

Wendy Christensen | 509-573-8050

Tom Tebb | 509-575-3989

Agenda

Yakima River Basin Water Enhancement Project Workgroup Meeting

Yakima Valley College Conference Center
1704 W Nob Hill Blvd, Yakima WA 98902

December 11, 2024; 9:30 AM to 12:30 PM
And on Teams (see below for link)

-
- 9:30 – 9:45 Welcome/Introductions and Agenda Overview**
Anna Marandi, HDR
- 9:45 – 10:00 YBIP Executive and Implementation Committee Updates / 2024 Accomplishments**
Wendy Christensen, Reclamation; Melissa Downes, OCR/ Ecology; Phil Rigdon, Yakama Nation; Joe Blodgett, Yakama Nation Fisheries
- 10:00 – 10:40 Monitoring with Partners in the Yakima Basin: US Fish and Wildlife Service**
Craig Haskell, Jason Romine - US Fish and Wildlife Service
- 10:40 – 11:05 5x5 Project Updates and Q&A:**
- Cle Elum Pool Raise – *Wendy Christensen, Reclamation; Joe Blodgett, Yakama Nation Fisheries; Kelly Clayton, Yakama Nation Fisheries*
 - Bateman Island – *Mike Livingston, WS Dept of Fish & Wildlife; Joe Blodgett, Yakama Nation Fisheries; Cindy Boen, US Corps of Engineers*
 - Gold Creek – *Mel Babik, Mitch Long, Kittitas Conservation Trust*
- 11:05 – 11:15 Public Comment**
- 11:15 – 11:30 Break**
- 11:30 – 11:45 2024 Highlights**
Wendy Christensen, Bureau of Reclamation
- 11:45 – 12:30 Roundtable Discussion – Workgroup Members**
Anna Marandi, HDR
- 12:30 Adjourn**

Upcoming 2025 YRBWEP Workgroup Meetings – March 12 (Hotel Windrow, Ellensburg)

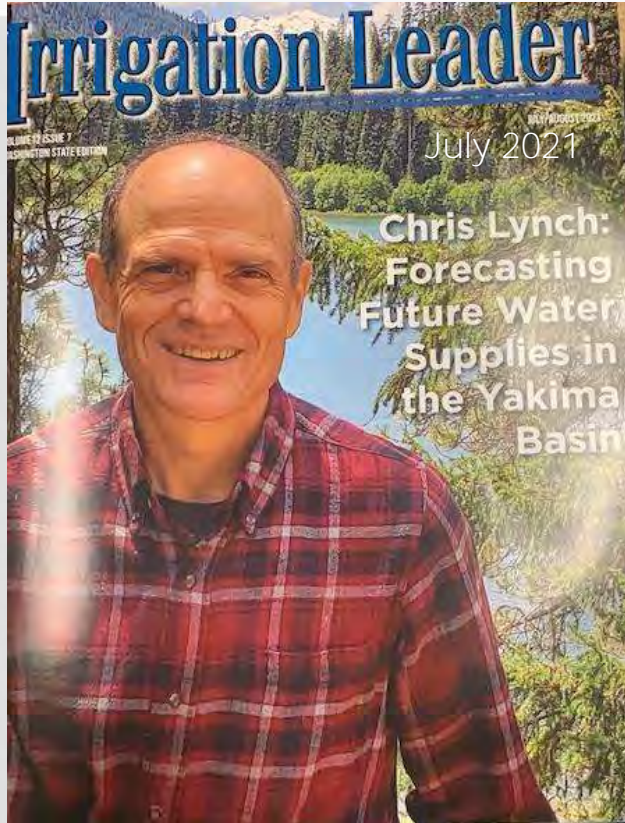
For additional information, see the reports and documents available at this link:

<http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html>

Microsoft Teams [Need help?](#)
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Meeting ID: 219 121 086 879
Passcode: fbHW7b

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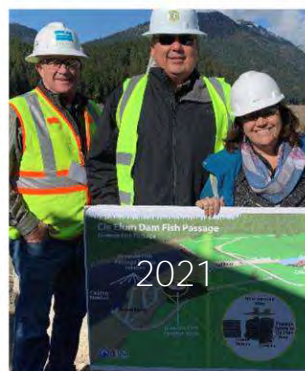
CHRIS LYNCH, THANK YOU !



CONGRATULATIONS ON YOUR RETIREMENT DECEMBER 2024!



THANK YOU ! TOM TEBB



CONGRATULATIONS ON
YOUR RETIREMENT
FEBRUARY 2025!



CHRIS AND TOM AT WSWRA 2024



THANK YOU!



Questions?

