

Washington Department of Fish and Wildlife

Fish Passage and the Fish Barrier Removal Board

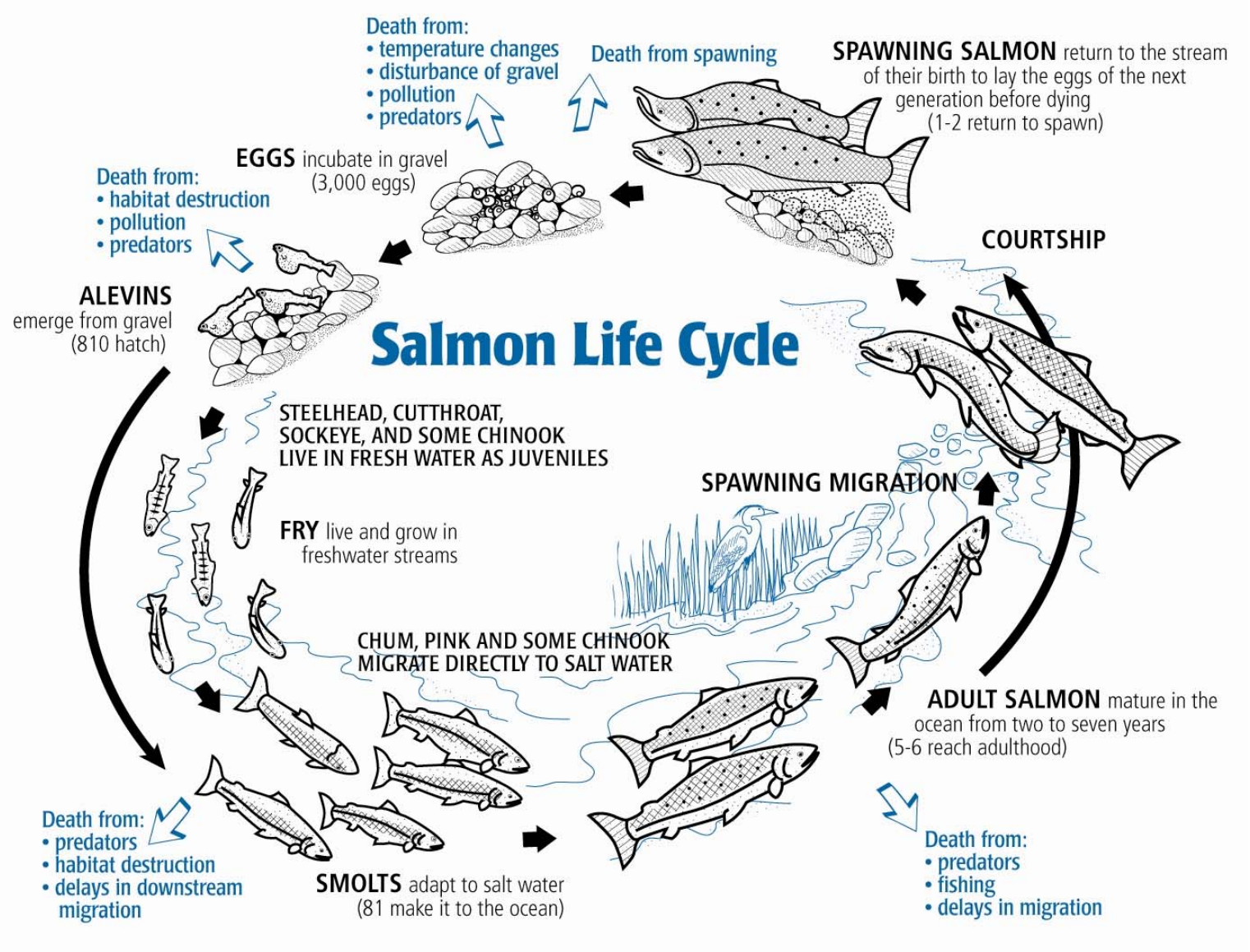
**Joint Transportation Committee Tour
October 2019**



