

Restoring Fish Passage at WSDOT Stream Crossings AWRA Seattle, October 2014



WSDOT Fish Passage Program

Partnership with WDFW starting early 1990's

Fish barrier inventory and prioritization

Statewide: 7,033 culverts evaluated,
1,982 barriers identified
1,537 with significant habitat

Correction of barriers:

- stand alone prioritized projects
- part of planned highway projects

282 corrections to date, improving access for 976 miles of stream habitat.

(as of 10/2014)



US 12 Silver Creek east of Randle

Culvert Case



SR 112 Trib to Pysht River
west of Port Angeles

US v WA Background

- **1850's Stevens Treaties:** Tribes ceded lands but reserved fishing rights
- **1974 Boldt Decision:** Treaties entitle Tribes to a fair share of fish and a related decision raised the question of the State's responsibilities to prevent habitat degradation
- **In 2001, United States and twenty-one Western WA Tribes filed suit against the State claiming culverts were blocking substantial amounts of salmon habitat and reducing the salmon available for harvest**
- **In 2007, Federal District Court Judge Martinez agreed to the claim and said the State was in breach of the Tribes' treaty rights**
- **On March 29, 2013, Judge Martinez issued a permanent injunction for the State to fix barrier culverts in the case area**

US v. WA Culvert Injunction

Who? State of Washington

WSDOT, WDNR, WDFW, Parks

Where? Case area

Western Washington WRIA's 1-23



How many WSDOT barrier culverts?

About 1015 total including

About 847 with Significant Habitat (>200 m upstream)

Culvert Injunction: Key Points



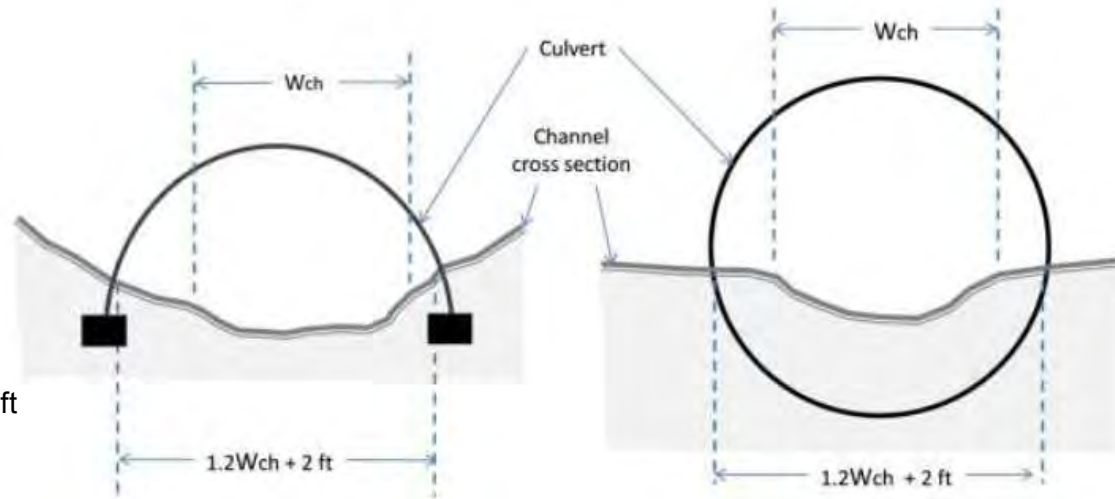
SR 21 Curlew Creek

- By March 2030: (2029 CN season) WSDOT to fix barriers with significant habitat (≥ 200 meters upstream)
- Order of preference for barrier correction
 1. avoid crossing;
 2. use “full span” bridge, or;
 3. use stream simulation
- WSDOT can defer corrections up to 10% of the total potential upstream habitat until end of culvert’s useful life, but must correct eventually
- WSDOT to correct culverts with <200 meters upstream habitat at end of useful life or through other transportation projects
- Notify Tribes of State’s activities with time for comments