Finding Common Ground
Collaborative Leadership in
Washington State - TVW

Website: www.yakimabasinintegratedplan.org

Monitoring with Partners in the Yakima Basin: U.S. Fish and Wildlife Service

**U.S. Fish and Wildlife Service
Yakima Integrated Plan Workgroup
December 11, 2024
Yakima Valley College**

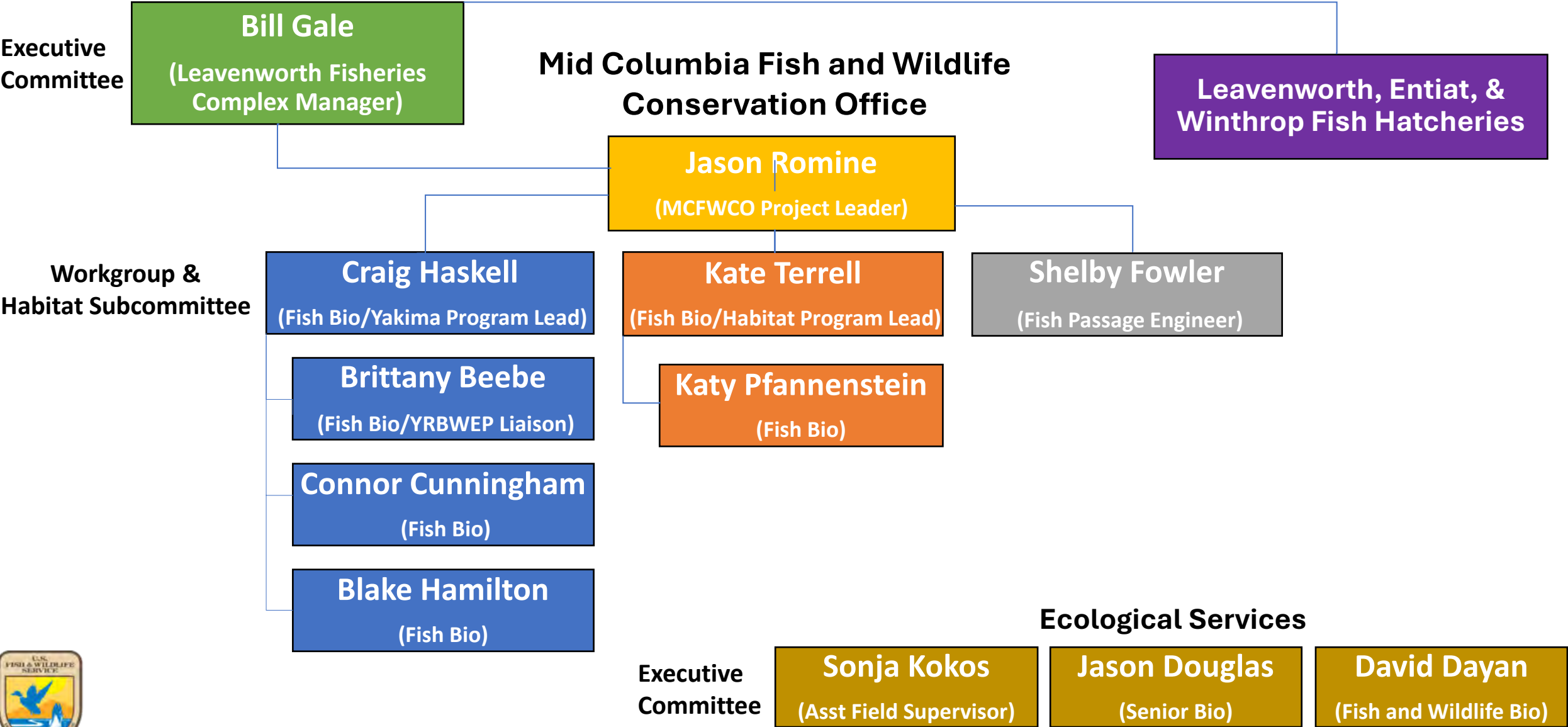


USFWS Mission Statement:

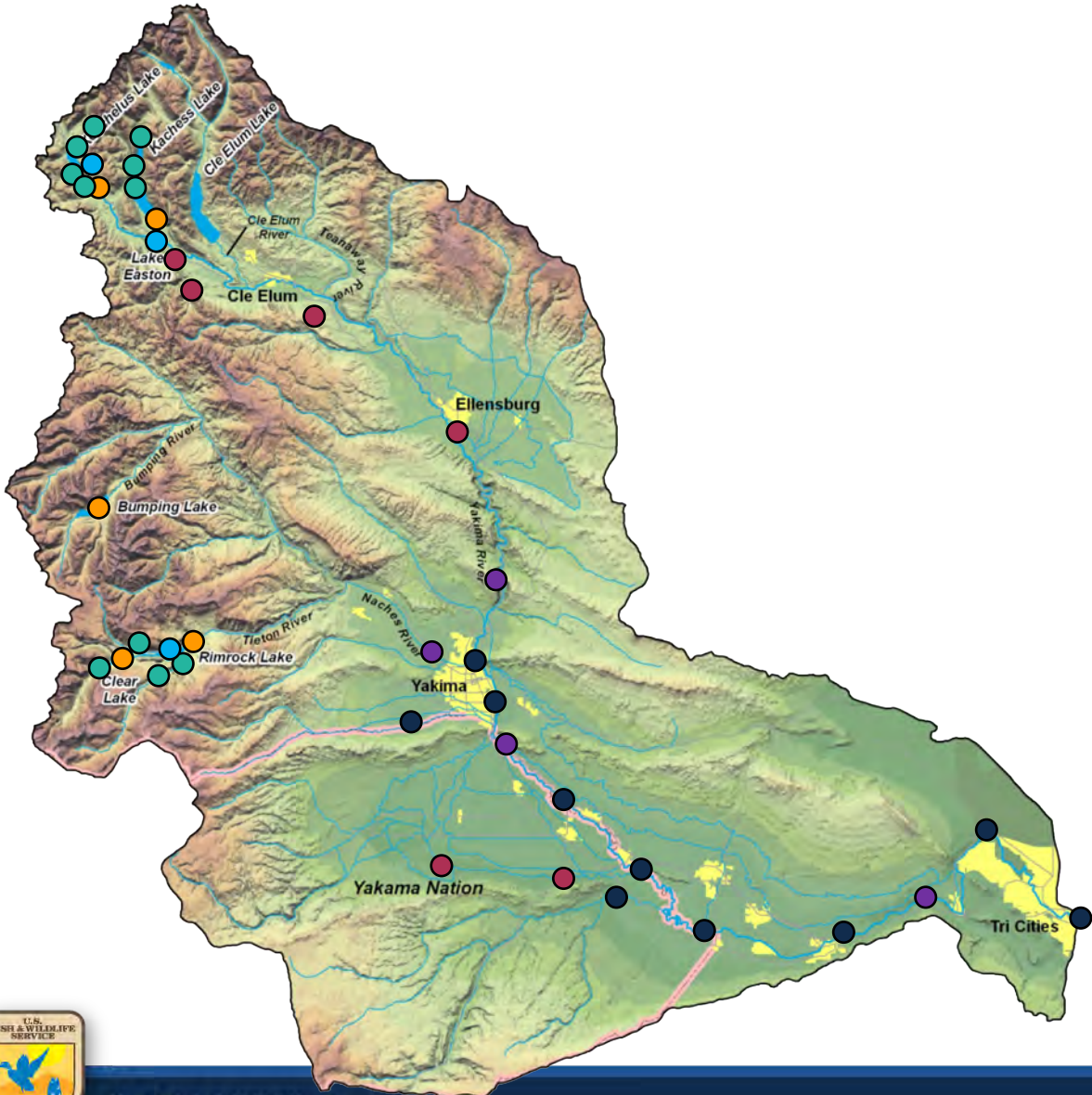
“work with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people”