Tom Jameson, LTC (RET)
WDFW
Fish Passage Division Manager
July 25th, 2019



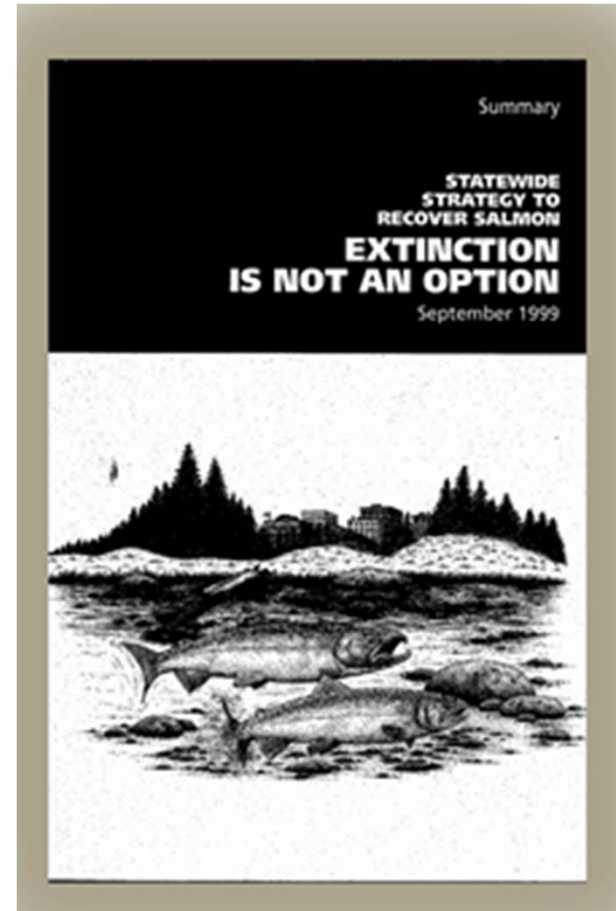
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REMOVAL BOARD**



Elements of the WA State Salmon Recovery Strategy



- **Habitat**
 - Agriculture
 - Forest practices
 - Urbanization
 - In-stream flow
 - **Fish barriers**
- **Harvest**
- **Hatcheries**
- **Hydropower**



What is a fish passage barrier?