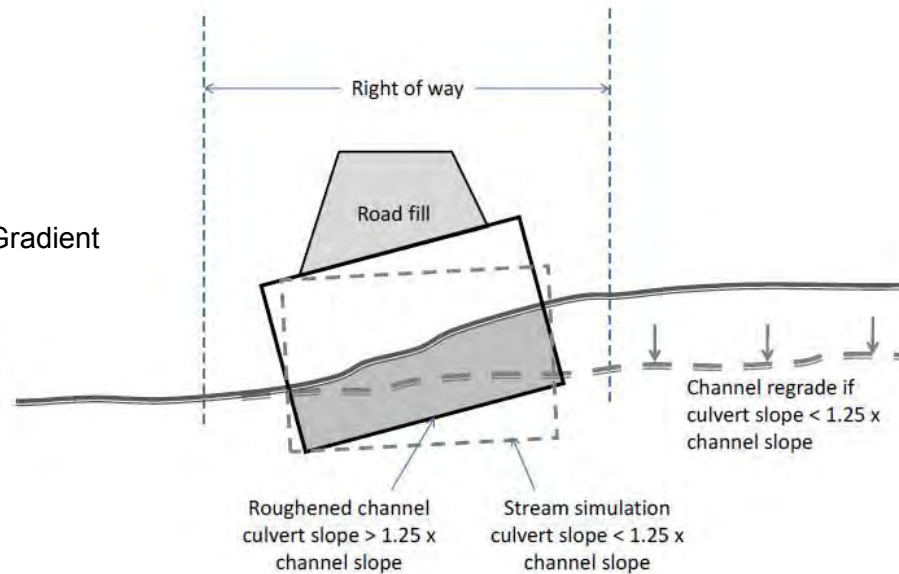
WDFW Stream Simulation

WDFW Design Guidelines

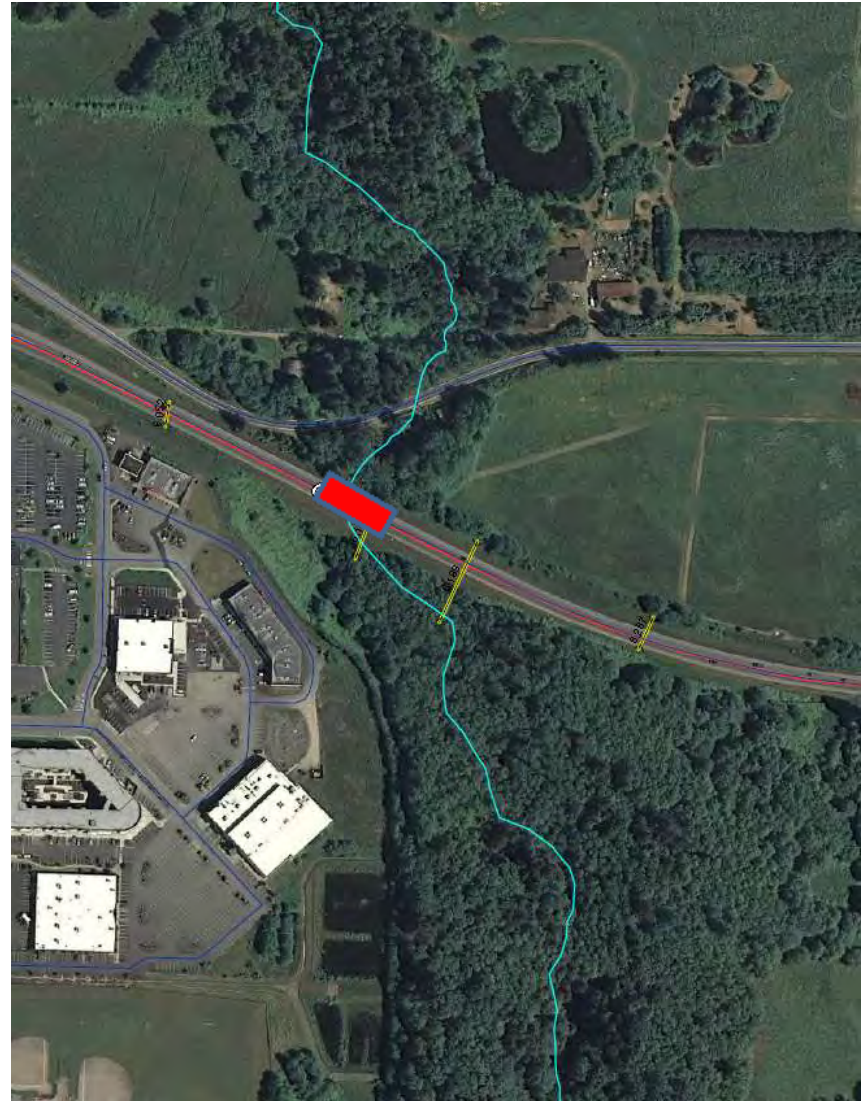
Width of Culvert Bed = $1.2 \times \text{Bankfull} + 2\text{ft}$