U.S. Fish and Wildlife Service: Who we are



Projects in the Yakima Basin



● Trap and Haul – Bull Trout



● PIT Tag Monitoring – Bull Trout



● Acoustic Monitoring – Bull Trout



● PIT Tag Monitoring – Salmon/Steelhead



● Freshwater Mussel Monitoring



● Fish Salvage



Trap and Haul - Bull Trout

● Trap & Haul Location



1 Upper Yakima Area

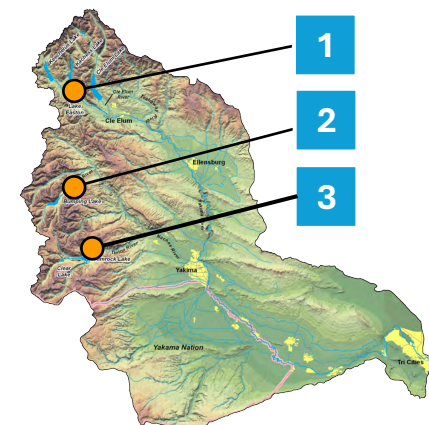
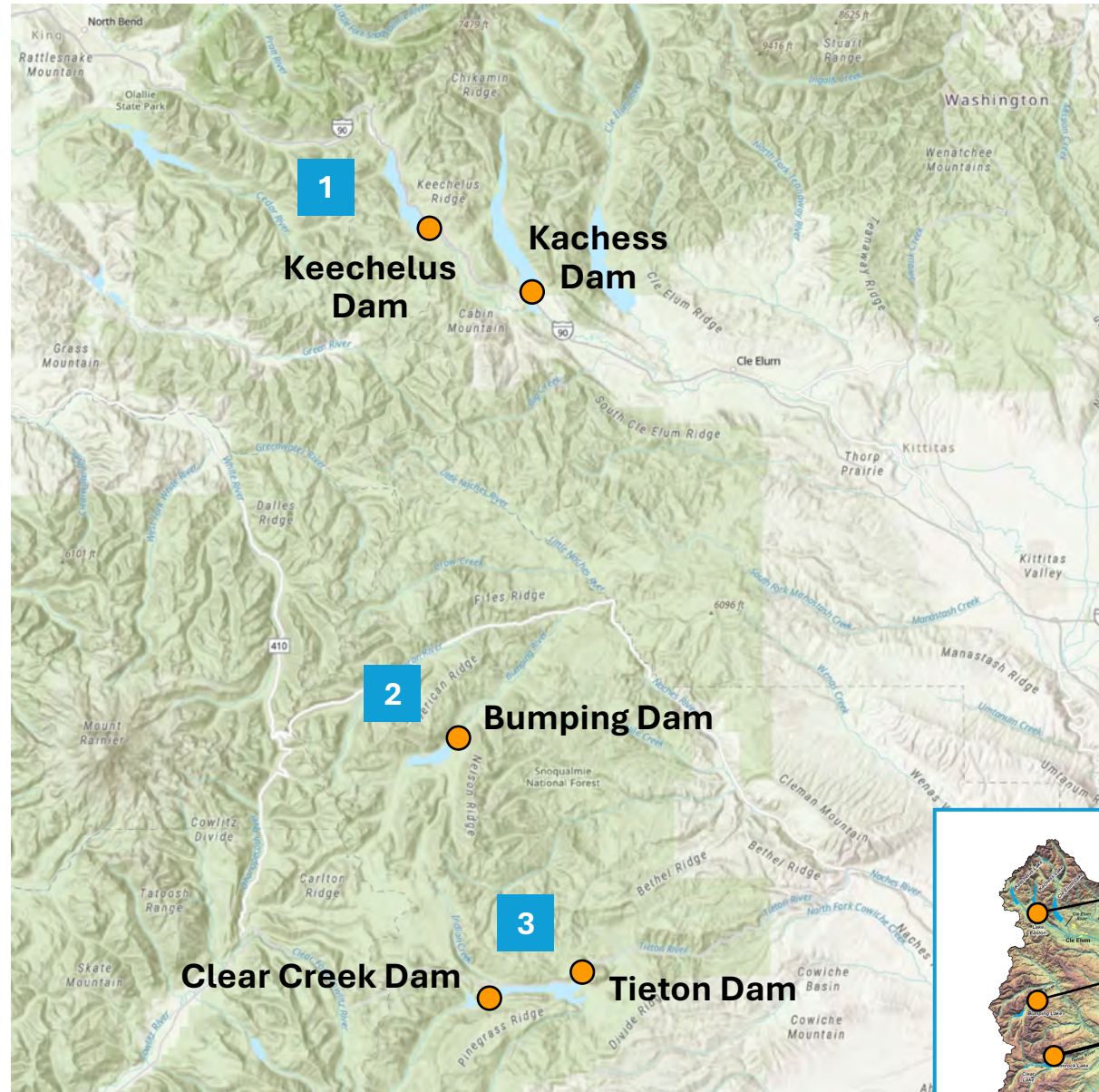
Keechelus Dam
Kachess Dam

