

# Statewide Steelhead Management Plan

## Part 1. Implementation and Current Initiatives

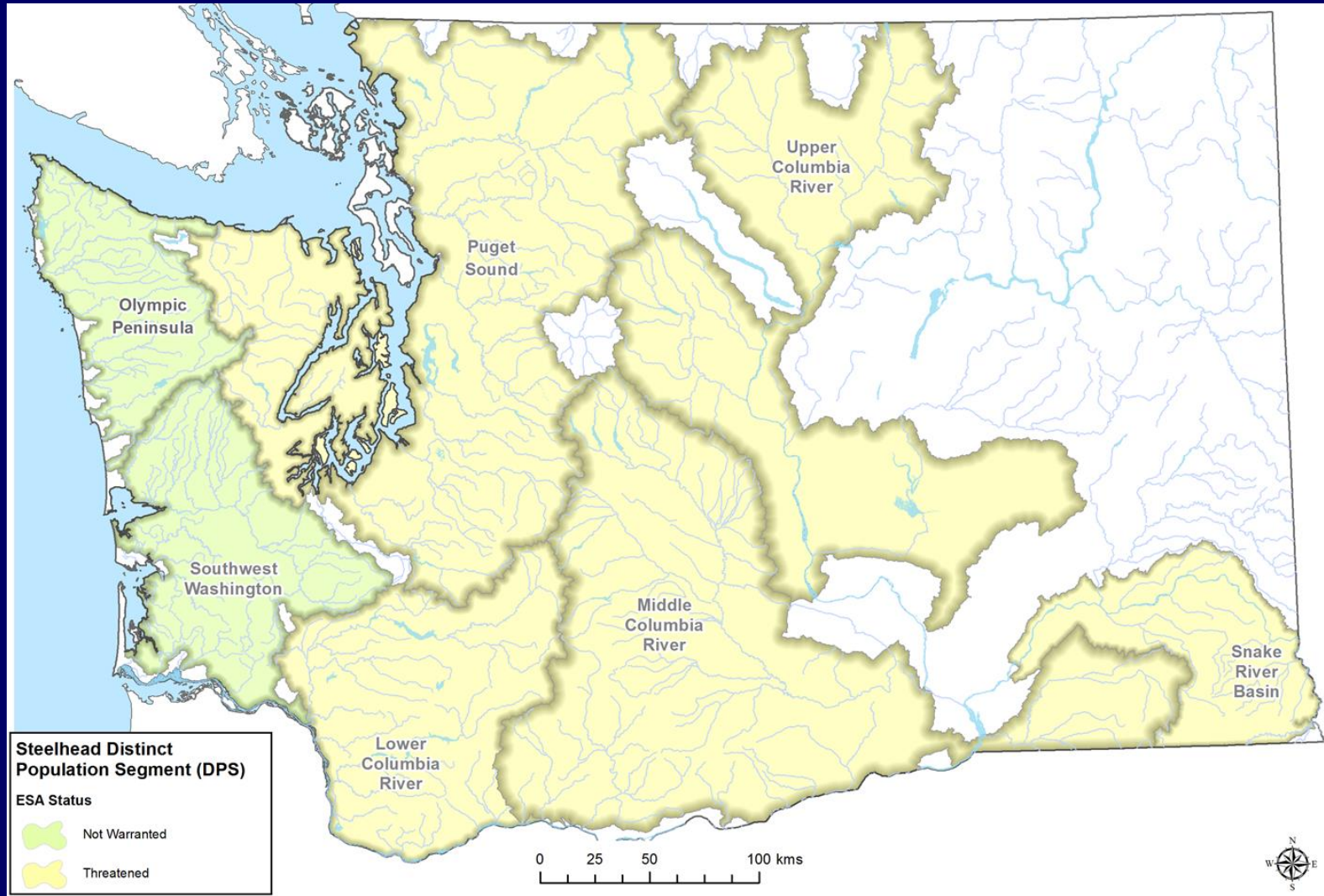


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# Presentation Outline

- Steelhead Science Paper
- Overview of Statewide Steelhead Management Plan (SSMP)
- Priority Implementation Actions
- Summary

