

Building Cities in the Rain

APWA Stormwater Managers

September 18, 2015



Photo: SvR Design

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Overview

1. Context – project origin/desired outcomes
2. Permit Flexibilities:
Regional Facilities/In
Basin Transfers
3. Permit Flexibilities:
Watershed Planning/Out
of Basin Stormwater
Control Transfers
4. Building Cities in the Rain
– Draft Prioritization
Guidance



Photo: SvR Design



Context – Project Origin and Desired Outcomes

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 being effective at recovering surface waters?

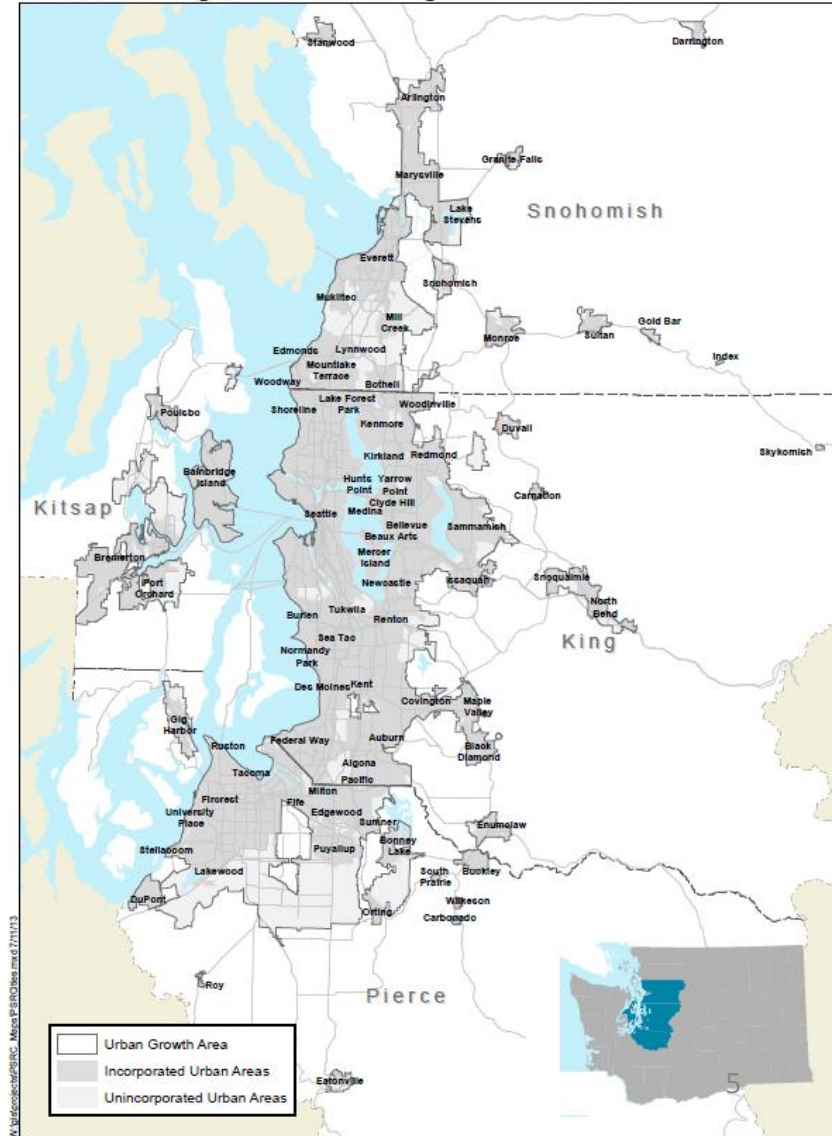


VISION 2040: Jobs & Housing for 1.7 Million



2 more Seattles + 2 more Tacomas

Central Puget Sound Region



VISION 2040

Focus on designated centers linked by transit:

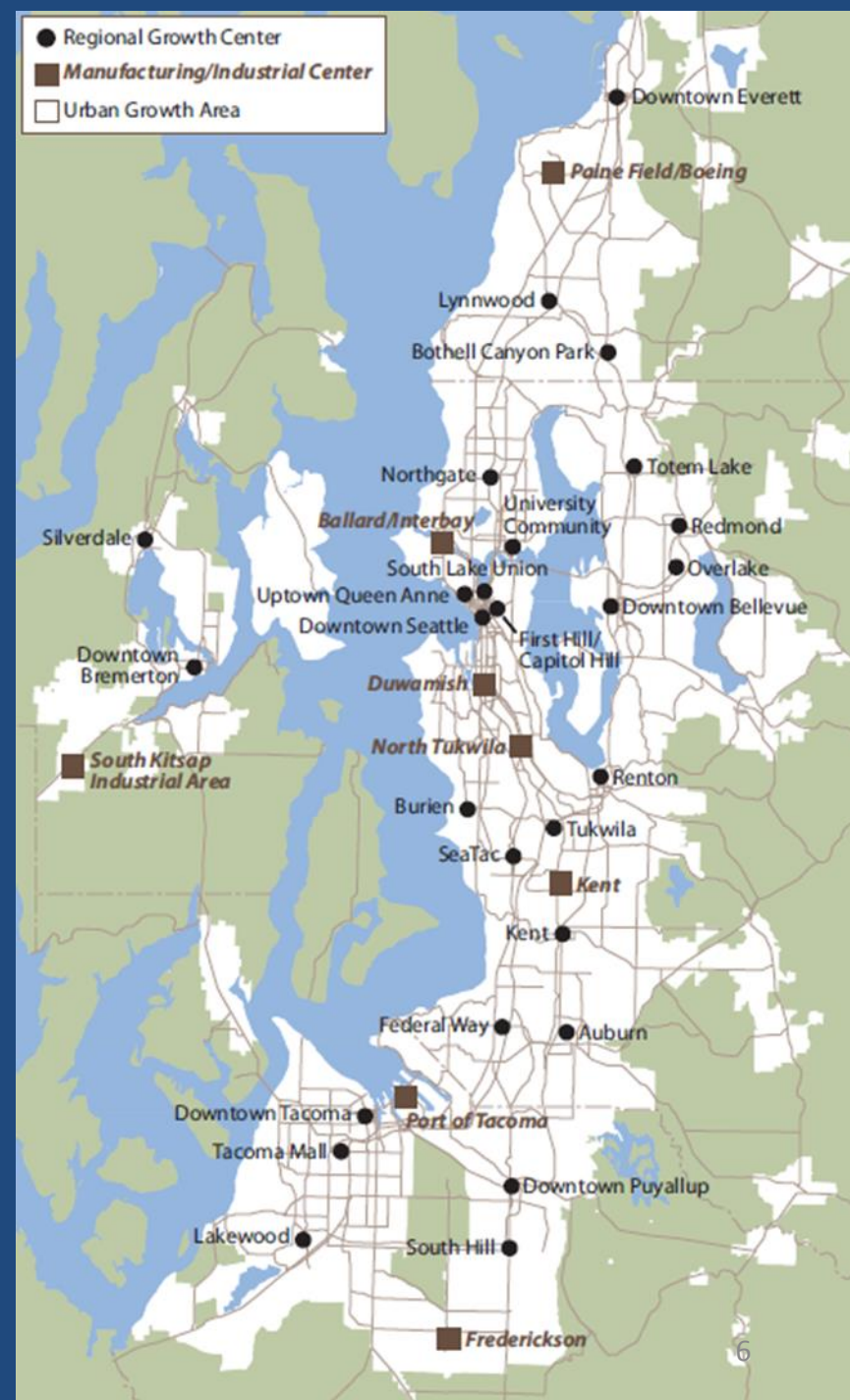
27 Regional Growth Centers

- 2.5% of total UGA (≈ 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

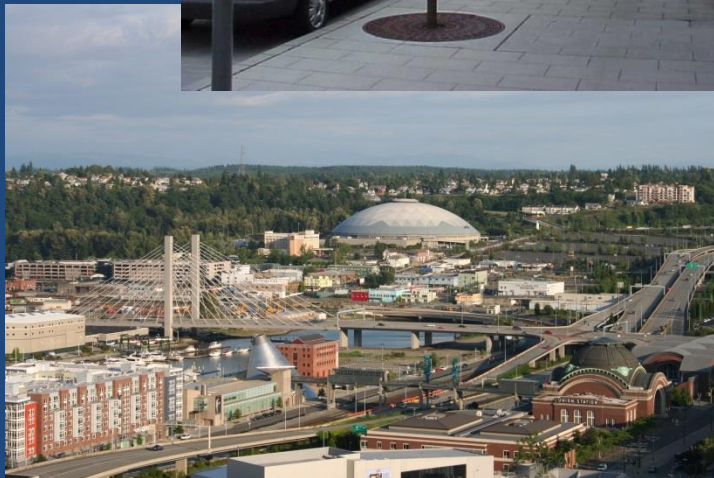


Photo: SvR Design

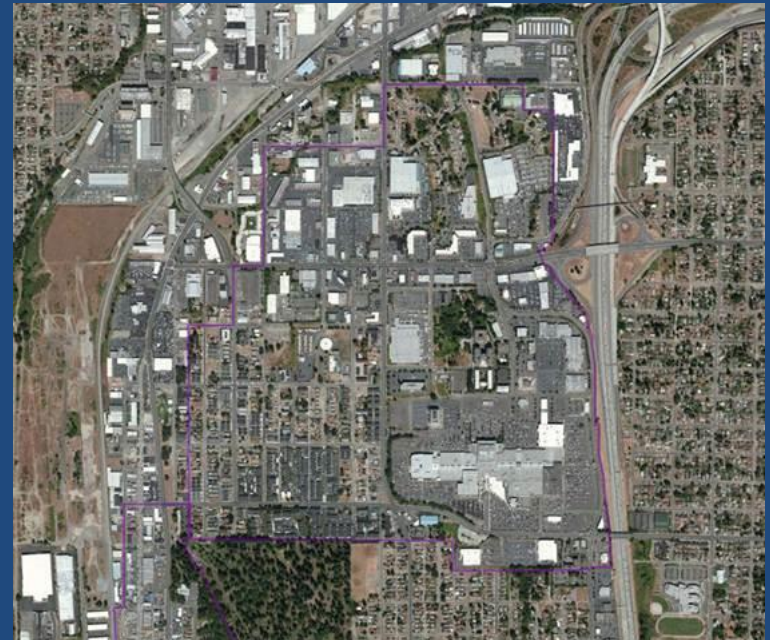