2 Bumping Reservoir

Bumping Dam

3 Rimrock Area

Clear Creek Dam
Tieton Dam



Trap and Haul: Interim Fish Passage

- **Bull Trout are migratory**

- **Work at Five Dams**

Clear Creek: 2016

Bumping, Keechelus, Kachess: 2019

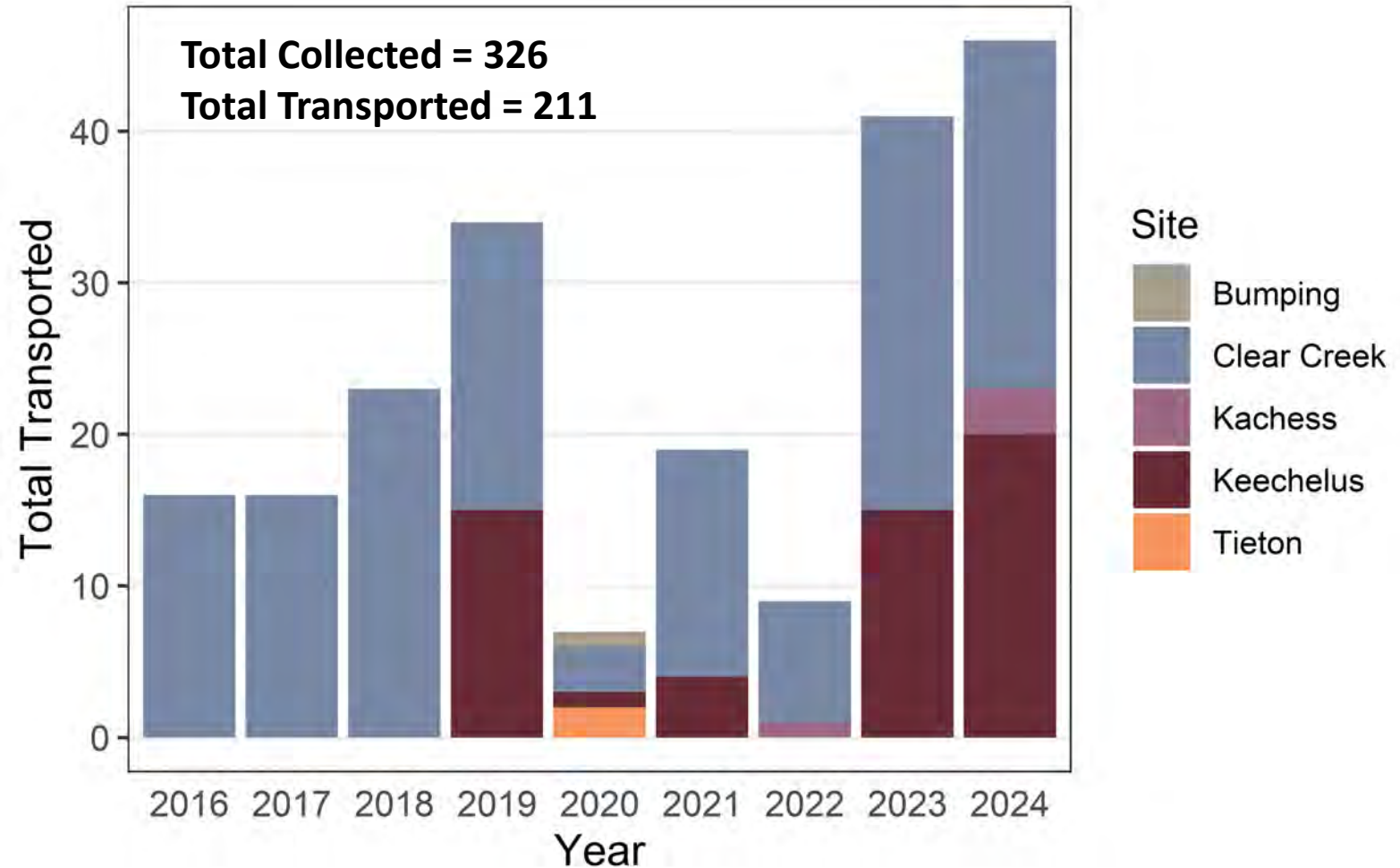
Tieton: 2020



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Bull Trout Entrainment is a Problem

- **Most at Clear Creek & Keechelus dams**
- **Tag and Monitor**
Tributaries (PIT tags)
Reservoirs (Acoustic tagging)
- **Genetic Assessment**
Natal Origin – Bull Trout stray
Hybridization with Brook Trout



