

# SPU's Role in Chinook Salmon Recovery – WRIAs 8 & 9: Lake Washington/Cedar River & Green Duwamish

For Creeks, Drainage and Wastewater Advisory  
Committee

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Kathy Minsch, Regional Liaison

# Presentation

- Purpose: Overview of Chinook salmon recovery in WRIAs 8 and 9 and SPU's Role
- Overview of each salmon plan – goals, key themes, progress to date, key issues
- Relevance to Seattle
- Future Direction/Looking Ahead

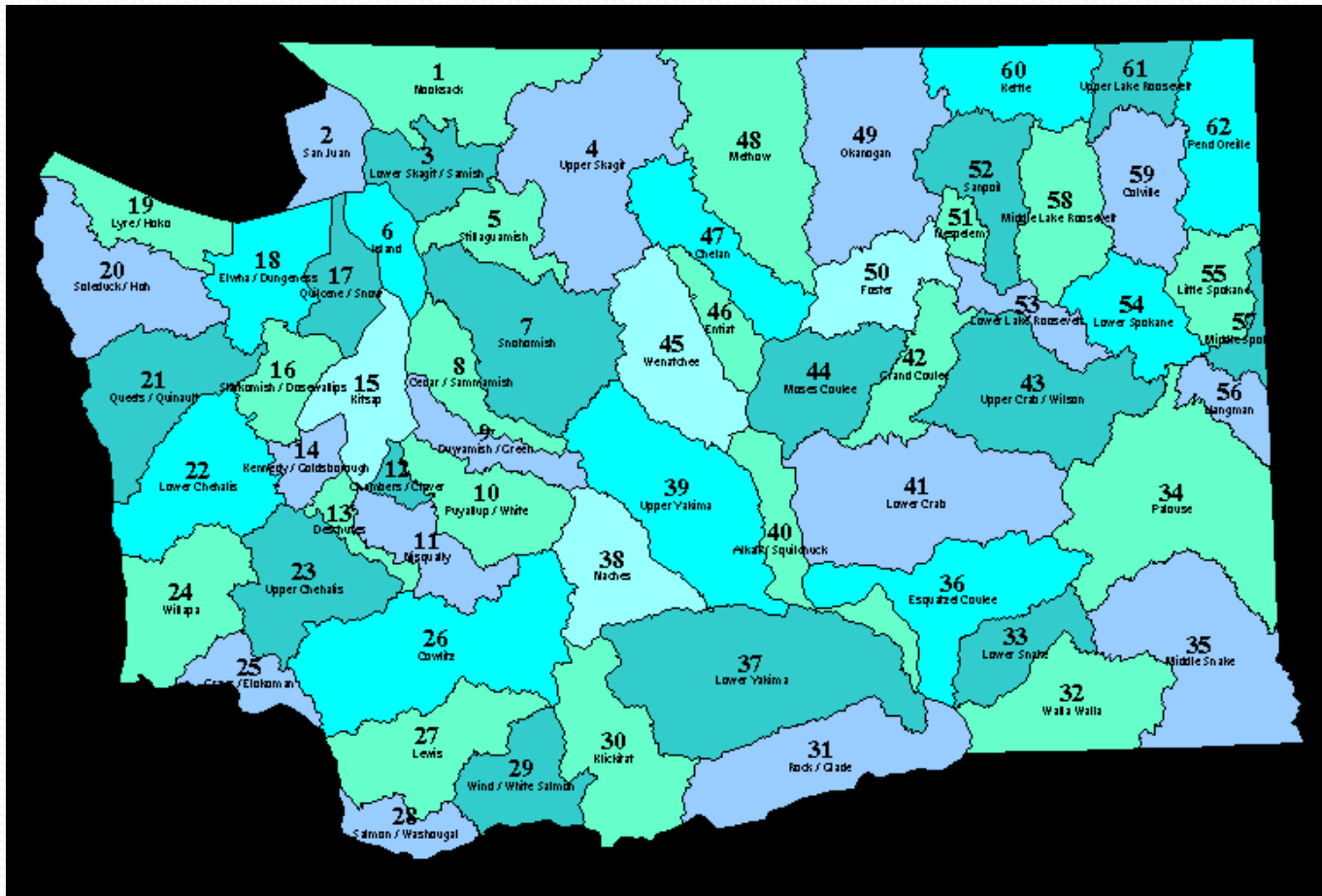
# Background of Salmon Planning

- Federal government listed Puget Sound Chinook Salmon as threatened 1999
- Tri County Salmon planning for watersheds in King, Pierce, Snohomish began 1998 under HB 2496
- Local planning in WRIAs 8 and 9 began in 2000
- Local salmon plans adopted by WRIAs in 2005
- NMFS adopts Puget Sound Chinook Salmon Recovery Plan in 2006 – 10 year plan for 14 watersheds
- Puget Sound Salmon Recovery Council – regional coordinating body guiding implementation of 14 salmon plans. Federal, state, tribal and lead entities, environmental community, business