High Velocity



Excessive Water Surface Drop



Shallow Water Depth



Other Fish Passage Barrier Conditions



Culvert Plugged with Sediment or Debris

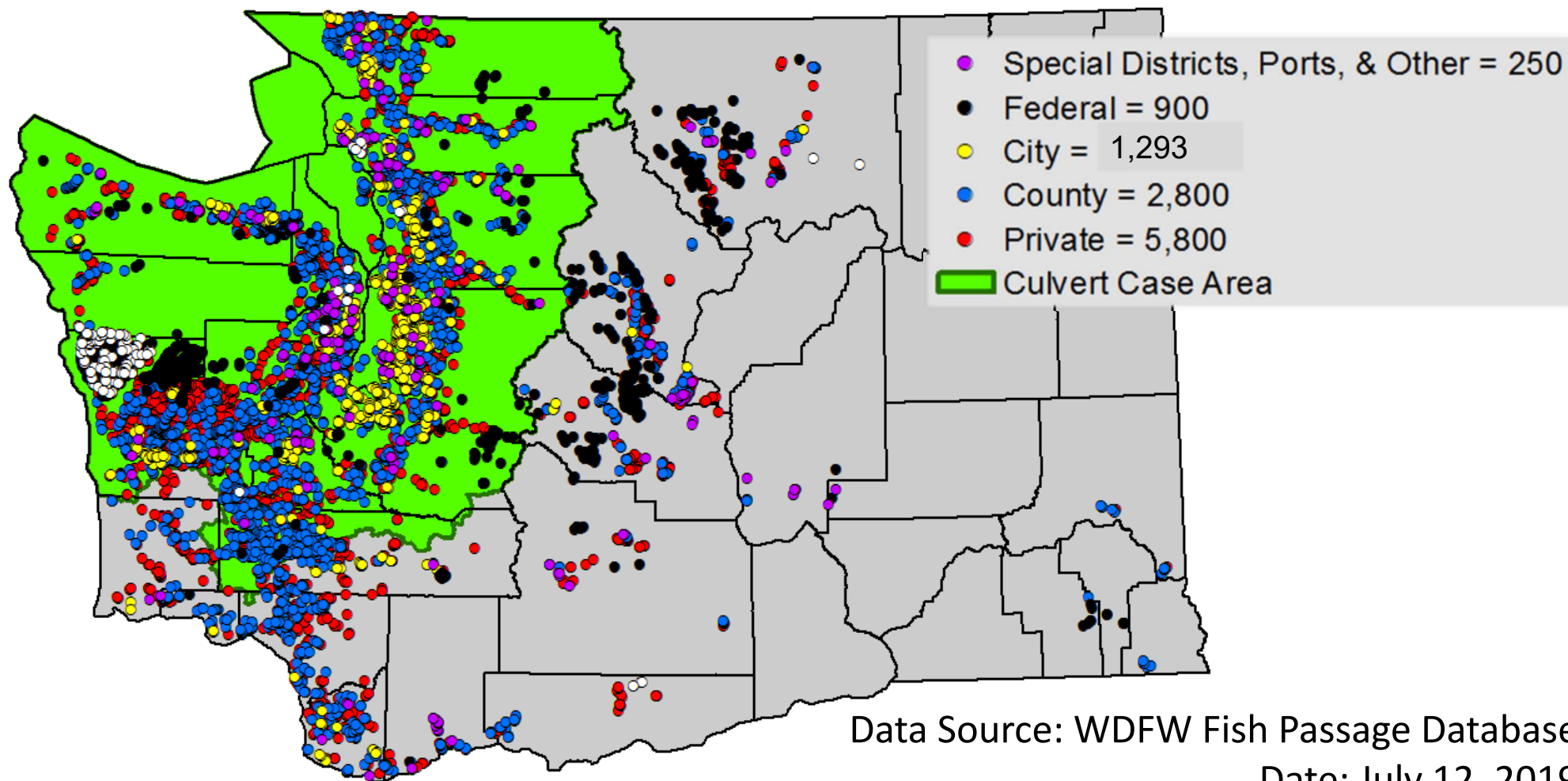
Trash Racks and Flap Gates



Deteriorating Culverts



Known Non-Injunction Salmon and Steelhead Barriers Statewide



What are the positive effects of removing a barrier?



- Salmon immediately take advantage of stream habitat
- Economic benefit
- New structure accommodates a historical range of flows
- Flood resilience - Protects infrastructure
- Reduces or eliminates maintenance

Before/After Photos: Lambert Creek, Lewis County

Fish Passage Programs within the State



- Road Maintenance & Abandonment Plans
- Family Forest Fish Passage Program
- Chehalis Basin Aquatic Species Restoration Plan
- SRFB, NRCS, Counties and Cities
- Culvert Injunction
- Fish Barrier Removal Board

Fish Barrier Removal Board (FBRB)



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REMOVAL BOARD**

- Re-established by Legislature in 2014
- Chaired by WDFW
- Members: WSDOT, DNR, Recreation and Conservation Office, Assoc. of Cities, Assoc. of Counties, tribes, salmon recovery regions

MISSION: Restore of healthy and harvestable levels of salmon and steelhead statewide through the coordinated and strategic removal of barriers to fish passage (RCW 77.95.160).



FBRB Coordination & Statutory Requirements



- Work in partnership with WSDOT
- Coordinate with all state agencies & local govts.
- Maximize the state investments
- Maximize the forest landowners investments
- Seek state-local partnership opportunities
- Develop a barrier database & training program
- Don't alter forest practice rules
- Don't delay WSDOT projects



FBRB 17-19 Capital Funded Project List

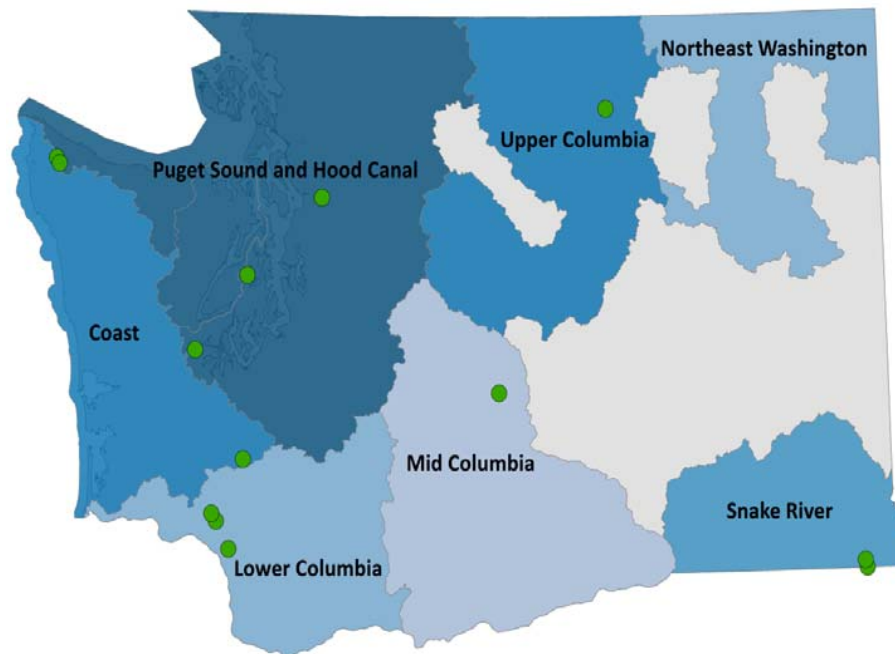


Requested

\$51.4 M

79 Projects

160 Miles of Habitat



Received

\$19.7M

13 Projects

42.8 Miles of Habitat,

Project Ownership: 8 County, 2 City, 2 State, 1 Private

FBRB Chico Creek Project



2019-21 Capital Funded Project List



51 fish passage projects (66 barriers)

- 29 'design-only'
- 37 construction
 - Completed construction projects open 82 total miles of habitat in 2019-21
- \$26.5M capital investment
- 2 State, 39 County, 8 City, and 17 Private barriers

Sponsors: Cities, Counties, Conservation Districts, Tribes



Photo: North Fork Ostrander Cr
2019-21 Watershed Pathway Project
Sponsor: Cowlitz Indian Tribe

For more information:



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WDFW Fish Passage Division Manager
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Stream Simulation Culvert Design

A method used to create and maintain the natural stream processes that are present in the adjacent channel in a culvert.



