

Restoring Fish Passage at WSDOT Stream Crossings

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WSDOT Fish Passage Program

Partnership with WDFW since early 1990's

WSDOT barriers inventoried and prioritized statewide:

- 1,982 barriers identified
- 1,537 barriers with significant habitat (>200 meters)

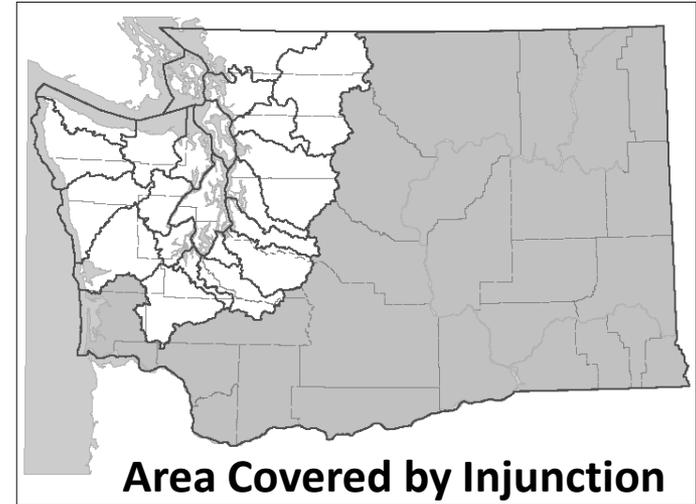
282 corrections since 1991; improving access to over 976 miles of stream habitat.



SR 542 Chain-Up Creek east of Deming

Federal Court Injunction March 2013

- 989 WSDOT culvert barriers subject to injunction.
- 825 with significant habitat (>200 m)
 - Must be corrected by 2030
 - Some barriers (up to 10% of total habitat) can be deferred until they fail.
- 164 barriers having <200 m habitat must be corrected as culverts fail or other projects involve these culverts.



Injunction Standard – Crossings Must Mimic Natural Stream Conditions



BEFORE: SR 530 Fortson Creek, west of Darrington. Previous culvert had excessive outfall drop



AFTER: Fortson Creek with new stream crossing

Cost to Meet Culvert Injunction

Minimum \$2.4 billion estimated in Spring 2013, based on limited knowledge of sites:

- Does not include cost of correcting barriers outside the injunction area
- Most projects currently in design have higher costs than those initially estimated for the program – requirements for correcting barriers are more extensive in many cases than initially projected
- Does not include the cost of correcting potential future barriers

Fish Passage Barrier Removal Board

- In 2014, the Washington Legislature created the Fish Barrier Removal Board.
- Chaired by WDFW; WSDOT has a seat on the board.
- Board members working collaboratively with tribes, local government, private landowners, and regional salmon recovery groups to coordinate fish passage barrier correction across the State.

SR 106 Twanoh Falls Creek



BEFORE – 5' round

- 2013 construction
- \$2.8 million
- 2.8 miles habitat gain
- Coho and chum salmon, searun cutthroat and resident trout



Chum salmon upstream following construction



AFTER – 20' bottomless culvert

Cost and Complexity Drivers

- Traffic Control
- Site characteristics
- Right of Way
- Utilities
- Additional Structures/ Headwalls
- In-Water Work Timing Limitations
- Coordination with Other Parties