# Watersheds and WRIAs

- Watersheds classified as Water Resource Inventory Areas (WRIAs)
- WRIAs 8 and 9 - SPU lead for City
- WRIAs 3, 4, and 7 – SCL lead for City
- 8 - Cedar River/Sammamish/Lake Washington
- 9 - Green/Duwamish Rivers
- 7 - Snohomish River
- 3/4- lower and upper Skagit River

# State of Washington WRIAs



# WRIAs 8 & 9 Salmon Recovery Plans

- Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Salmon Recovery Plan 2005-2015
- Green/Duwamish and Central Puget Sound Watershed (WRIA 9) Salmon Habitat Plan: Making Our Watershed Fit for a King 2005-2015

# Common Features

- Locally driven, collaborative , pro-active
- Multi-stakeholders - jurisdictions, tribes, federal and state agencies, non-profits, businesses, citizens
- Science-based actions – characterizations/assessments based on VSP parameters =viable salmonid populations
- Abundance, productivity, distribution and diversity
- 10 year plans w/50 year horizon
- Adopted by Seattle City Council 2005

# Common Features cont.

- Overarching goal: to restore and protect Chinook, along w/other salmonids
- Focus on CIP habitat acquisition, protection and restoration projects
- Multiple beneficial uses e.g. water quality, flooding
- Programs and policies – land use, stormwater, public outreach and stewardship
- Monitoring /Adaptive Management
- 3 and 10 year workplans



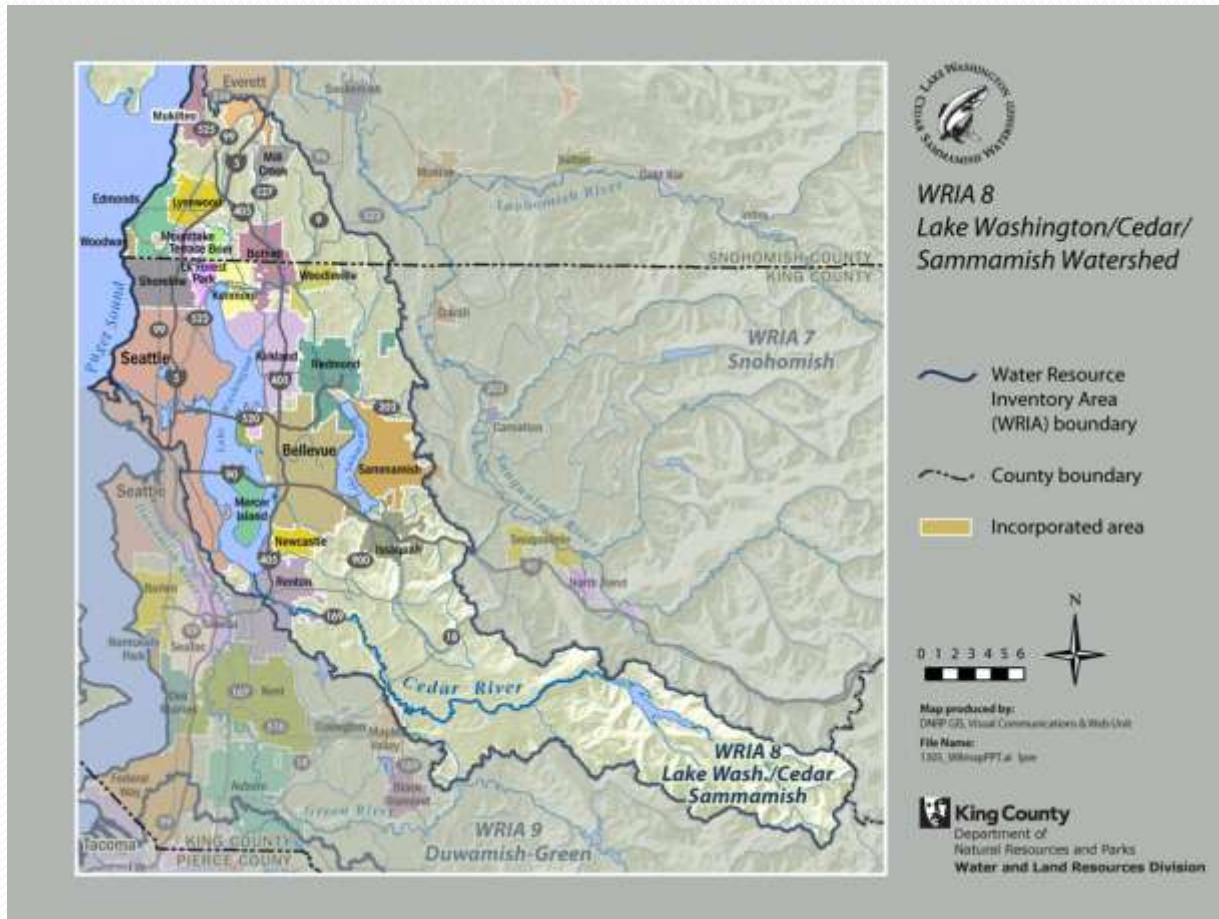
# Common Features cont.