# Steelhead Distinct Population Segments (DPS)

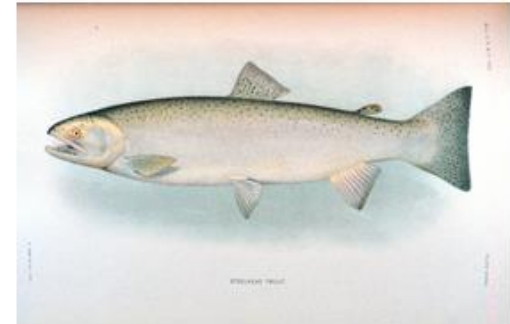


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Commission Presentation  
August 7, 2015

# Steelhead Science Paper

- Developed over four years
- Multiple external reviews
- >50 Findings & Recommendations
- Scientific foundation for SSMP



*Oncorhynchus mykiss:*  
Assessment of Washington State's Steelhead  
Populations and Programs

Edited by  
James B. Scott, Jr.  
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Washington Department of Fish and Wildlife  
Olympia, Washington

February 1, 2008

# A new management paradigm needed...

## Old Management

- Abundance & productivity
- Single-sector management
- Hatcheries as isolated fish factories
- MSH spawner objective
- Landed catch

## 21<sup>st</sup> Century Management

- Stresses diversity & spatial structure
- Emphasizes integrated all-H management & importance of habitat
- Operates hatcheries with clearly defined goals & standards
- Recognizes that spawner objective may be greater than MSH
- Manages based on total fishery related mortality

# SSMP Development

- Extensive stakeholder process and EIS (2006-2008)
- 8 policy statements adopted by FWC in 2008, including:
  - Artificial Production
  - Natural Production
  - Habitat Protection and Restoration
  - Fishery Management
  - Monitoring, Evaluation, and Adaptive Management
- Comprehensive (42 pages, 57 strategies, 95 actions)



# Statewide Steelhead Management Plan

**Expansive, Bold, Ambitious!**

*How have we done?*

# Artificial Production

## Steelhead Science Paper

**Finding.** Chambers Creek Winter and Skamania River Summer steelhead programs pose a high potential genetic risk.

## Statewide Steelhead Management Plan

**Policy.** Artificial production programs implemented to enhance harvest opportunities shall provide fishery benefits while allowing watershed-specific goals for the diversity, spatial structure, productivity, and abundance of the target wild stock to be achieved.