City of Redmond

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



City of Tacoma

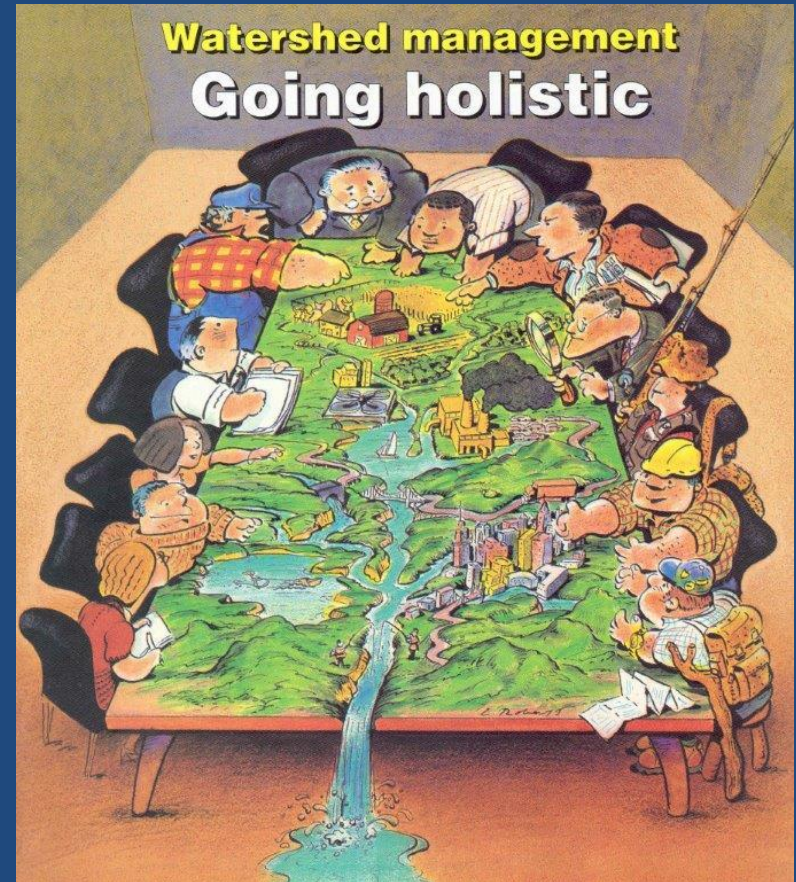
Tacoma received an NEP Watershed grant for a Tacoma Mall Subarea Plan, including an areawide stormwater strategy