- Multiple complex funding sources and structure
- Interlocal agreements with King County as service provider – dues from each jurisdiction to support teams of staff
- State and federal grants through RCO – SRFB, PSAR, ALEA; Ecology, Puget Sound Partnership, EPA, Corps
- Local funding sources – King Conservation District, Flood Control District, Conservation Futures, Parks
- Local match

# WRIA 8 Salmon Recovery Plan

- 692 square miles includes 2 rivers, 3 large lakes, numerous creeks, Ship Canal and nearshore Puget Sound. Rural, suburban and urban land uses
- 2 salmon populations – Cedar (highest risk), Sammamish
- Goal: Create a healthy environment for fish, wildlife, people

# WRIA 8 Watershed Map



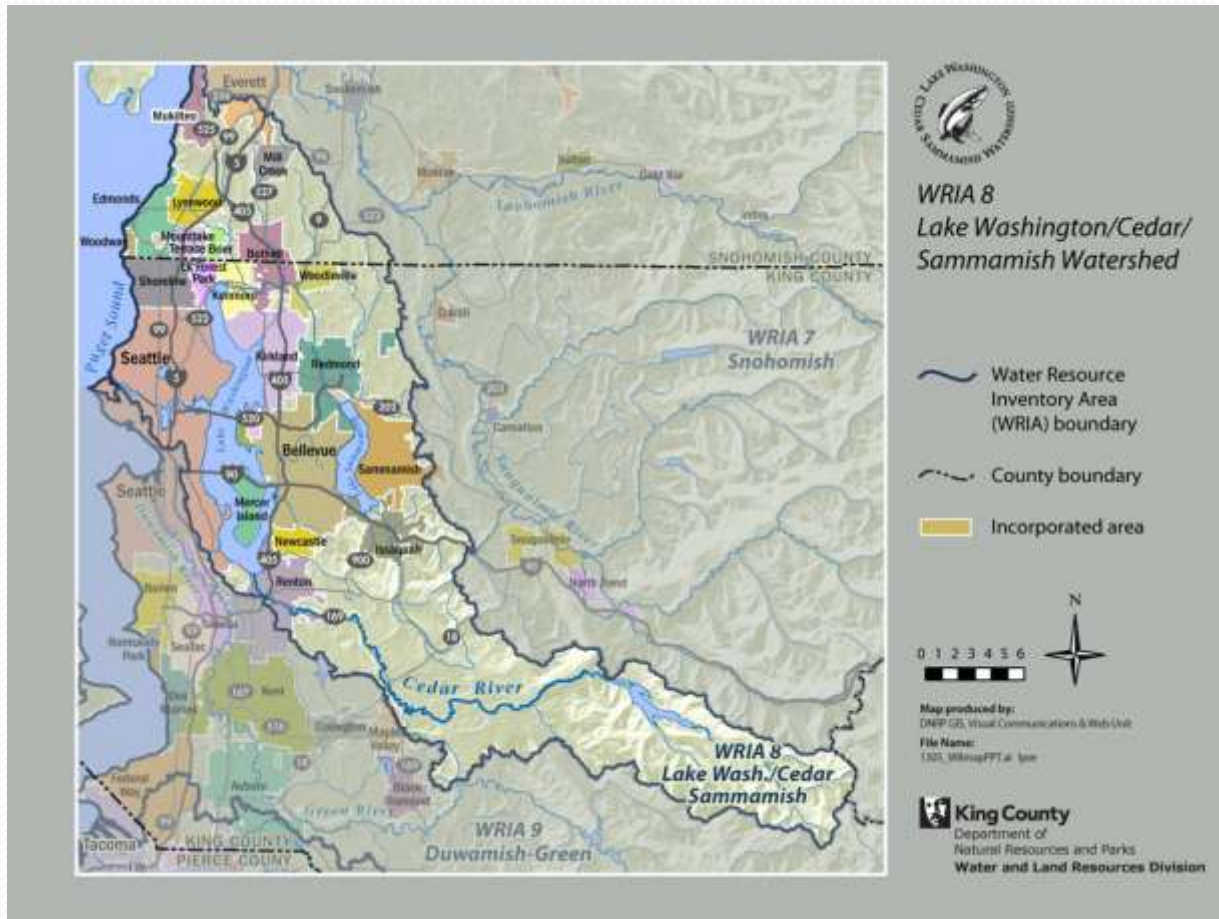
# WRIA 8 Salmon Recovery Plan

- Over 1,200 capital projects and programmatic actions – site specific and watershed wide
- Watershed-wide priorities: protecting forests, reducing impervious surfaces, managing stormwater flows, protecting/improving water quality, conserving water, protecting/restoring riparian areas

# WRIA 8 Salmon Recovery Plan

- Organized by Tiers – 1, 2, 3
  - Tier 1 primary spawning, migratory and rearing habitat
  - Tier 2 less frequently used for spawning, more degraded
  - Tier 3 water quality protection
- Tier 1 areas under Seattle jurisdiction: Upper Cedar River Watershed, western Lake Washington Shoreline, Ship Canal, Ballard Locks, nearshore north of Locks

# WRIA 8 Watershed Map



# WRIA 8 Salmon Recovery Plan

- Salmon Recovery Council – electeds, other stakeholders
- Implementation, Project and Technical committees
- 27 local governments pay annual dues since 2001 through ILA w/King County. Current ILA 2007-2015.
- ILA cost shares calculated by area, assessed value and shoreline. Total slightly over \$500K
- Seattle dues currently \$128K, or about 25% of total.  
90% Water LOB, 10% Drainage LOB

# Major Seattle Projects

- Cedar River Watershed Acquisition and Restoration—  
e.g. Royal Arch, Belmondo, Rainbow Bend
- Cedar River Stewardship in Action w/King County  
Noxious Weeds, Forterra and Friends of Cedar River –  
knotweed removal on private lands.
- Lake Washington – Mapes and Taylor Creeks
- Ship Canal – Salmon Bay Natural Area
- Studies and monitoring



# Funding for Seattle Projects

- Leverage HCP w/WRIA funding sources=over \$2 million in grants federal, state and local
- KCD grants – WRIA, Member Jurisdiction
- FCD Cooperative Watershed Management grants
- Drainage fees as match for Lake Washington projects