PIT Tag Monitoring - Bull Trout

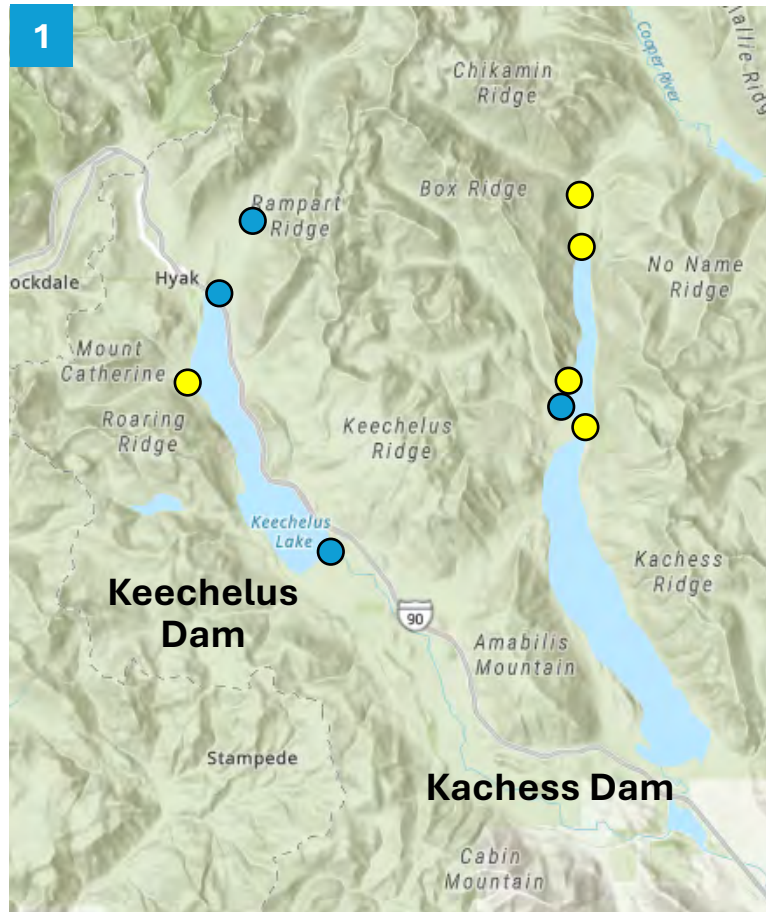


● Submersible Antennas

● Fixed Antennas

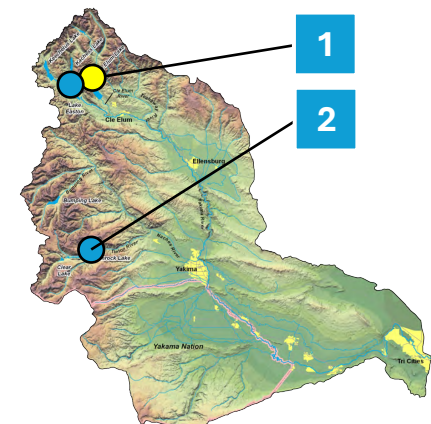
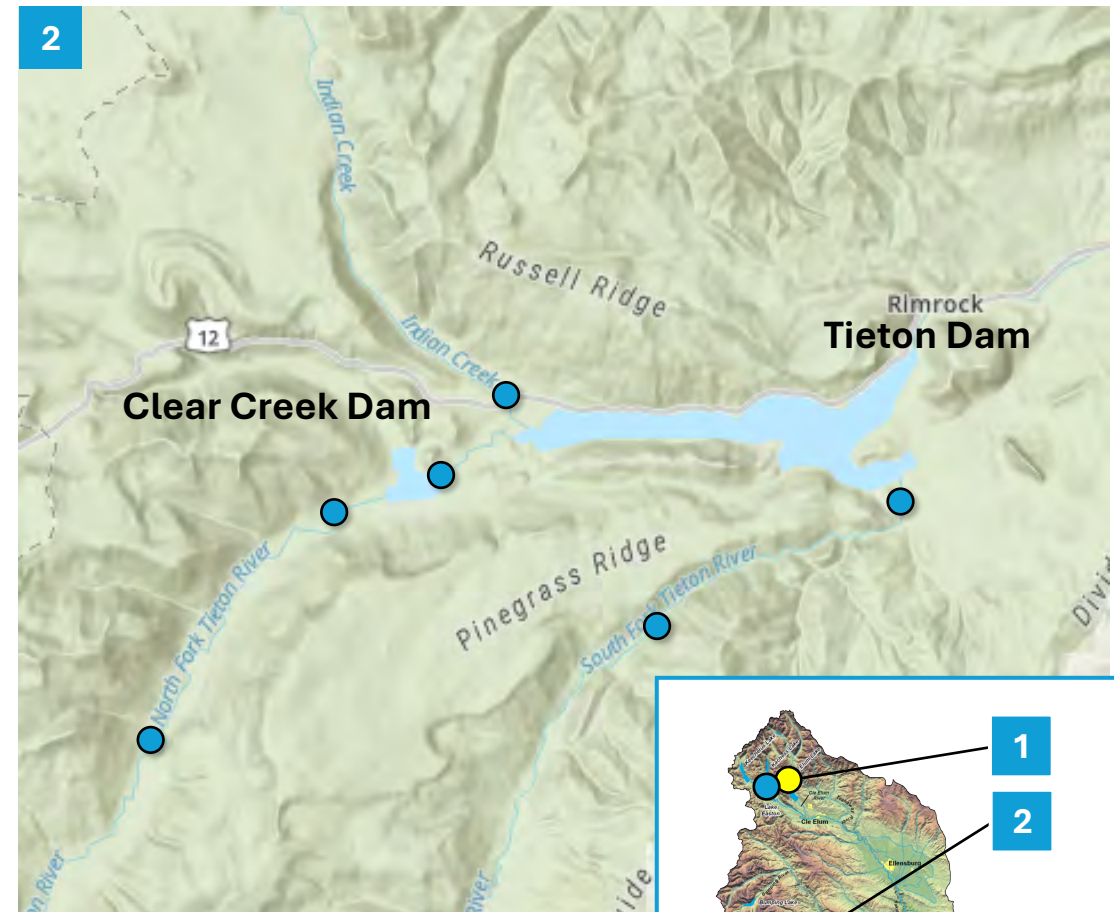
1 Upper Yakima Area

Box Canyon Creek
Upper Kachess River
Gold Creek
Gold Creek Pond
Outlet Channel
Keechelus Dam



