



Washington Department of Fish and Wildlife

Fish Passage - Overview

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Habitat Program - Fish Passage Overview

- How we are organized
- Objectives
- History
- Activities
- Budget
- Accomplishments



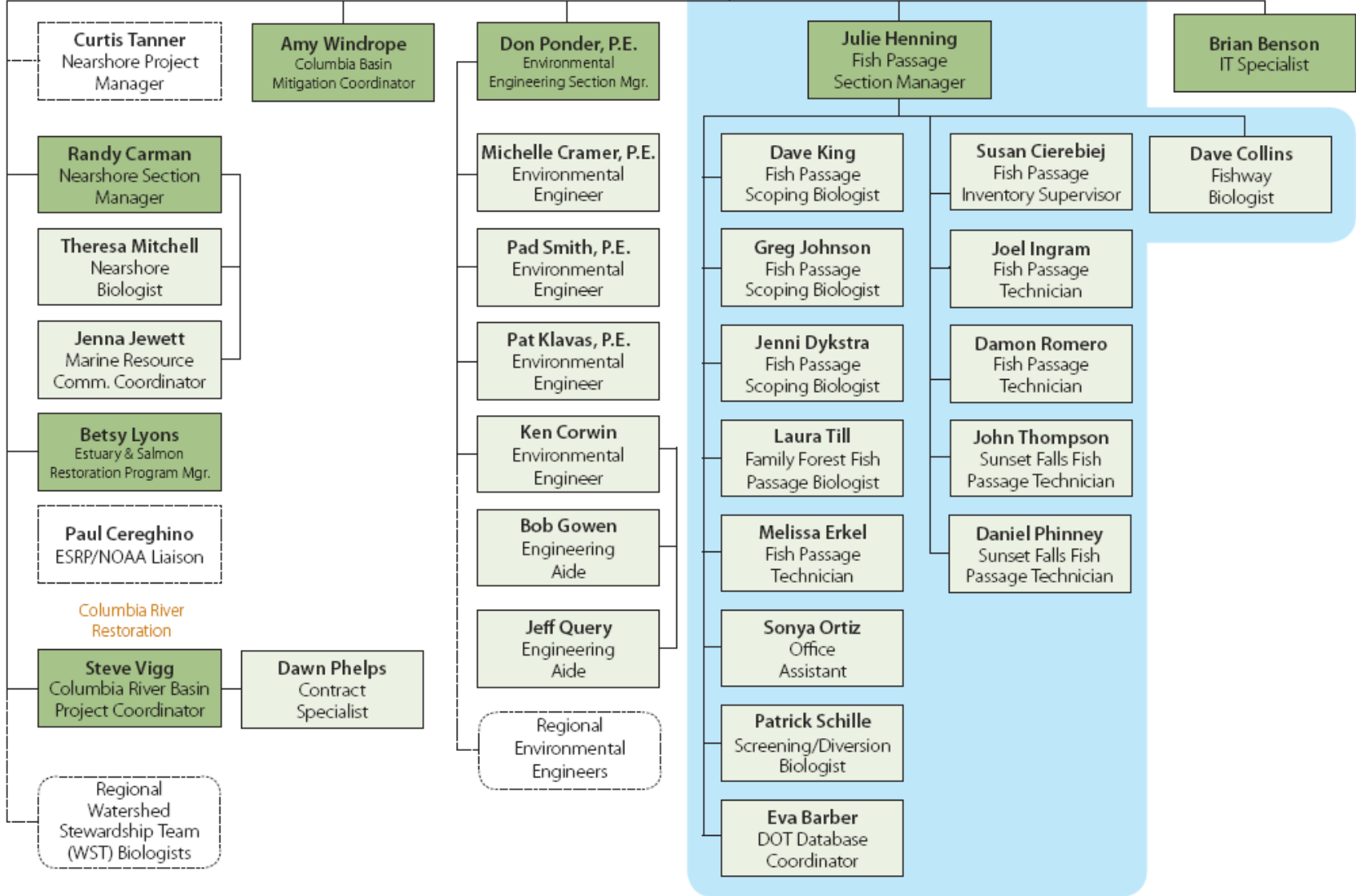
David Price
Restoration Division
Manager

Legend
■ Direct Reports
□ Division staff

Nearshore Restoration

Environmental
Engineering

Environmental Restoration -
Fish Passage



Objective

- To correct fish passage barriers and unscreened diversions
 - Allows fish to access quality spawning and rearing habitat
 - Provides habitat connection
 - Reduces fish stranding and mortality associated with unscreened diversions

What is a fish barrier?