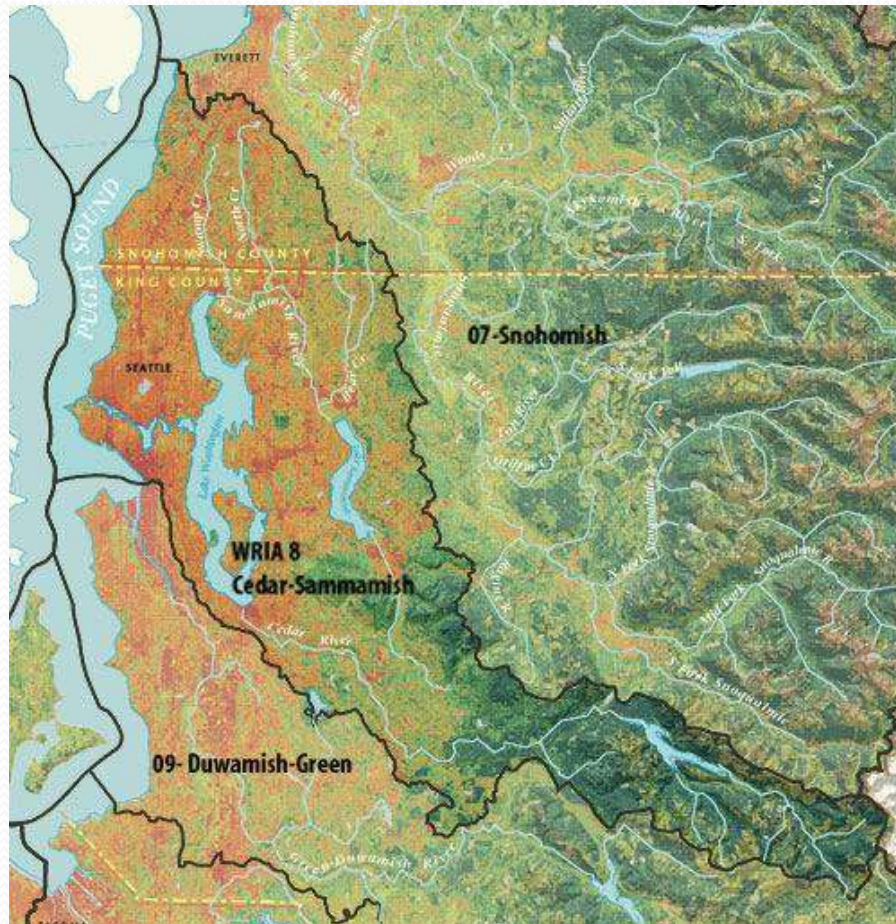
# Green Shorelines Program

- Seattle's Green Shorelines Guidebook – DPD, Restore Our Waters. Habitat and water quality
- Inspired creation of interagency Green Shorelines Steering Committee - workshops in 2009, major outreach focus in WRIA
- Green Shores - \$1 million EPA grant DPD w/San Juan County and Sea Grant
- Inspired State and PSP focus on incentives for green shorelines – legislation, grants

# New Priority: Riparian Stewardship

- Focus on planting trees and shrubs along river/creek banks
- Based on Land Cover analysis results in 2010 showing higher rate of decrease of forest cover in UGA's.
- Temperature
  - TMDLs
  - Ecology grant criteria include riparian plantings

# Land Cover Analysis WRIA 8



# Ed/Outreach

- Model programs in Seattle by nonprofit partners
  - Seattle Aquarium Beach Naturalist program
  - Friends of Cedar River Salmon SEEson, Watershed Report
- New priority – communications “Telling the story”

