxics in fish**

Healthy Human Population:

5. **Shellfish harvest**
6. **Swimming beaches**



# For More Information



## Building Cities in the Rain

[Portal ID #1780]

OverviewContactsEventsLibrary


### Summary of the project

The Washington State Department of Commerce, with funding from the U.S. Environmental Protection Agency's National Estuary Program, is partnering with the South Central Sound Puget Caucus to identify approaches to managing stormwater in infill areas.

**Problem Statement:**  
Current regulatory and legal requirements, including stormwater management, provide important environmental protections but can also make development in urban centers more expensive than in less dense areas. What approaches can the region use to both encourage development in dense urban centers to meet land use goals, while meeting water quality requirements?

**Need:**  
The challenge of meeting growth management and stormwater goals is complex and involves many disciplines such as water resources, science and engineering, architecture, real estate development and finance, land use and environmental regulation, and urban design, among others. Infill development can include costs for demolition, brownfield remediation, historic preservation, aging infrastructure repair, and stormwater infrastructure. These types of requirements can ultimately make an infill project more expensive than a similar project in a less developed area.

#### Pictures



Courtesy SvR Design

Visit the project web site at [www.ezview.wa.gov](http://www.ezview.wa.gov)  
or contact Heather Ballash at  
[heather.ballash@commerce.wa.gov](mailto:heather.ballash@commerce.wa.gov), (360) 725-3044