Utilities

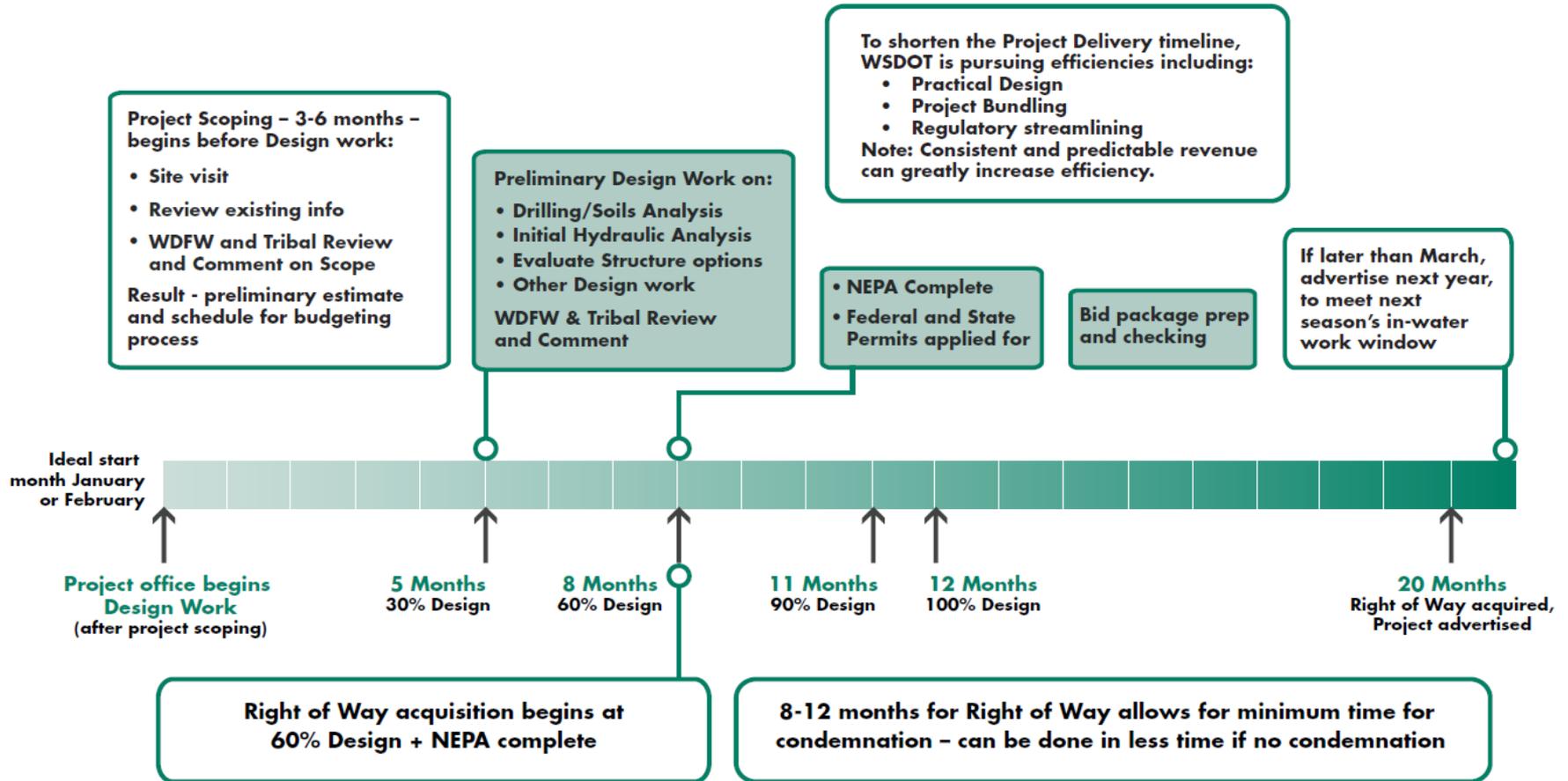


Large Headwall



Traffic Control

Typical Fish Passage Correction Project Development Process



Efficiencies in Correcting Barriers

- Created dedicated fish passage design teams – predictable funding is needed to continue this effort.
 - *Specialized expertise speeds up the work*
- Implementing Practical Design.
- Worked through Lean process with WDFW to improve collaboration on design, avoid re-work, eliminate duplication, and streamline permitting.
- Streamlined Federal ESA consultations – programmatic approvals in place or near completion (e.g., NOAA approvals now taking 2 days compared to 45-288 days in past).
- Planning to bundle future projects to gain efficiencies.
- Working with industry experts on existing and emerging approaches to delivery.