Excessive Water
Surface Drop



High Velocity



Shallow Water
Depth



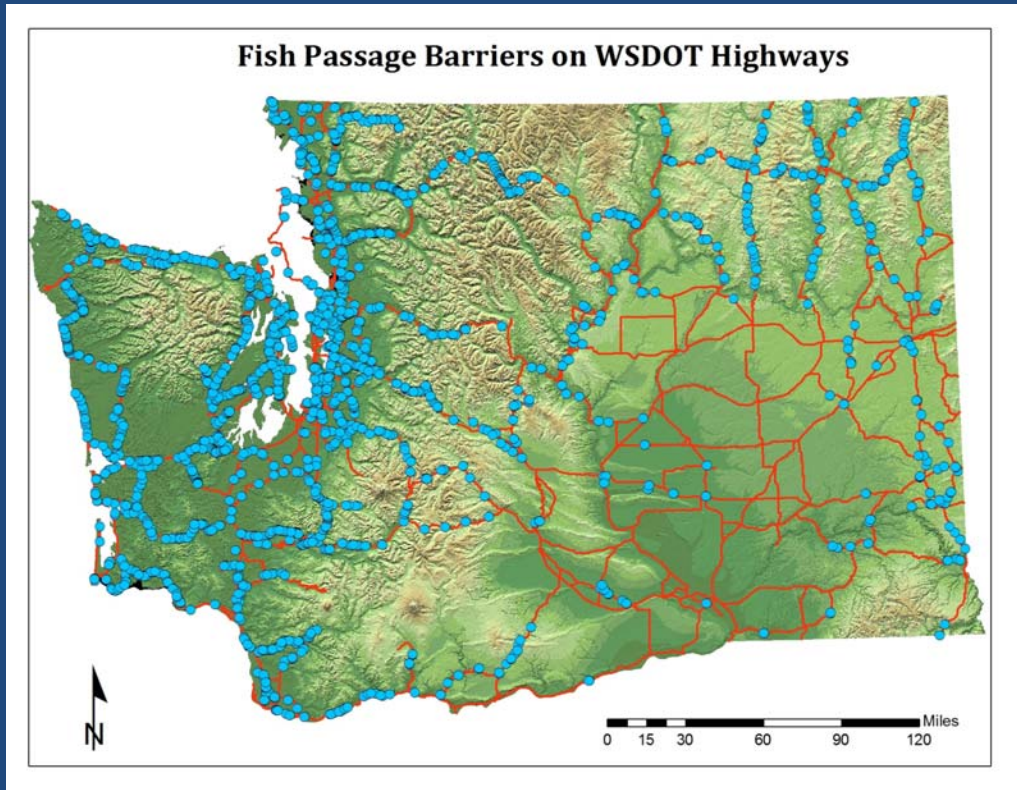
What is a fish screen?



April 13-14, 2012, WDFW
Commission Presentation

Information subject to changes and
amendments over time

Challenges we face



WSDOT has 3,185 documented fish-bearing stream crossings of which, 1,984 evaluated as barriers

Over 40,000 miles of county roads statewide and unknown # of barriers

History

- Mid-1980s fish passage problems were recognized and data was collected.
- 1992 WSDOT Barrier culvert inventory was initiated.
 - Protocols developed and a prioritization process was developed.
 - A relational database was created linking culvert description with habitat characteristics, species and priority index information.

Fish Passage Program -history

**Fish Passage Barrier and Surface
Water Diversion Screening
Assessment and Prioritization
Manual
2009**



**WASHINGTON DEPARTMENT OF
FISH & WILDLIFE**

HABITAT PROGRAM

Technical Applications (TAPPS) Division



- State standard
- Science based

<http://wdfw.wa.gov/publications/pub.php?id=00061>

Fish Passage Activities

Inventory
culverts and
physical surveys

Barrier
prioritization and
database
management

Scoping reports
on WSDOT and
WDFW lands

Technical assistance
on inventories, and
barrier correction

Fishways and
fish screen
inspections

Inventory Culverts and Physical Surveys

- WDFW has inventory crews that identify barriers and conduct physical surveys for prioritization.