2 Rimrock Area

North Fork Tieton River
South Fork Tieton River
Indian Creek
Clear Creek Dam



Monitoring Bull Trout in Tributaries

- **PIT tags (2,187 since 2012)**

Trap and Haul

Rescue and Rear Program

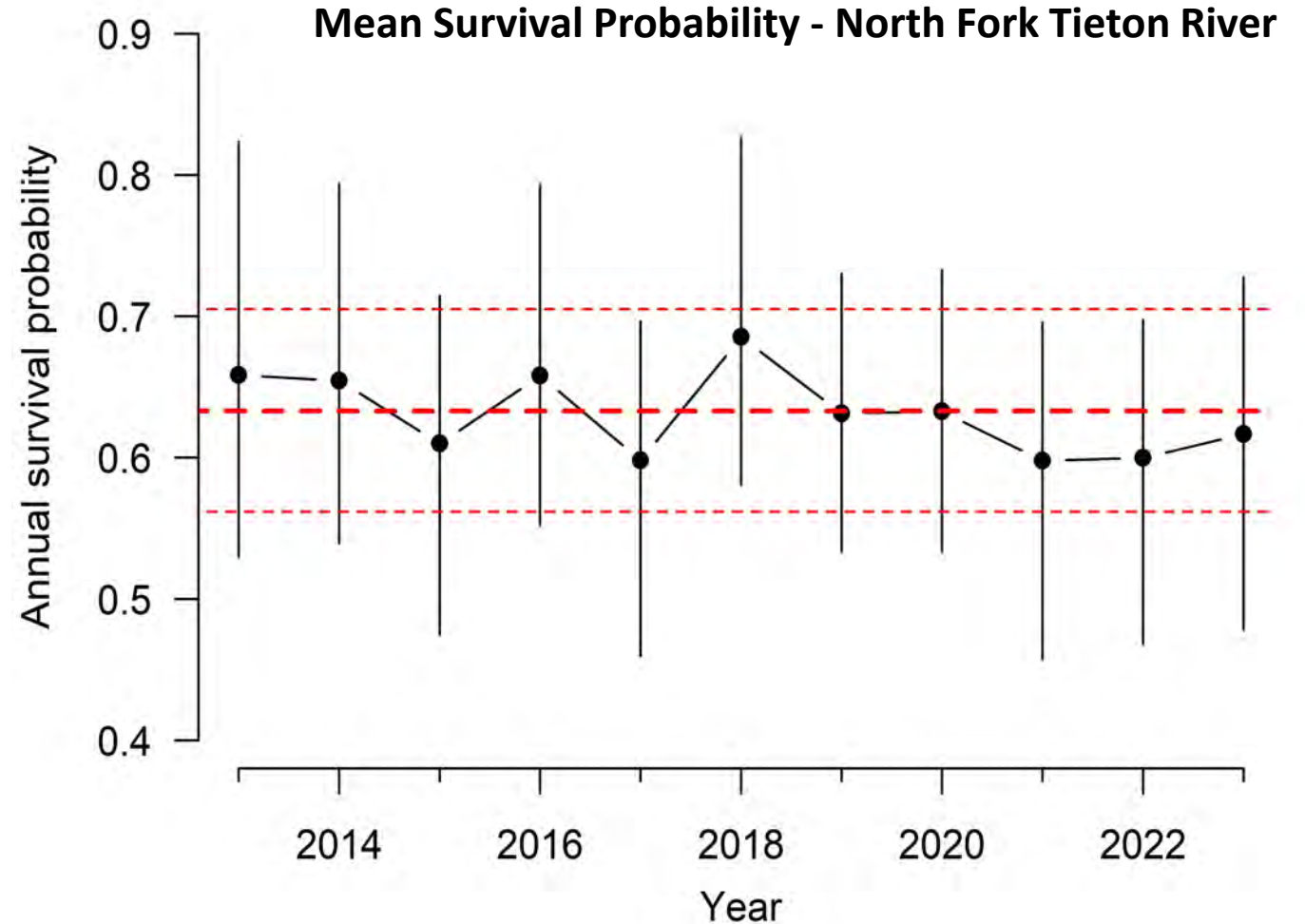
- **PIT Antennas**

Spawning Tributaries

Dams

- **Other fish**

Steelhead, Coho, and Chinook



Acoustic Monitoring - Bull Trout



● Hydrophones

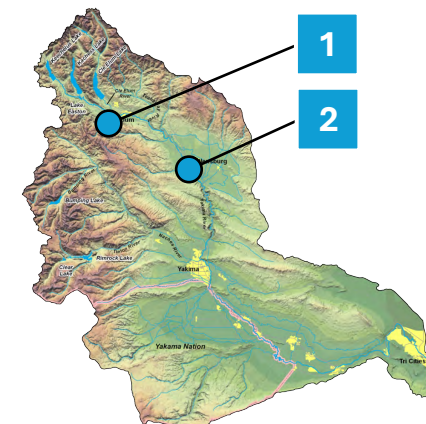
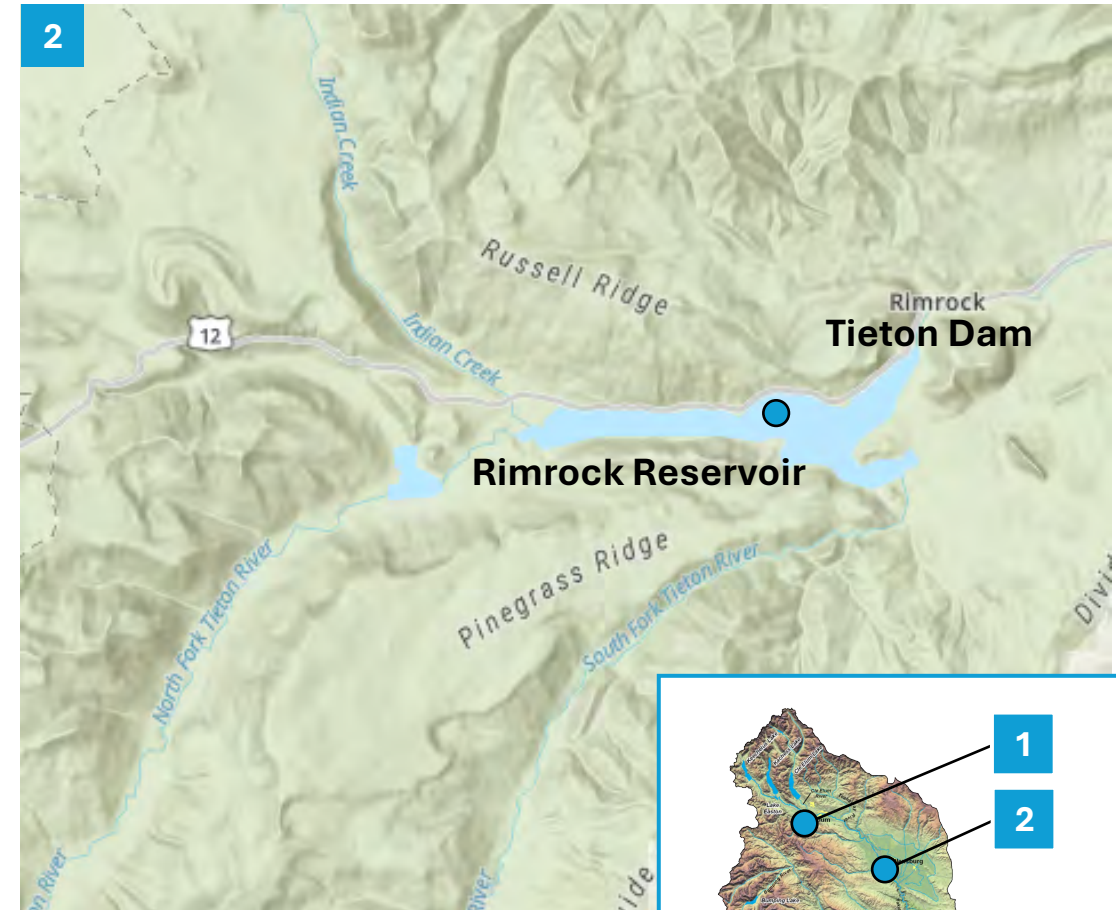
1 Upper Yakima Area

Keechelus Reservoir (18)
Easton Reservoir (1)



2 Rimrock Area

Rimrock Reservoir (6)
Tieton Dam Tailrace (2)