# Artificial Production

## Strategies & Actions:

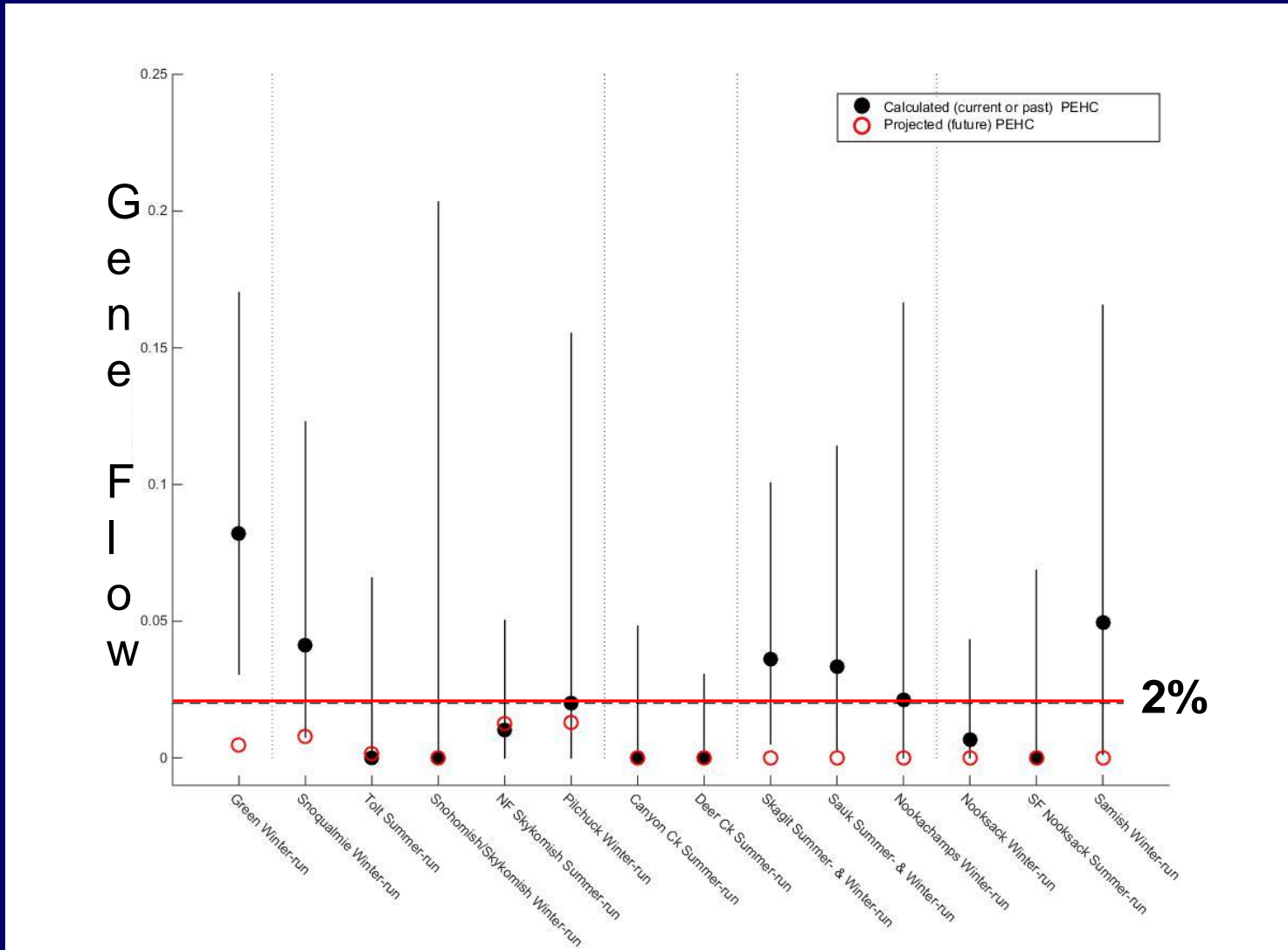
- For programs affecting wild stocks of importance for conservation and recovery, long-term goal will include:
  - Segregated Harvest Programs: gene flow < 2% to wild stocks

# Artificial Production

## Implementation Status:

- Substantial program modifications
- Three-Pronged Strategy
  - ✓ Modify: Assess & redesign programs to meet standards
  - ✓ Verify: Monitor & adaptively manage
  - ✓ Fail-Safe: Establish wild steelhead gene banks
- Puget Sound
  - > 50% reduction in number of fish released
  - > 65% reduction in release locations

# Artificial Production



# Artificial Production

## Next Steps:

- Monitor & adaptively manage Puget Sound and Lower Columbia programs
- Assess and redesign Washington Coastal programs

# Natural Production

## Steelhead Science Paper

**Finding.** Short-term abundance and long-term persistence of the steelhead resource requires viable, locally adapted, diverse populations, but a substantial loss of population structure has occurred in some, but not all regions (range of 0-55% loss).

## Statewide Steelhead Management Plan

**Policy.** Steelhead management shall place the highest priority on the protection of wild stocks to maintain and restore stocks to healthy levels.