Barrier Prioritization

- Priority Index (PI) calculated for each barrier.
- Projects that have the greatest benefits to fish are constructed first



Database Activity

- WDFW Fish Passage and Diversion Screening Inventory (FPDSI)
 - Central repository for info
 - Used to select projects that are vital to salmon recovery
 - Information is available to the public, other agencies, and Tribes
 - Over 35,000 records

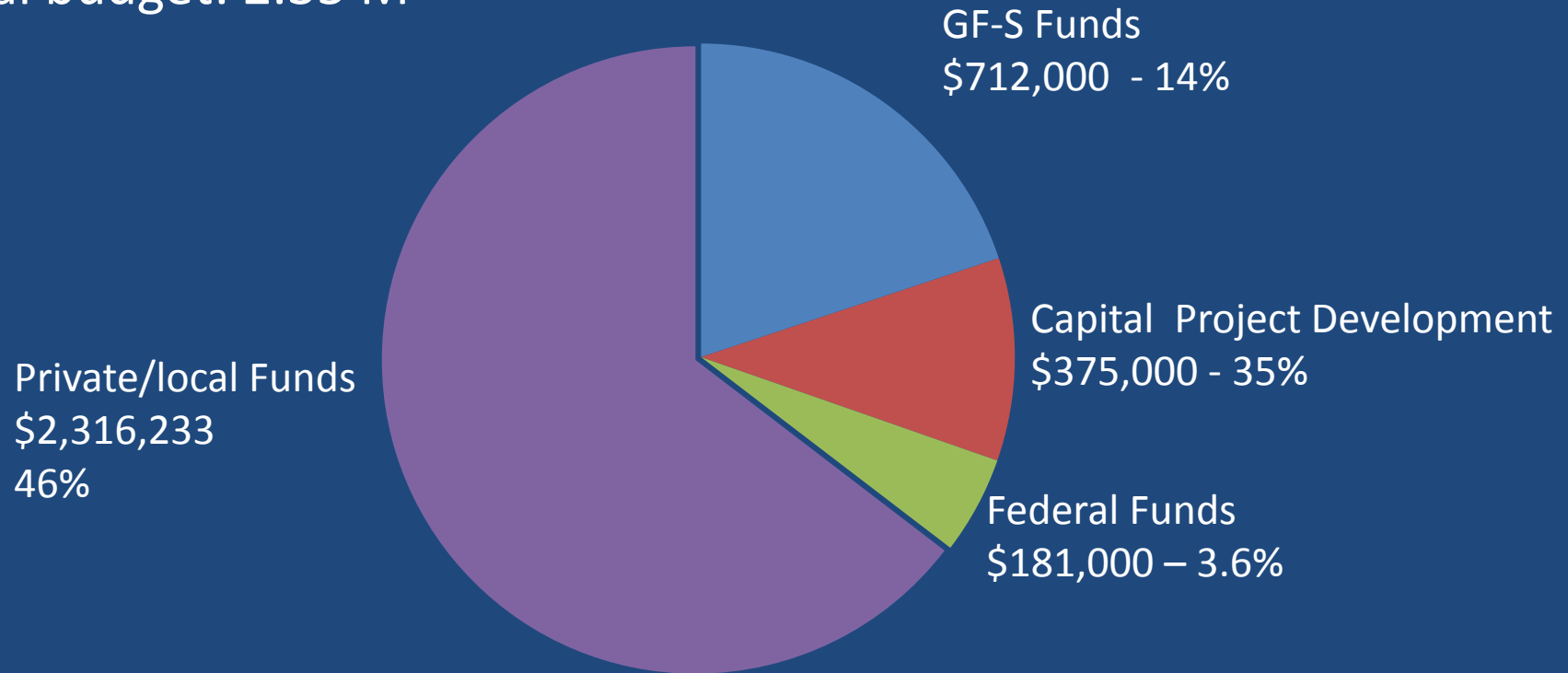
Project Scoping

- Biologists find solutions to correct barriers
- Currently scoping about 150-200 projects
- Engineers develop a conceptual design and/or engineered drawing for the correction
- Provide technical assistance to irrigators and Conservation Districts on improving fish screening

11-13 Biennium Budget for Fish Passage

Operating budget: 3.58 M

Capital budget: 2.35 M



Accomplishments through inventories

- WDFW has been partnering with WSDOT for 20+ years to fix fish barriers
- 6,469 culverts WSDOT-owned inventoried statewide
- 3,185 culverts on fish-bearing streams
- 1,984 barriers
- 1,440 with at least 200m of habitat upstream



Accomplishments

- 245 WSDOT owned fish barriers repaired
- Opened over 820 miles of habitat

Before
0.7 meter (2.5 ft)



After
3.6 meter (11.8 ft)
3-sided arch

Accomplishments

- Work with the Fish and Wildlife Programs to address fish passage and screening issues on WDFW lands
- Inventory and repair