Tacoma Mall Subarea

GMA - Local Comprehensive Planning

- Policy/goal - healthy environmental assets at build out
- Capital Facility Planning – assess your environmental assets and stormwater infrastructure together, especially for urban centers
- Efficiently and intentionally invest in your community's environment



Flexibility in regulations: “in basin” alternatives

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 mitigation

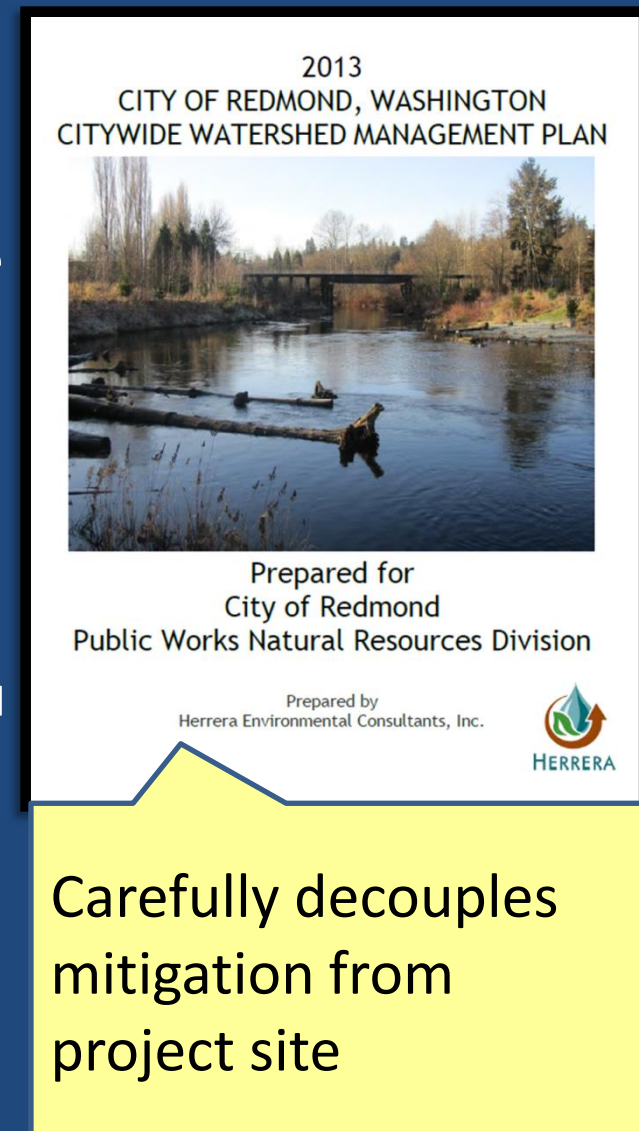


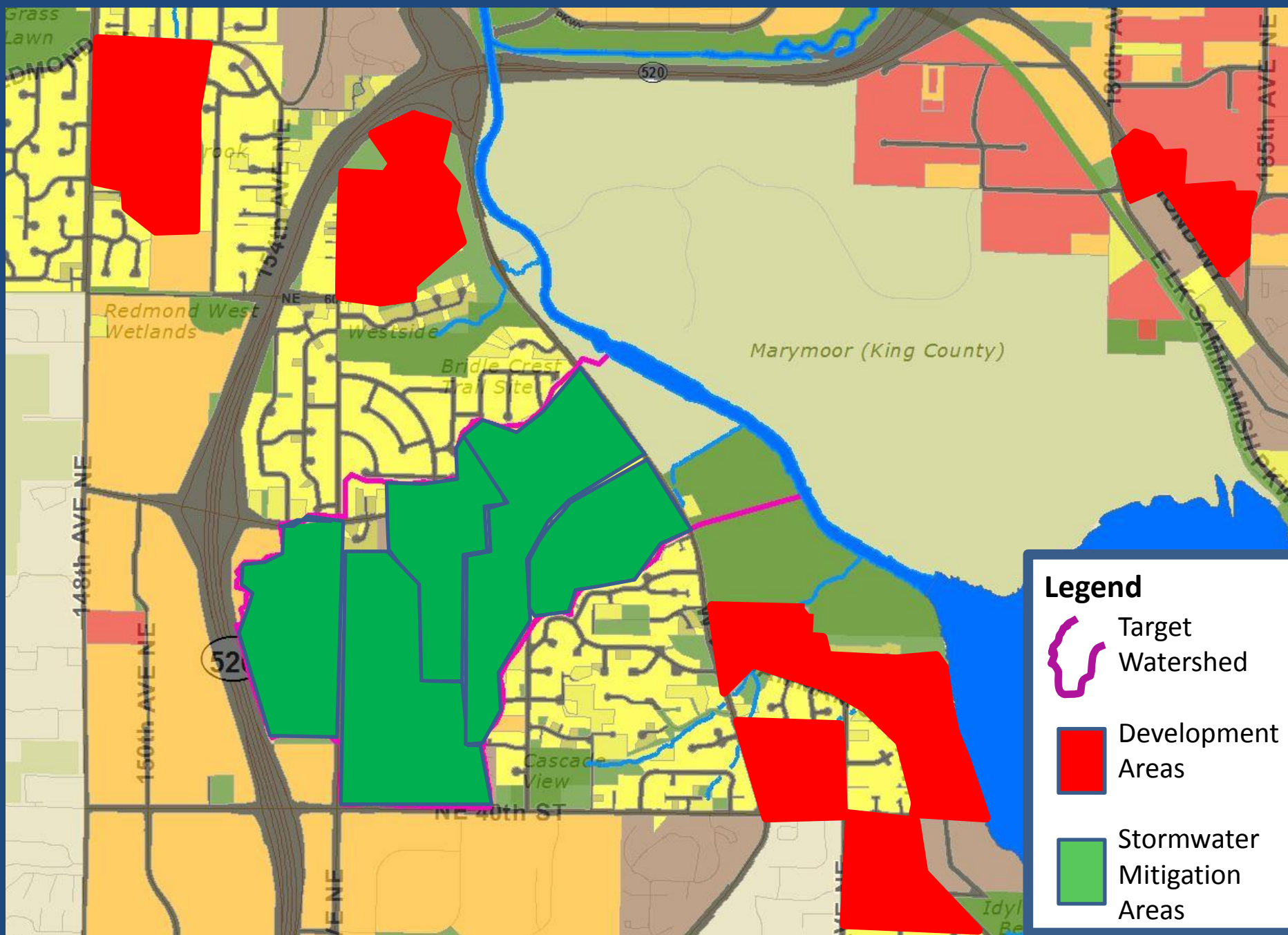
Flexibility in regulations: “out of basin” alternative

Identify where stormwater retrofits will have near term ecological benefits

City builds stormwater retrofits to address hydrology and water quality issues

Developers/local governments pay fee-in-lieu of on-site controls to pay back stormwater retrofits





Stormwater Control Transfer Program

Anne Dettelbach, Water Quality Program



Stormwater Control Transfer Program (SCTP) Background

- **Responds to:**
 - Recurring complaint that SW Req'mts discourage urban redevelopment
 - Building Cities in the Rain Initiative
 - Stipulated Order in settlement of municipal permit appeal
- **Articulates municipal permit flexibility**
- **Identifies Ecology expectations**
- **Consistent with PS Ecosystem Recovery Targets (improve lightly to moderately impacted basins)**



Stormwater Control Transfer Program Overview: *What it is*

- **An alternative approach** to satisfy municipal stormwater permit requirements associated with flow control at new and redevelopment sites that...
- **Accelerates environmental improvements** in priority watersheds and is...
- Implemented through a **water quality/quantity planning provision** in Phase I and II Municipal Stormwater Permits in...
- Western Washington.