# Natural Production

## Strategies & Actions:

- Prevent loss of steelhead stocks
  - ✓ At-Risk Report - next presentation
- Create network of wild steelhead gene banks
  - Wild stocks largely protected from effects of hatchery programs
  - No hatchery releases
  - Populations sufficiently abundant and productive to be self-sustaining
  - At least one WSGB for each major population group (MPG)

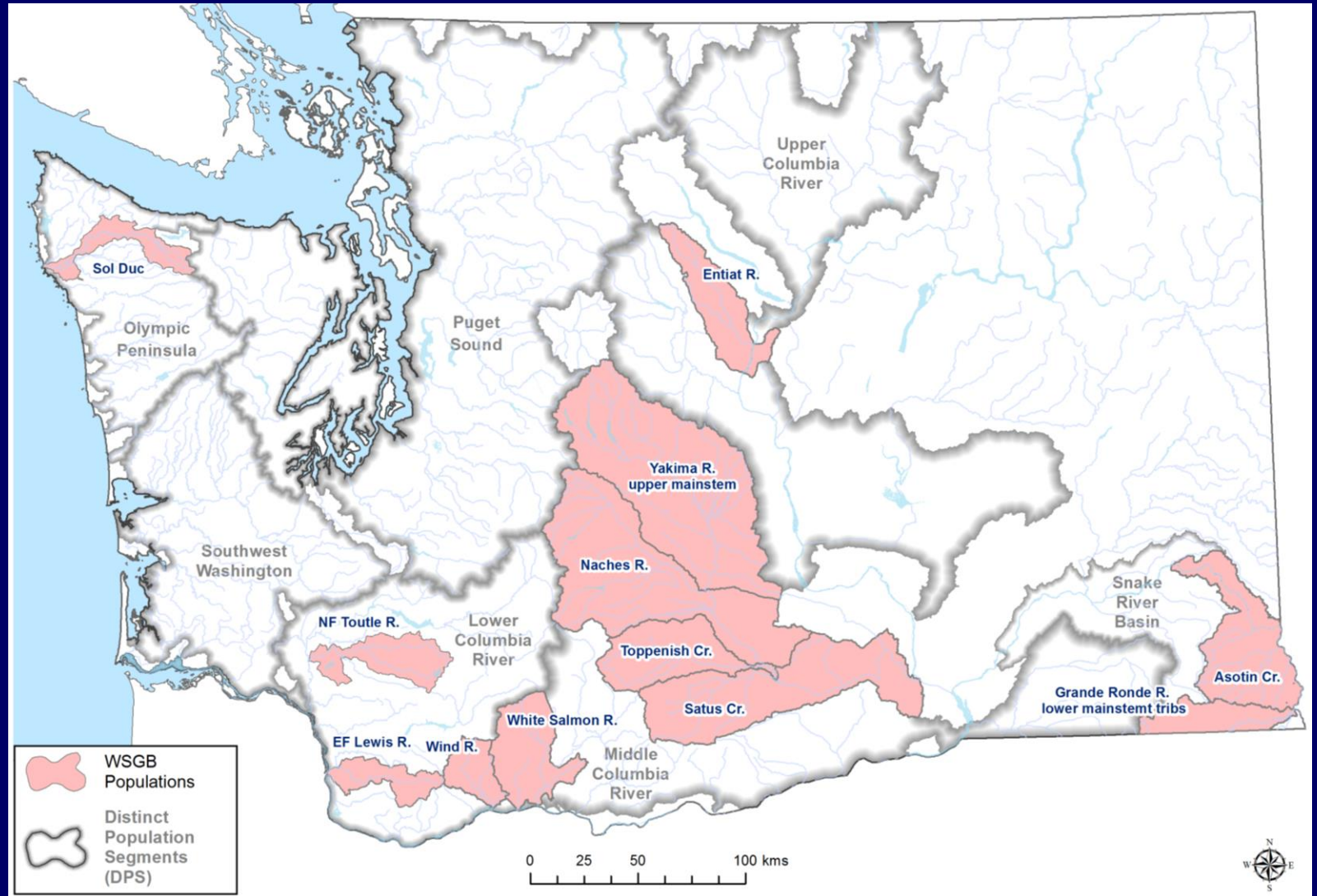
# Wild Steelhead Gene Banks

## Implementation Status:

- At least one WSGB established for 7 MPGs
  - ✓ North Coast MPG (Olympic Peninsula DPS)
  - ✓ Cascade MPG (Lower Columbia DPS)
  - ✓ Gorge MPG (Lower Columbia DPS)
  - ✓ Yakima MPG (Mid-Columbia DPS)
  - ✓ Wenatchee-Methow MPG (Upper Columbia DPS)
  - ✓ Lower Snake MPG (Snake DPS)
  - ✓ Grande Ronde MPG (Snake DPS)
- 12 individual populations



# Wild Steelhead Gene Banks



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# Natural Production