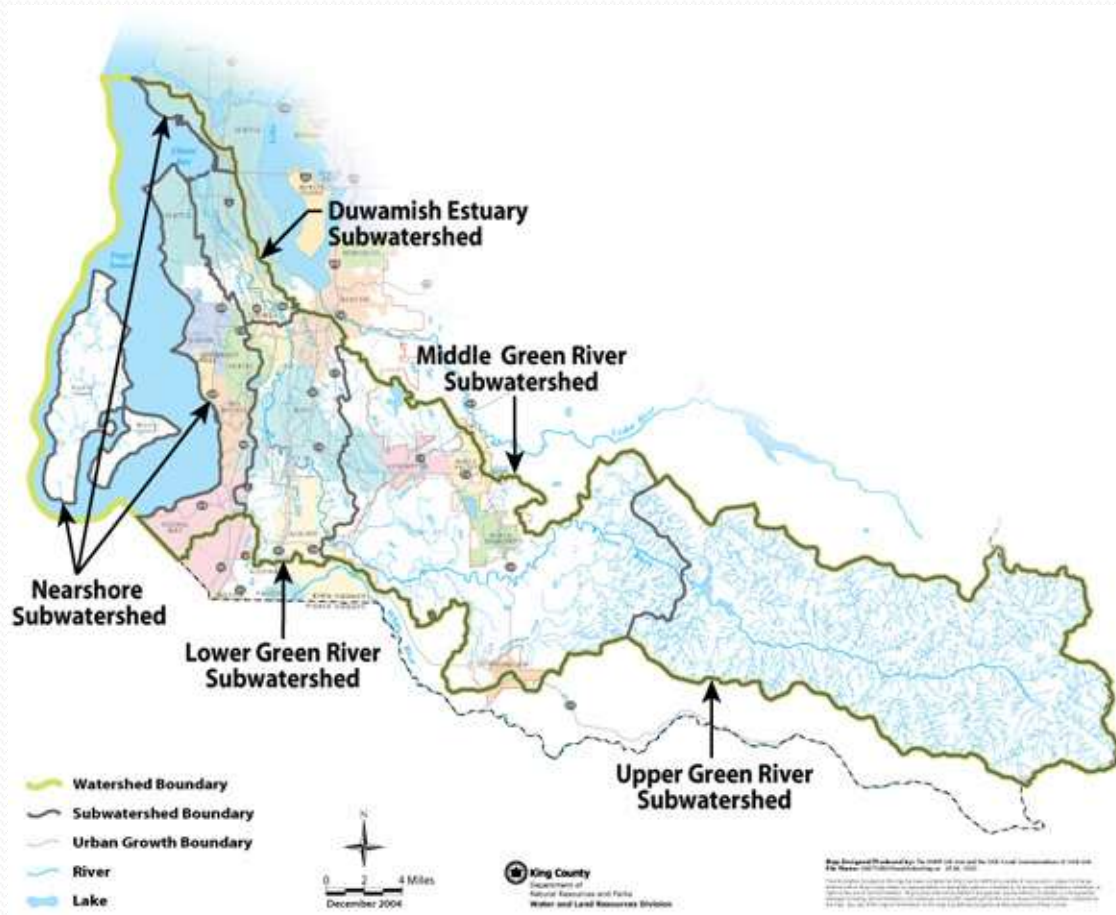
# Monitoring/Adaptive Management

- Long term – fish in/fish out, status and trends for over 10 years
- Implementation and project effectiveness monitoring
- Funding difficult to find for both
- New adaptive management framework next 2 years – Open Standards

# WRIA 9 Salmon Recovery Plan

- 664 square miles includes 5 subwatersheds
  - Upper, middle and lower Green River
  - Duwamish Estuary Transition Zone
  - Marine Nearshore
- Rearing, spawning and migratory – juvenile, adults
- Goal to restore and protect :
  - Freshwater, marine and estuarine habitat :physical, chemical, biological processes
  - Habitat connectivity
  - Clean water in quantities good for salmon

# WRIA 9 Watershed Map





# WRIA 9 Salmon Recovery Plan

- Watershed Ecosystem Forum of electeds and stakeholders
- Implementation/Technical Committee
- 17 local governments pay annual dues since 2001 through ILA w/King County. Current ILA 2007-2015.
- ILA cost shares calculated by area, assessed value and shoreline. Total \$381K.
- Seattle dues currently \$93K or about 25% of total. Drainage LOB.

# WRIA 9 Salmon Recovery Plan

- Habitat restoration projects completed – 10
- Habitat restoration projects underway – 23
- 64 more on the list
- WRIA 9 approach – large projects partnering w/Corps
- Levee setbacks

# Seattle Projects Elliott Bay/Nearshore

- Olympic Sculpture Park Beach Cove in Elliott Bay – creation and 5 years of monitoring
- Seawall Test Panels – installation and monitoring