Match:

- Channel width
- Gradient
- Floodplain utilization
- Streambed material size



Allows:

- Passage of flood flows and debris
- Passage of nearly all fish and aquatic organisms
- Many stream processes, including banks

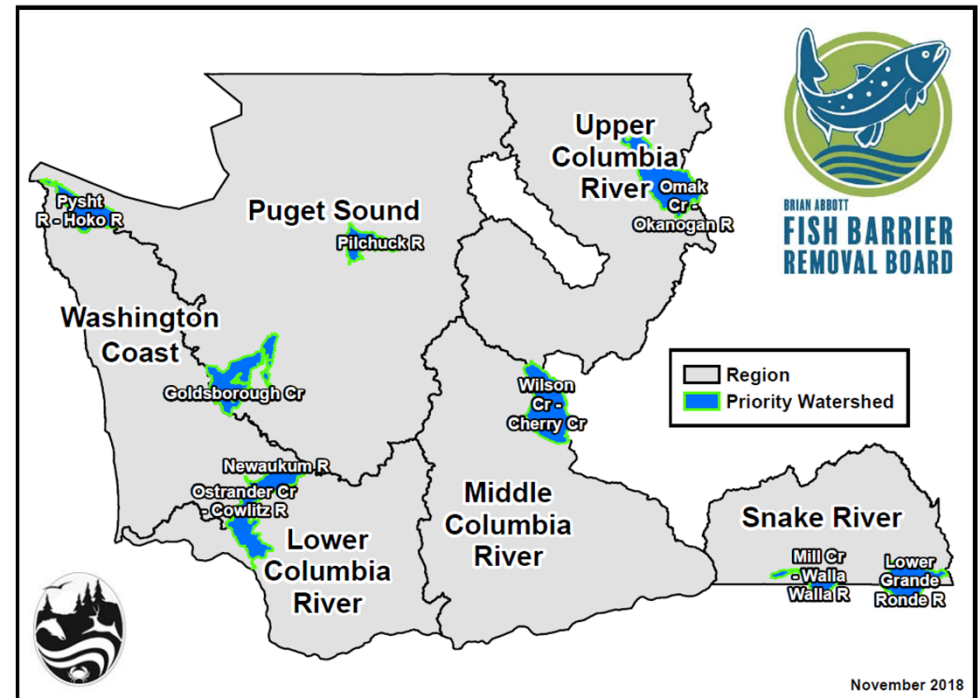
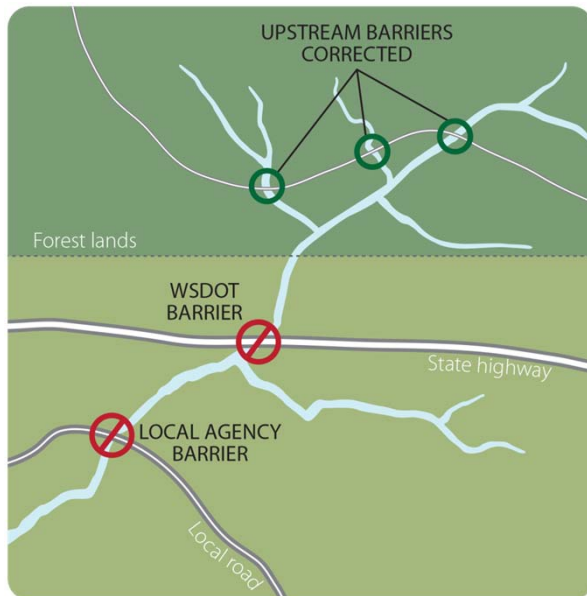
The premise is that if fish can move through the natural channel they can move through simulated channel in a culvert.

Two Barrier Removal Strategies



Watershed Pathway

- Board-approved watersheds prioritized by regional salmon recovery organizations
- Maximize benefits to salmon at a population scale



Coordinated Pathway

- Fix barriers in close proximity to other barrier repairs
- Leverage previous fish passage investments

FBRB Coordination with WSDOT