Culvert bed gradient < $1.25 \times$ Upstream Channel Gradient



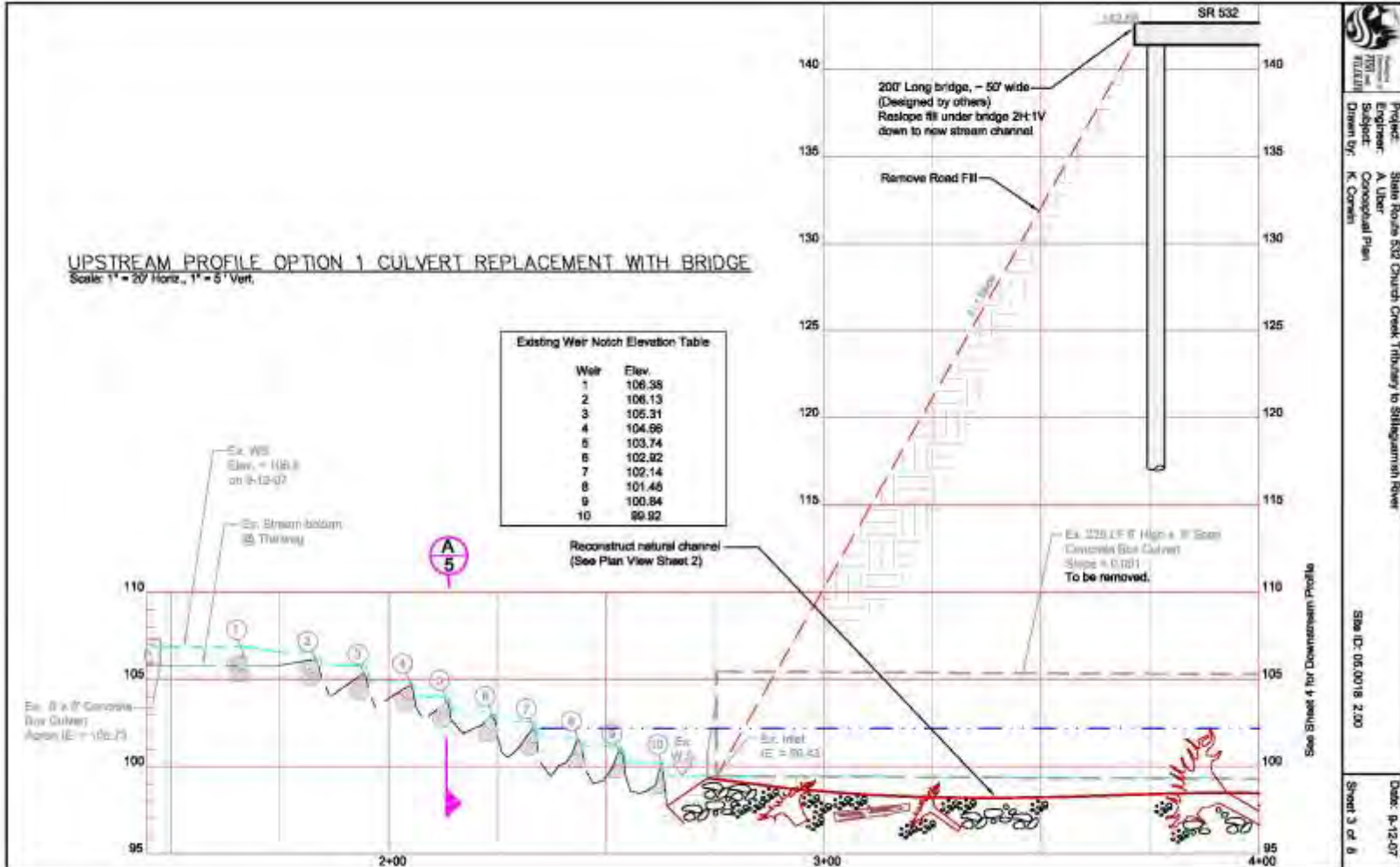