SCTP Overview: *What it is not*

- Relaxation of stormwater requirements
- Wetlands Mitigation Banking
- TMDL-driven pollutant trading
- In-basin SW control transfer program
- An alternative to structural retrofitting required by Phase I MS4 permit

NOTE: Phase II permit does not require retrofitting existing development with stormwater controls



SCTP Guidance Overview

- Section 1:
 - Overview
 - General Principles
 - Key Elements
 - Specific Guidelines
- Section II: Prioritization Analysis Support & Principles
- Section III: Effectiveness Monitoring Plan Considerations
- Section IV: Determining Debits/Credits & Tracking Transfers



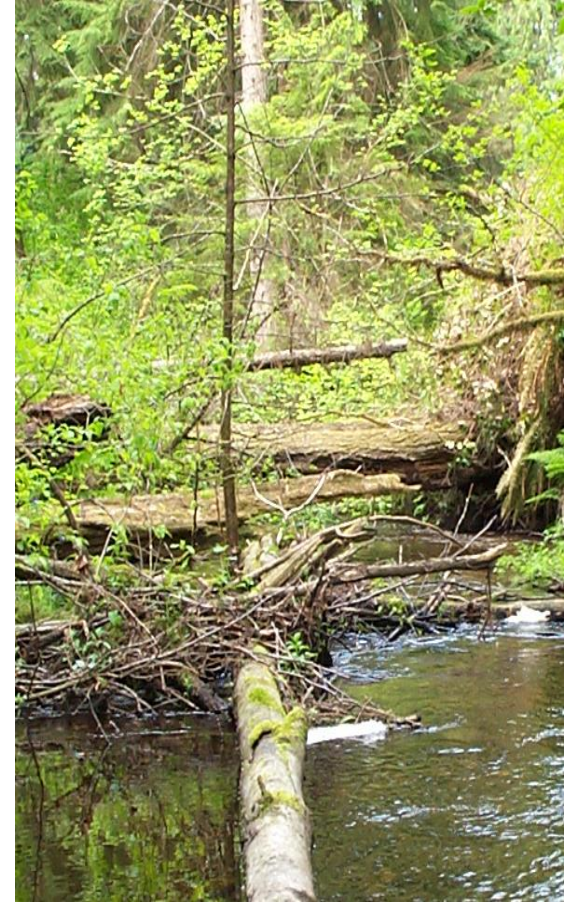
General Program Principles

1. Environmental Goal: Full attainment of WQS
2. NO increased stormwater impacts to any receiving water
3. Directs stormwater improvements to “priority watersheds”
4. Prioritization is science-based
5. Ecology approval required; action is appealable
6. Other, more stringent requirements may still apply



Section 1: Key Program Elements

1. Always match pre-project condition at project site
 - Only the “improvement” may be transferred
2. Cannot transfer requirements ‘away from’ any priority watersheds
3. Offsite facilities must be online before transfers allowed
4. Municipal permittee verifies facility long-term O&M



Section 1: Key Program Elements, *cont'd*

5. Alternative site construction; or purchase regional facility capacity (fee-in-lieu)
6. Dedicated fee-in-lieu accounts + capacity tracking
7. Annual reporting/accounting to Ecology *

**See Stormwater Control Transfer Tables for more details*



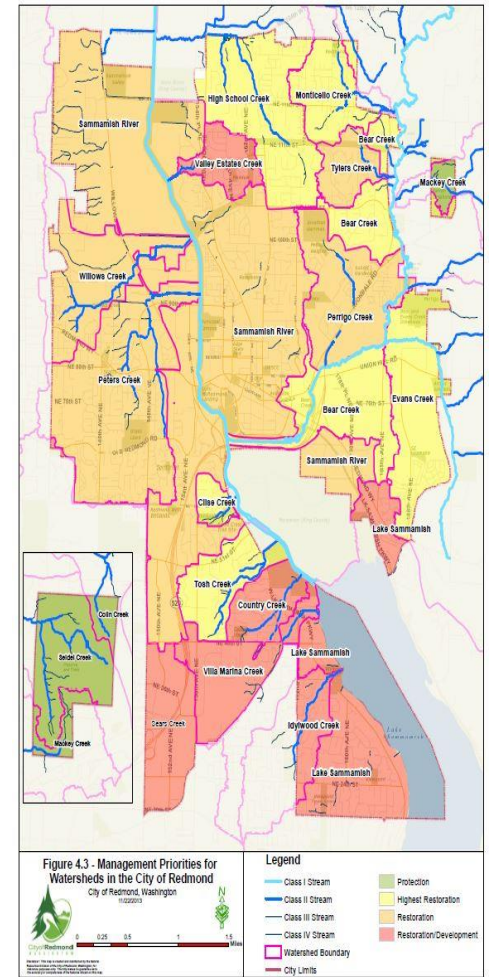
Sec. 1: Flow Control Transfer Guidelines