## Next Steps:

- Complete public processes and designate WSGBs for:
  - ✓ North Cascades MPG (Puget Sound DPS)
  - ✓ Central & South Puget Sound MPG (Puget Sound DPS)
  - ✓ Hood Canal & Strait of Juan de Fuca (Puget Sound DPS)
  - ✓ Coast MPG (Southwest Washington DPS)
- Initiate WSGB public processes for Willapa Bay and Grays Harbor

# Habitat Protection & Restoration

## Steelhead Science Paper

**Finding.** Degradation of riverine, estuarine, and nearshore habitat has resulted in the loss of an average of 83% of the potential production of the 42 steelhead populations assessed in Washington.

## Statewide Steelhead Management Plan

**Policy.** Protect and restore the quality, quantity, and productivity of freshwater and marine habitat necessary to sustain and restore healthy steelhead stocks.

# Habitat Protection & Restoration

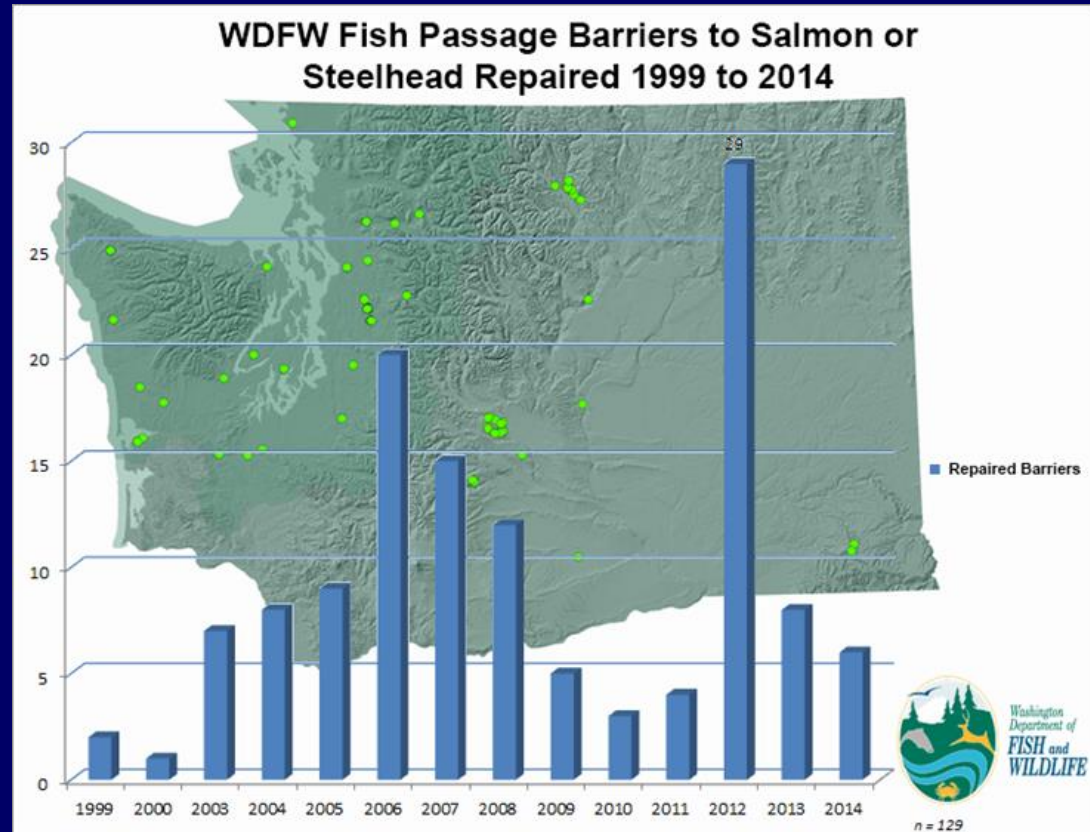
## Strategies & Actions:

- Eliminate fish passage barriers
- Protect and restore in-stream flows

# Eliminate Fish Passage Barriers

## Implementation Status:

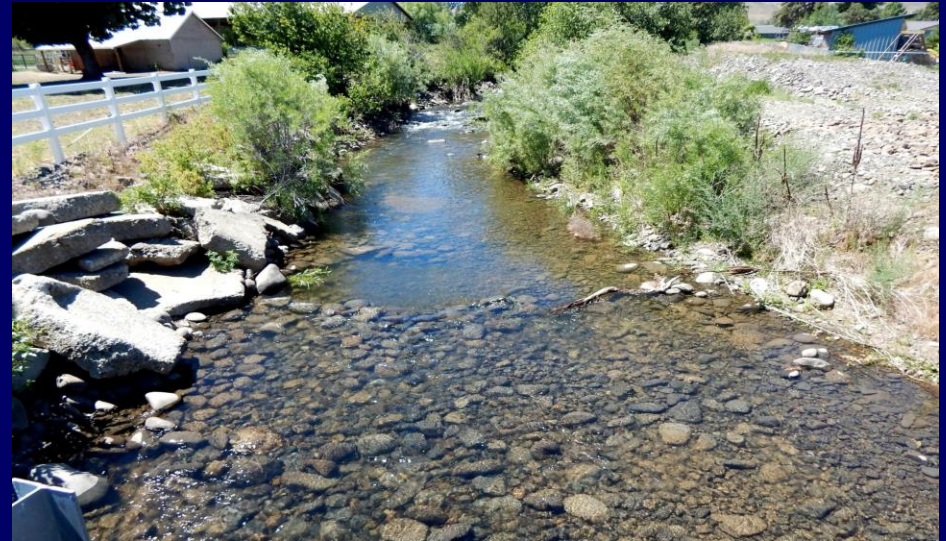
- 2015 - All barriers removed on WDFW lands subject to culvert injunction!





# Protect & Restore In-stream Flows

## Kittitas Reclamation District Stream Supplementation



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# Habitat Protection & Restoration

## Next Steps:

Barrier Removal – Continue to develop the statewide fish barrier removal strategy with our partners and begin plan implementation to ensure that barriers are removed from downstream to upstream thus opening high priority spawning and rearing habitat to steelhead

In Stream Flow Protection – Continue to perform instream flow science, provide fish expertise to the Department of Ecology to ensure fish needs are balanced with out of stream needs, and enhance our relationships and efforts with irrigation districts and other water users to ensure steelhead have adequate water for rearing, migration and spawning



# Fishery Management

## Steelhead Science Paper

**Finding.** Management of steelhead requires evaluation of trade-offs between conflicting objectives and an effective process for determining where to operate along these trade-offs.

Likely trade-offs:

- Habitat quality versus spawner abundance
- Harvest level versus the fitness of the natural population
- Harvest level versus population diversity

## Statewide Steelhead Management Plan

**Policy.** Promote achievement of region-wide conservation and recovery goals through the protection and restoration of the diversity, spatial structure, abundance, and productivity of wild steelhead stocks through fisheries management.