SR 532 Church Creek



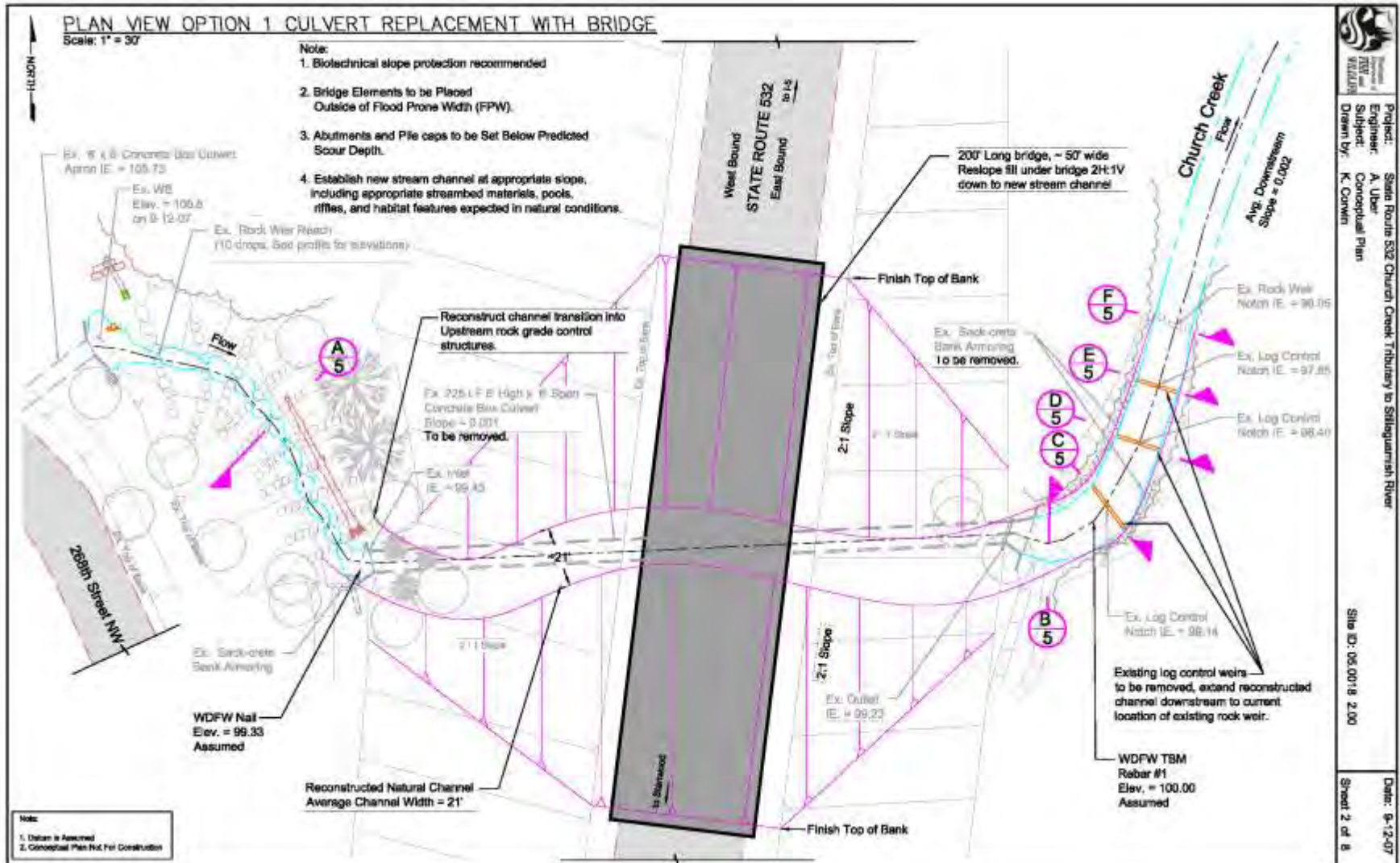
SR 532 Church Creek – City Culvert Upstream