U.S. Fish & Wildlife Service

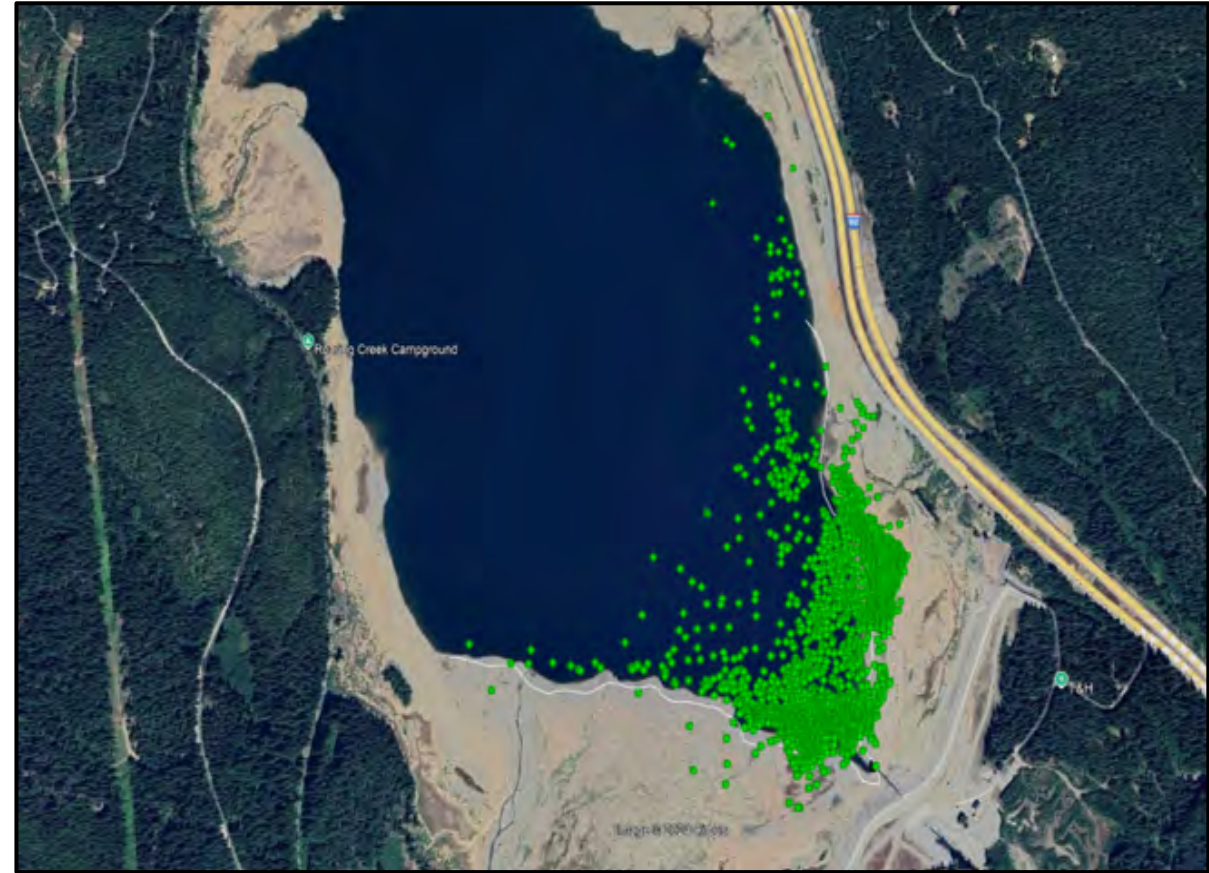
Monitoring Bull Trout in Reservoirs

- **Use Acoustic Tags**

Keechelus (n = 71), Kachess (n=51), and
Rimrock (n=10)

- **Quantify Distribution, Survival,
and Entrainment**

Sub Adults from Rescue and Rear Program
Adults from Trap and Haul Program



Track of a 'Rescue and Rear' Bull Trout (June 4-18, 2024) in
the Keechelus Dam forebay



Predicting Future Bull Trout Spawning Reaches

- Occupancy modeling
- Identify re-introduction/conservation introduction locations
- Use habitat and watershed metrics

Habitat metrics

Mean August stream temp, cold water availability, high flow frequency

Watershed metrics

Slope, volume, Brook Trout presence, road density, canopy cover, connectivity



YAKIMA BASIN
FISH AND WILDLIFE
RECOVERY BOARD



Washington
Department of
FISH and
WILDLIFE

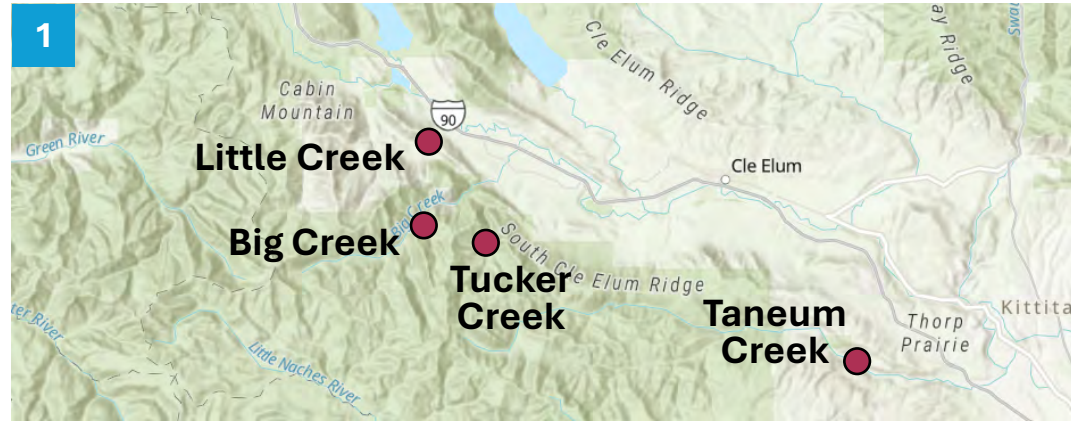
PIT Tag Monitoring - Salmon and Steelhead