# Fishery Management

## Strategies & Actions:

- Protect juvenile steelhead and resident rainbow trout
- Adaptively manage fisheries to assure that fishery plans are responsive to variable productivity, and region-wide conservation and recovery goals are achieved.
  - ✓ North Coast Steelhead Advisory Group Process
  - ✓ Skagit Steelhead Fishery Management Plan

# Protect Juvenile Steelhead & Trout

## Implementation Status:

- Previous statewide standard stream rule
  - Open 1<sup>st</sup> Saturday in June through October 31<sup>st</sup>
  - Generally open to use of bait
  - 8" minimum size
  - 2 fish daily limit
- Stream Strategy
  - ✓ Stream-specific rules tailored to biology and stock status
- FWC adopted stream strategy rules
  - ✓ 2010 – Puget Sound
  - ✓ 2012 – Washington Coast
  - ✓ 2014 – Columbia River Basin

# North Coast Steelhead Process

## Implementation Status:

- Concerns expressed by recreational fishers:
  - ✓ Increased recreational fishing pressure
  - ✓ Declining steelhead abundance
  - ✓ Treaty-Nontreaty sharing not 50:50
- Advisory Group process initiated July 2015:
  - ✓ Review stock assessment & fishery information
  - ✓ Develop recreational fishing rule proposals
  - ✓ Review fishing guide information and, if necessary, develop enhanced management strategies
  - ✓ Review hatchery programs

# Skagit Steelhead Fishery Plan

## Implementation Status:

- Concerns expressed by recreational fishers:
  - 4.2% ESA-limit on impacts throughout Puget Sound
  - Increasing spawners in Skagit River
  - But no recreational fishery directed at wild steelhead
- Skagit Fishery Plan
  - ✓ Co-managers jointly developing
  - ✓ Abundance-based management approach
  - ✓ Public meeting on analysis & impact cap
  - ✓ Targeting submission to NOAA this fall
  - ✓ Stakeholder process to develop management approach within impact cap

# Fishery Management

## Next Steps:

- Vision - Network of rivers with varying fishing opportunities:
  - ✓ Hatchery production
  - ✓ Wild production
  - ✓ Catch-and-Keep
  - ✓ Catch-and-Release



# Monitoring & Research

## Steelhead Science Paper

**Finding.** Increased emphasis on monitoring the diversity of *O. mykiss* populations is needed.

## Statewide Steelhead Management Plan

**Policy.** Implement monitoring, evaluation and adaptive management to influence management decisions to protect the abundance, diversity, and productivity of wild steelhead stocks and the habitats they rely on.