SR 532 Church Creek



SR 532 Church Creek



Project: State Route 532 Church Creek Tributary to Silligquamish River
 Engineer: A. Usher
 Subject: Conceptual Plan
 Drawn By: K. Corwin

Site ID: 06.0018 2.00

Date: 9-12-07
 Sheet 2 of 8

I-5 Fisher Creek

SEC. 29 T. 33N. R. 4E W.M.



FISHER CREEK CULVERT



FISHER CREEK CULVERT OUTLET



FISHER CREEK CHANNEL

REPLACE EXISTING CULVERT WITH 2 MULTI-LANE BRIDGES OR ARCH CULVERTS, 500 FT OF CHANNEL WORK,

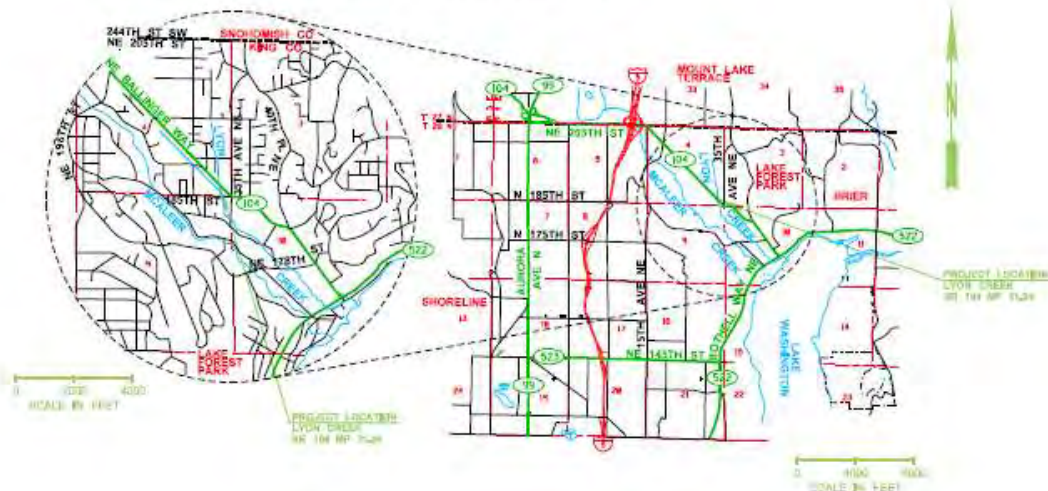
I-5 Fisher Creek



Upstream of culvert

SR 104 Lyon Creek

SEC. 4 T. 26N. R. 4E W.M.



SR 104 LYON CREEK OUTLET



SR 104 LYON CREEK INLET



SR 104 LYON CREEK
CULVERT CROSSING

REPLACE EXISTING BOX
CULVERT WITH 20 FT
BOX CULVERT.
UPSTREAM CHANNEL
WORK AND POSSIBLE
DOWNSTREAM
CHANNEL WORK.