Pre-Project Land Cover Condition	Post-Developed Land Cover Condition	Flow Control Requirement
Forest	New Impervious	Project site: Impervious to forested Transfer site: NONE
Impervious	Replaced Impervious	Project site: NONE Transfer site: Impervious to forested
Lawn/Landscape	New Impervious	Project site: Impervious to lawn/landscape Transfer site: Lawn/landscape to forested



Section II: Prioritization Analysis

1. Priority watersheds: Stormwater improvements provide more immediate environmental benefit
2. Science-based
3. Watershed-specific information
4. Specific prioritization goal, data sources
5. Input from tribal, federal, state natural resource agencies
6. Ecology concurrence



Section II: Prioritization Principles to Consider

Prioritize watersheds with:

- Low to moderate impairment
 - Relative to the municipality
- Permittee ability to influence
- Possible synergy with other rehabilitation efforts (e.g., salmon recovery)



Section III: Monitoring

- Purpose
 - Document program effectiveness

Q: Is water quality/quantity improving in the priority watershed?
- Establish Baseline Condition in priority watershed
- Repeat Monitoring after significant retrofitting to track cumulative improvements



Section IV: Capacity Credit Calculations & Facility Options

- Flow Control:
 - Detention, Retention, Combination
 - New or Expanded; Full size or undersized
 - Full Dispersion
 - Permeable Pavement; Bioretention
 - Reforestation
- Capacity calculations



Section IV: Facility Transfer Tracking

- Transfer currency is area by land cover type (i.e., impervious, other hard surfaces, lawn/landscape, pasture)
- Transfer tracking tables (to nearest 1/10 ac)
 - **Table 1:** Track flow control transfers per project site
 - **Table 2 :** Track regional facility capacity used vs available
 - **Table 3:** Track use of regional capacity by projects
 - Tables 2 & 3 are part of Annual Report to Ecology



Fee-in-lieu

- Guidance does not cover
- Municipality determines
- Fee factors
 - Large enough to pay bonds or create fund for next regional facility
 - Small enough to attract developers
 - May need to be supplemented by utility fee



Stormwater Control Transfer Program Review and Comment

- Public Draft Issued for Comment: May 15, 2015
 - Described how to set-up a transfer program for:
 - Flow Control
 - Run-off Treatment
 - LID
- Public Comments Received: July 15
 - Little support for LID transfers
 - Serious concerns raised re: treatment transfer
 - Numerous comments on needed clarifications and proposed changes



Comments on Draft

- 7 Municipalities
- USEPA
- 2 Environmental Groups
- 2 Tribal Interests
- Port of Tacoma
- WSDOT
- Building Cities in the Rain Group

Link to comments on Ecology Municipal Stormwater Permit site at

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/controltransfer.html>



Comments: Overview

- Municipalities
 - Doesn't go far enough
- Environmental Groups/USEPA
 - Goes too far
- Tribes
 - Not a good idea



Municipalities

- Too complicated and costly
 - Start-up \$, Tracking, Monitoring
- Doesn't address enough urban SW implementation issues
- Too risky – too much uncertainty
- Need scope and definitions clarity
- Too restrictive – needs more flexibility and alternatives



Environmental Groups

- Undercuts need for & level of effort in municipal retrofit programs
- Status quo at redev sites allows ongoing degradation
- Toxics reduction opportunity loss & transfer inequality
- LID transfer undercuts new LID requirements
- Ecology authority questionable
- Environmental justice issues
- Transfer metric inadequate
- More public review & appealability



Tribal Interests

- Much overlap w/ Env Groups
- Prioritization concerns
- Concern about limited opportunity to comment, appeal