Fish Passage – Current Funding

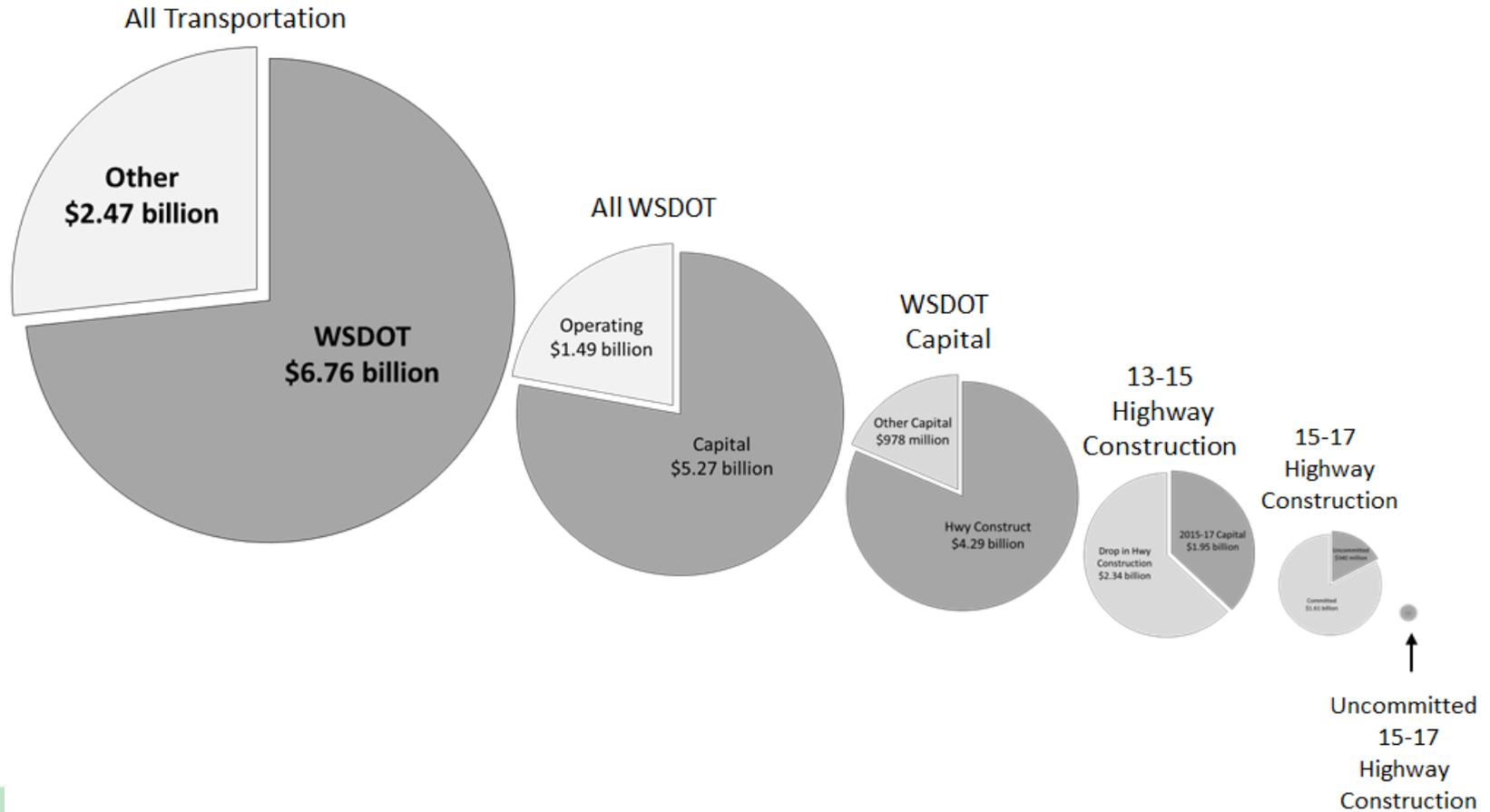
- Current 13-15 budget \$36M
- Ramping up scoping and design -- 41 corrections currently in design, 31 more to be scoped 13-15
- 16 projects constructed in case area in 13-15
- Existing funding from 15-17 through 21-23 will support only 11 additional stand-alone projects
- Results with existing funding:

	13-15*	15-17	17-19	19-21	21-23	➤	29-31
Funding	\$36M	\$26.9M	\$13.3M	\$7.9M	\$7M		Total \$91M
Barriers Removed Since Injunction	17*	7	2	1	1		Cumulative Total 28
Habitat Gained	7%	3%	3%	< 1%	< 1%		Cumulative Total ~13%

*Includes 9 barriers corrected as part of other highway projects in 13-15

Fish Passage Funding – Looking Ahead

Most of the budget is already committed



Fish Passage – \$80M per biennium

- The Department’s budget request assumes an \$80 million per biennium funding level to design and construct stand-alone corrections
- Requires a reprioritization of existing activities
- Results:

	13-15*	15-17	17-19	19-21	21-23	➤	29-31
Funding	\$36M	\$80M	\$80M	\$80M	\$80M		Total \$676M
Barriers Removed Since Injunction	17*	23	9	12	6		Cumulative Total 120-150
Habitat Gained	7%	11%	8%	10%	4%		Cumulative Total 55% - 65%

*Includes 9 barriers corrected as part of other highway projects in 13-15

- Governor’s budget adds \$360 million over 12 years
- With this additional funding, over 70% of habitat would be opened

Contact

For more information about
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