SR 104 Lyon Creek



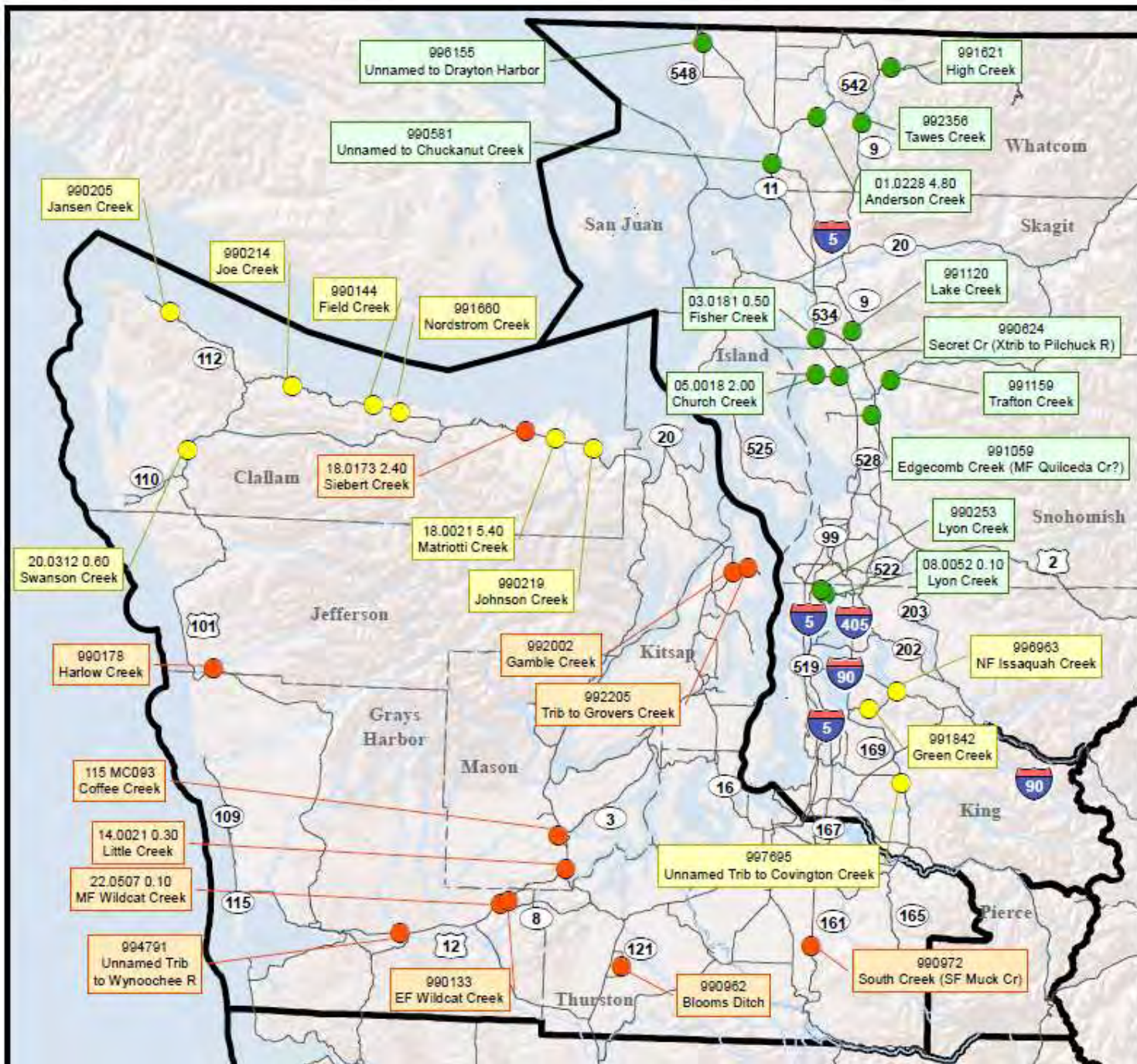


WSDOT Barrier Culverts in Injunction Area (847 as of January 1, 2014)



Fish Passage 13-15 Design List

July 2013

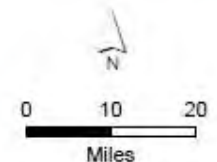


Design Region

- North Central (10)
- Northwest (13)
- Olympic (11)

- State Routes
- County Boundary

WSDOT is currently in the process of determining how the recent decision from Judge Martinez will affect our work. This ruling places some significant requirements on the agency to provide fish passage at many culverts by 2030. We do not have a specific list of projects identified that will be completed under this ruling at this time and the information we are providing should not be interpreted as the State's response or position with regard to the recent ruling. WSDOT is working with the Governor's office, the legislature, other agencies, an tribes to determine how to address the ruling.