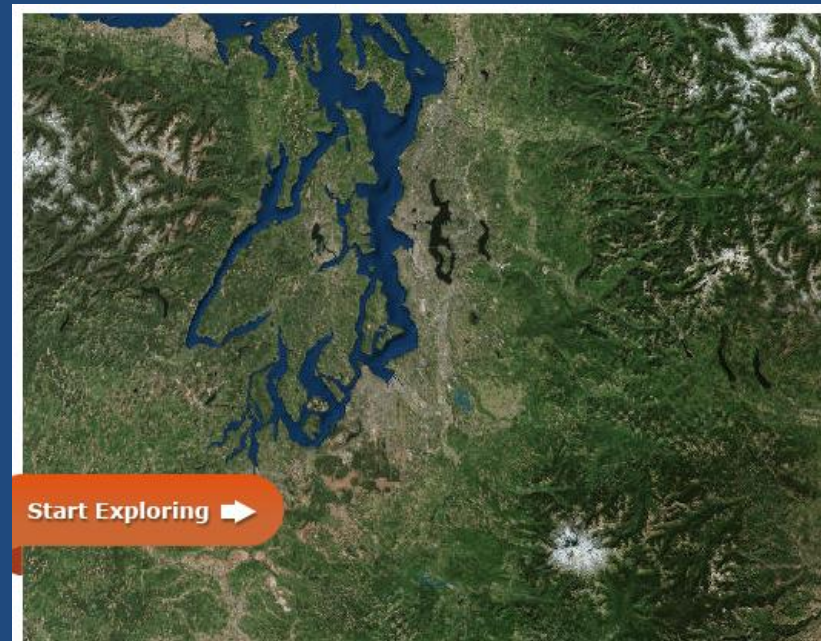


Building Cities in the Rain:
Draft Prioritization Guidance for
Out of Basin Transfers

Focus on Regional Growth Centers

Process and data for prioritizing water bodies

1. Establish prioritization goals.
2. Review regional-scale information as initial screen. Refine with local data.
3. Seek input from stakeholders (tribes, resource agencies, your neighbors)
4. Plan to invest where stormwater retrofits are expected to accelerate environmental improvement
5. Submit plan to Ecology for approval.



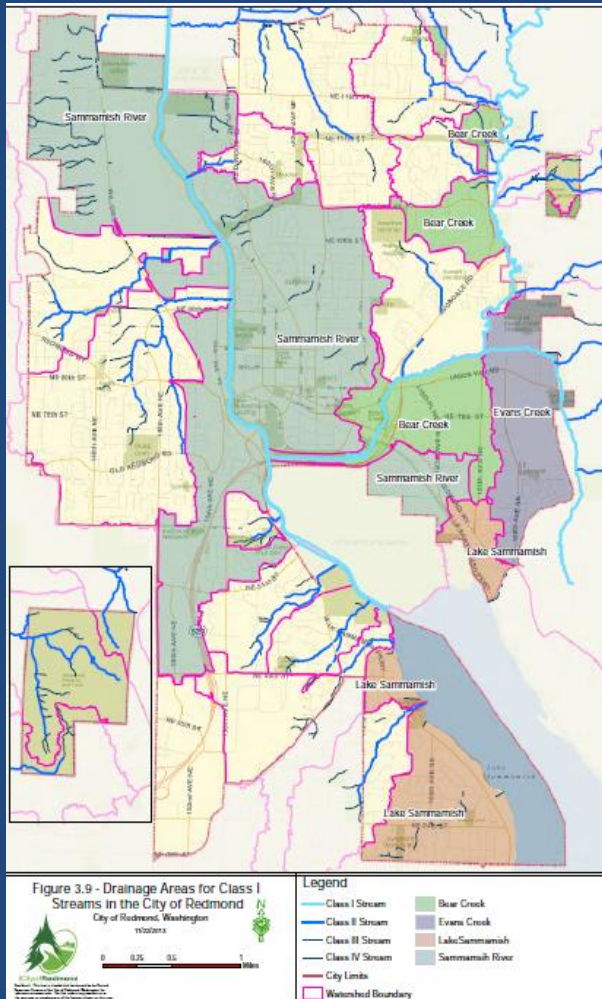
Puget Sound Characterization Project

Two-step Analytical Process Recommended

Use local data to refine prioritization:

Step 1 - Review receiving waterbodies or waters for actual or potential fish use.


Step 2 – Give priority where stormwater improvements are expected to accelerate environmental improvement



Categories of Data for Prioritization

- Fish Use
 - Actual or potential fish use
 - Tree Canopy/Condition of Buffer
 - BIBI
 - Known water quality impairment
- Stormwater Control Opportunities
 - Existing land use/land cover
 - Age and condition of stormwater infrastructure
 - Watershed area data
 - Priorities identified in state/regional/local plans

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
or contact Heather Ballash at
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