- Shilshole Estuary Studies
- WRIA 9 Marine Nearshore Inventory

# Seattle Projects Duwamish

- Hamm Creek purchase
- Kellogg Island restoration in Duwamish
- Herrings House Park, T-107
- Duwamish Chinook Salmon studies
- Nature Consortium Duwamish Alive
- Seattle contributed \$100k to North Wind's Weir
- Bluefields
- Superfund mitigation
- Duwamish Blueprint

# Monitoring/Adaptive Management

- Status and Trends Report 2005-2010
  - Jointly written by ITC (WRIA 9 team, city scientists)
  - Riparian condition, armoring, flow
  - Identified temperature as critical factor

# Monitoring/Adaptive Management

- Adaptive Management/Monitoring Plan 2013
  - Implementation, Effectiveness, and Validation
  - Will follow Open Standards Framework
- New Monitoring Projects
  - Cumulative project effectiveness LG juvenile fish habitat
  - Cumulative habitat conditions
- New funding for smolt trap – validation monitoring

# Opportunities

- Duwamish Blueprint – habitat restoration
- Urban Waters Partnership
- Sea Wall
- Stormwater retrofit project
- Source control

# WRIAs 8 & 9: Challenges/Looking Ahead

- Funding challenges at all levels
- Watershed Investment District draft legislation
- Renegotiating ILAs
- Adaptive Management and Monitoring Framework
- 10 year plan updates



# WRIAs 8 & 9:Challenges/Looking Ahead

- Tribal Treaty Rights at Risk – want more focus on land use and regulations to protect from increasing development, not just projects to restore
- Climate Change
- Ballard Locks repairs