Data Source: Culvert Case Barriers, State Routes, and County Boundaries by WSDOT.

Current Barrier Correction Effort

- Fish Passage Program funding in 13-15 – \$36 Million.
- \$20 Million of that directed toward ramping up
- 4 Specialty Design Teams – 2 NWR, 1 NCR, 1 OR
- Improved team process with WDFW
- Design 34 projects to be ad ready 13-15
- Scope 75 additional for design in 15-17 (if funded)



Complying with the Culvert Injunction



Program costs:

- **\$2.4 B estimated to fix all barriers within case area**

Planning for accelerated correction target rate:

- **30 to 40 projects per biennium**
- **Plan for fish passage corrections in Safety & Mobility projects**
- **Planning is subject to Tribal coordination**
- **Continue barrier correction effort outside case area**
- **New law – 2SHB 2251, 2014 Legislative session Creates Fish Passage Board and coordination requirements**



Email updates

- Traffic & Cameras
- Projects
- Business
- Environment
- Maps & Data

You are here: [Home](#) > [Agency Projects](#) > [Fish Passage](#)

Project Info

- [Home](#)
- [Coordinating with Others](#)
- [Costs for Fish Barrier Removal](#)
- [Determining Culvert Repair Priorities](#)
- [Environmental Stewardship](#)
- [Federal Court Injunction](#)
- [Fish Barrier Correction Construction Process](#)
- [Frequently Asked Questions](#)
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- [Culverts as Barrier to Fish](#)
- [Number of Fish Barriers](#)
- [Fish Passage Contacts](#)
- [Working with Partners](#)

Publications

- [Barrier Correction Folio \(pdf 1 mb\)](#)
- [2014 Annual Fish Passage Report \(pdf 9.7 mb\)](#)
- [2013 Annual Fish Passage Report \(pdf 5 mb\)](#)

Contact

- [Fish Passage contacts](#)

Fish Passage

State highways cross hundreds of streams and rivers in Washington. At many of those locations, culverts are too small or otherwise inadequate to allow fish to migrate upstream and downstream as necessary for growth and reproduction. WSDOT has been working for more than two decades to correct these inadequate culverts to improve fish habitat.

Find Fish Passage Projects



[View Interactive Map](#)

Why is WSDOT fixing fish barriers?

- [Environmental Stewardship Related to Fish Passage](#)
- [Fish Passage Responsibilities](#)
- [Federal Court Injunction Related to Fish Passage](#)

What makes a fish barrier?

- [How Culverts Can be a Barrier to Fish](#)
- [Number of Fish Barriers on State Highways](#)
- [Poster of fish barriers \(pdf 1 mb\)](#)

What does it take to fix barriers?

- [Determining Culvert Repair Priorities](#)
- [Fish Barrier Correction Construction Process](#)

Before Photo



US 97 culvert that blocked fish passage at Butler Creek, a tributary to the Little Klickitat River near Goldendale.

After Photo



US 97 at Butler Creek after the \$3.5 million barrier removal project was completed in April 2013.

Fish Passage Partners

- [Working with Fish Passage Partners](#)
- [Coordinating Fish Passage Projects with Others](#)
- [Washington Department of Fish and Wildlife](#)
- [Department of Natural Resources](#)
- [Washington State Parks and Recreation Commission](#)
- [Northwest Indian Fisheries](#)

Questions?

Paul Wagner

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See our website:

wsdot.wa.gov/Projects/FishPassage/default.htm