Before: 3 ft diameter culvert



After: 8 ft diameter culvert



W. Rock Prairie Unit of Scatter Creek WLA

Family Forest Fish Passage Program (FFFPP)



Grays Harbor Conservation Dist; Welch- Unnamed trib to Wishkah River R6 (#08-1637)
04/17/2008, Attachment #7, Welch_Outlet1

Before: Undersized culvert with a 2ft outfall drop



Grays Harbor Conservation Dist; Welch- Unnamed trib to Wishkah River R6 (#08-1637)
Worksheet #1, Welch - Wishkah Trib Fish Barrier
11/04/2010, Attachment #53, Upstream from Wishkah

After: Replaced with a bridge

Activities

- Outside entities look to us for fish passage expertise for help with inventory protocols, barrier data, and engineering support
- Train salmon recovery partners
- Contracts with WSDOT, State Parks, Grant PUD, BPA, and RCO



Activities Continued

- Fishways- Mitchell Act and WSDOT
- Screening – Inspection program and Yakima Screen Shop



Granite Falls Fishway

Culvert Case Litigation

- Assess Tribe's right to a 'fair share' of the harvestable salmon in the case area (Boldt decision). The Tribes claim that state owns culverts blocking passage to salmon habitat, reducing harvest opportunity.
- In 2007, Judge Martinez enters an order, the State was in breach of the tribes treaty rights, State owns culverts that are barriers to salmon and reduce harvest available to tribes.
- In 2009, trial began to determine the remedy. Closing arguments June 2010 and a decision is pending.

Culvert Litigation

- o State agencies are continuing to work on correcting fish barriers
- o Applies to State owned roads in Western WA.
- o Applies to WSDOT, DNR, WDFW, and State Parks



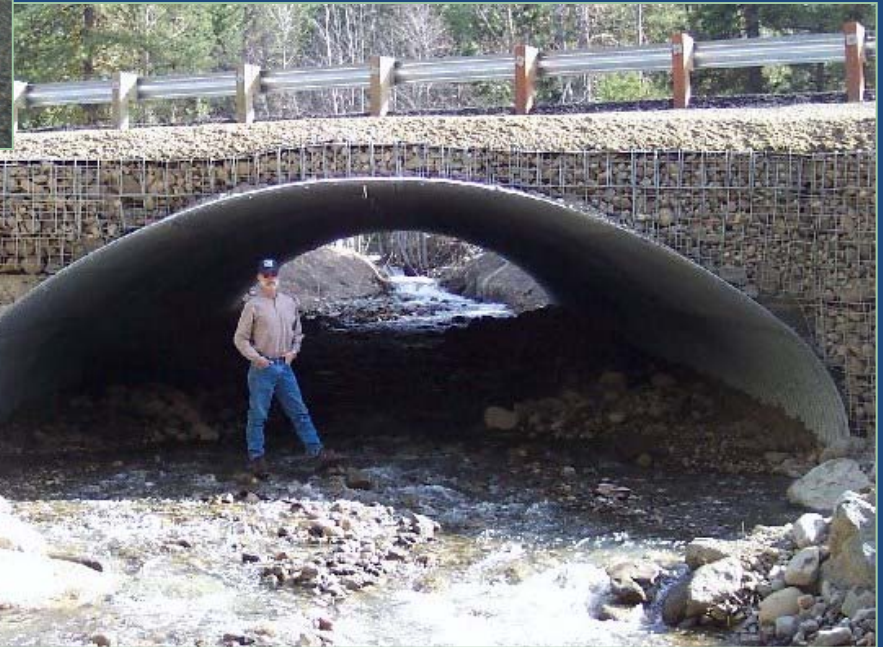
Accomplishments

- 2012 will be one of our largest construction seasons on WDFW lands where 27 fish barriers will be corrected.
- 11 more to correct





Questions?



Culvert Case Area WRIAs 1-23



Fish Passage Regulation

- **WAC 220-110-070 - Water Crossing Structures - *“free and unimpeded fish passage for adult and juvenile fishes”***
- **Forest and Fish Agreement – WAC 222-24-010 & 050 – *“structures must provide for fish passage at all life stages”***
- **76.09(3)8 - *“Fish passage barrier” is defined as “any artificial instream structure that impedes the free passage of fish”***

Fishways – What are they?

- A man-made structure that facilitates passage of fish through or over a barrier.
 - The barrier can be man-made such as a culvert, low head dam or concrete flume.
 - The barrier can be natural such as a falls or cascade.
- RCW 77.57.030 - A dam or other obstruction across or in a stream shall be provided with a durable and efficient fishway approved by the director.