# Monitoring & Research

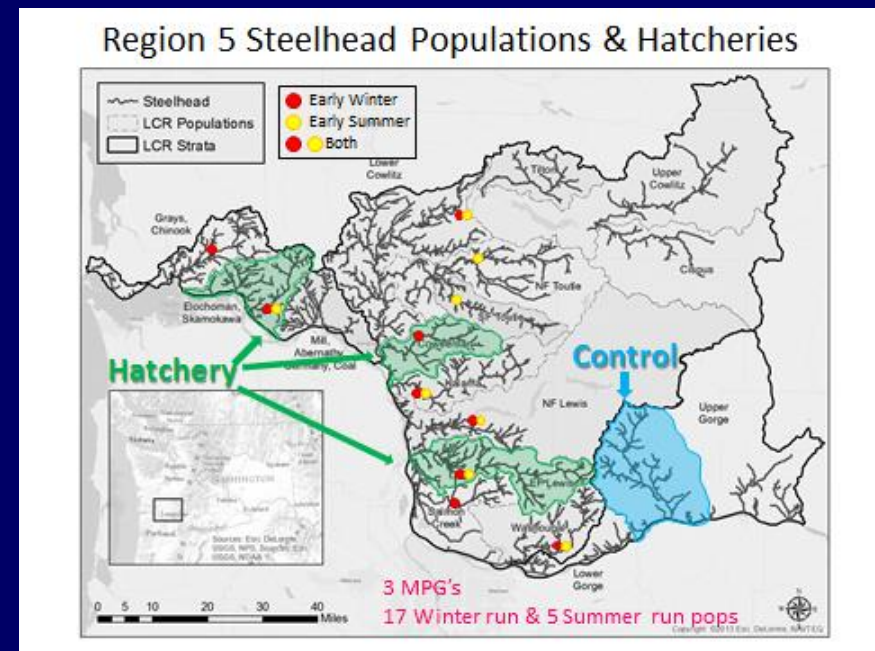
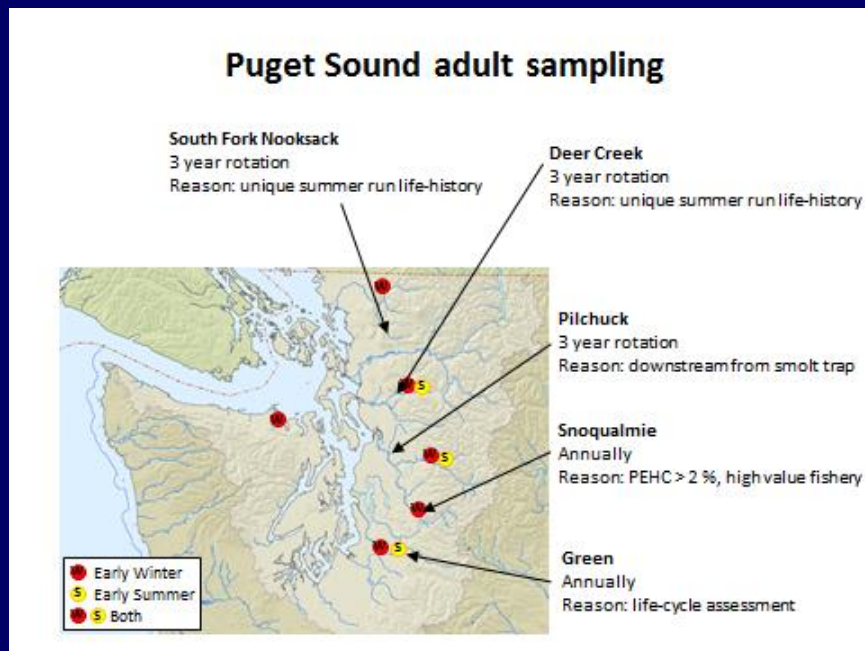
## Strategies & Actions:

- Develop improved tools that relate environmental factors (e.g., climate, water temperature, stream flow) and the physiological status of juvenile *O. mykiss* to the diversity, spatial structure, abundance, and productivity of steelhead stocks.
  - ✓ Salish Sea Study – coming up
- Assess the gene flow rate between the non-local segregated hatchery stocks and wild stocks in conjunction with stock assessment work.

# Genetic Monitoring Program

## Implementation Status:

- Genetic monitoring program for juveniles and adults
  - ✓ Lower Columbia initiated in 2014
  - ✓ Puget Sound initiated in 2015



# Summary

## *How have we done?*

- Started from big hole – 5 of 7 DPSs ESA-listed
- SSMP – Expansive, Bold, Ambitious
- Implementation focused on priority conservation actions
  - ✓ Reduce hatchery risks
  - ✓ Establish wild steelhead gene banks
  - ✓ Improve monitoring programs
  - ✓ Review fishery rules - enhance protection for juvenile steelhead
  - ✓ Re-energize habitat protection & restoration

# Summary

*How have we done?*

*Implemented new steelhead management paradigm...  
– but we still have a lot of work to do.*



*Steelhead*  
Washington's State Fish