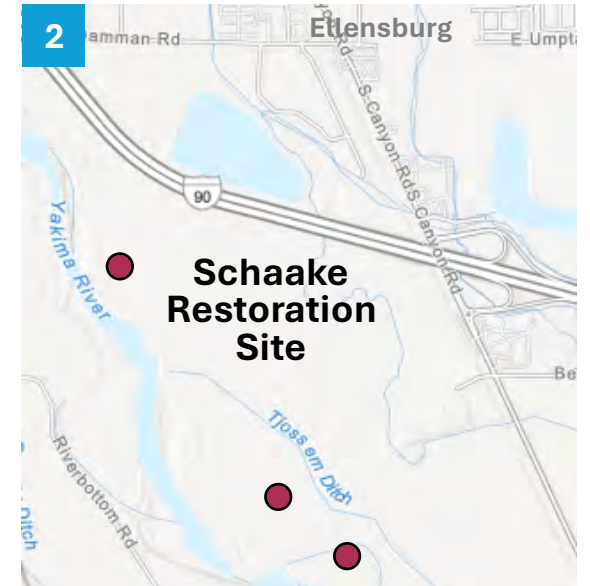
● Fixed Antennas

1 Kittitas Reclamation District Canal Tributaries

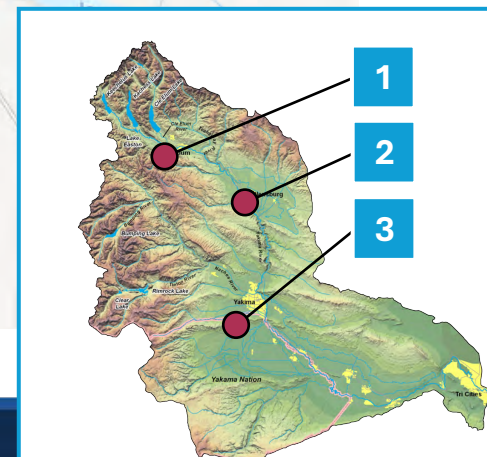
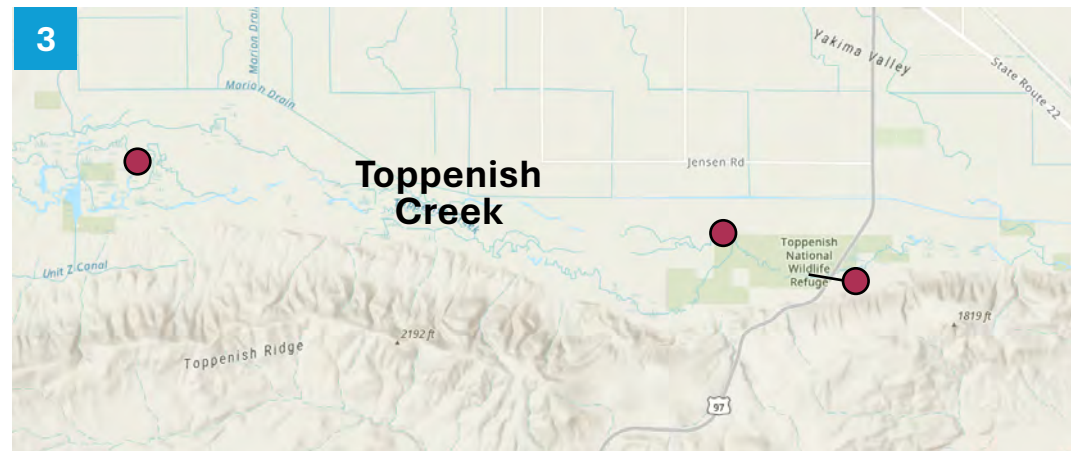
Little Creek
Big Creek
Tucker Creek
Taneum Creek



2 Schaake Restoration Site



3 Toppenish Creek



U.S. Fish & Wildlife Service

Freshwater Mussel Work



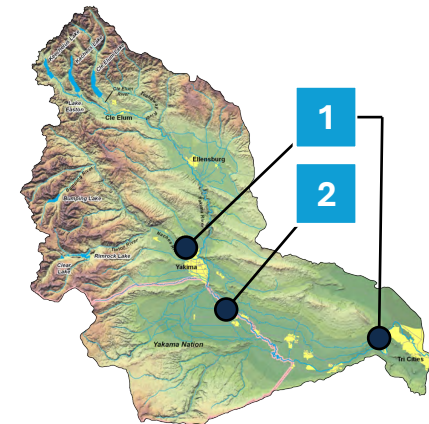
— Proposed eDNA Sample Locations
(at 1km intervals)

1 eDNA Sampling

Ahtanum Creek
Toppenish Creek
Satus Creek
Sulphur Creek
Lower Mainstem
Yakima River

2 Visual Surveys and Monitoring

Toppenish Creek
Wildlife Refuge



Freshwater Mussels are Ecologically and Culturally Important

- Freshwater Mussels are disappearing rapidly
- Determine distribution in the Yakima Basin
- Initiate Long Term Monitoring

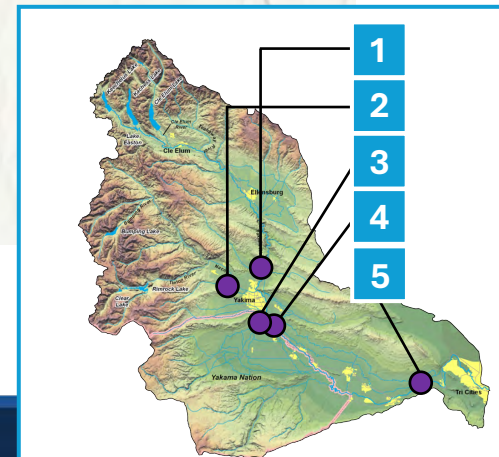
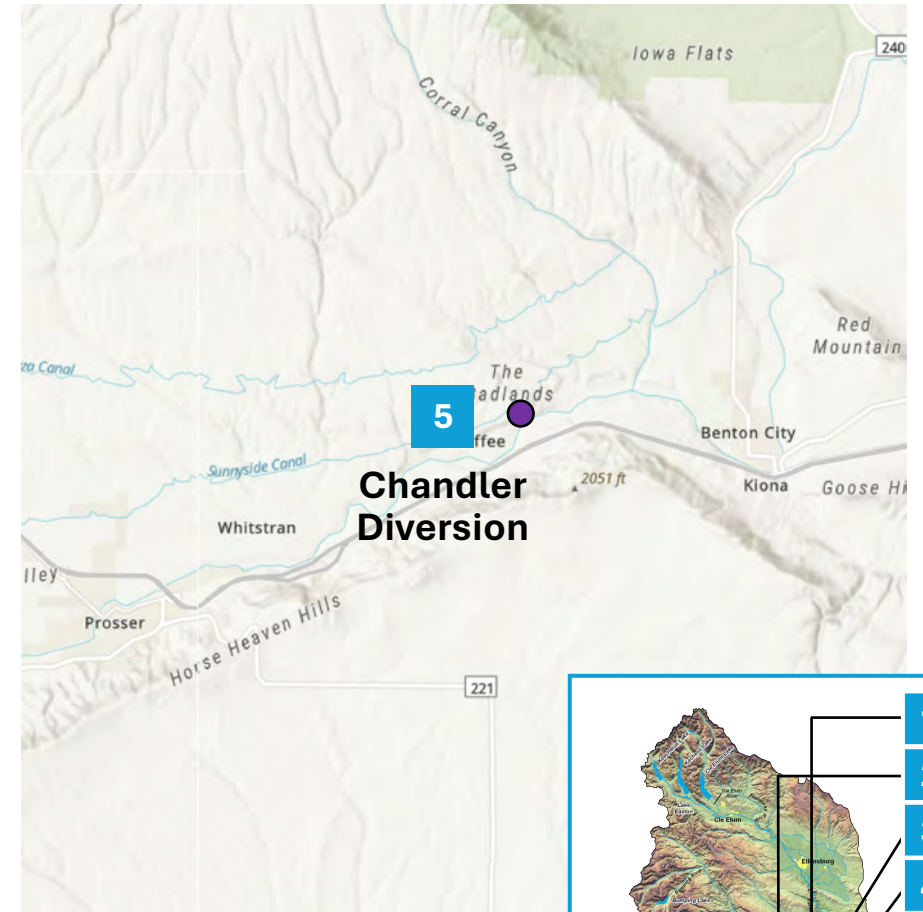
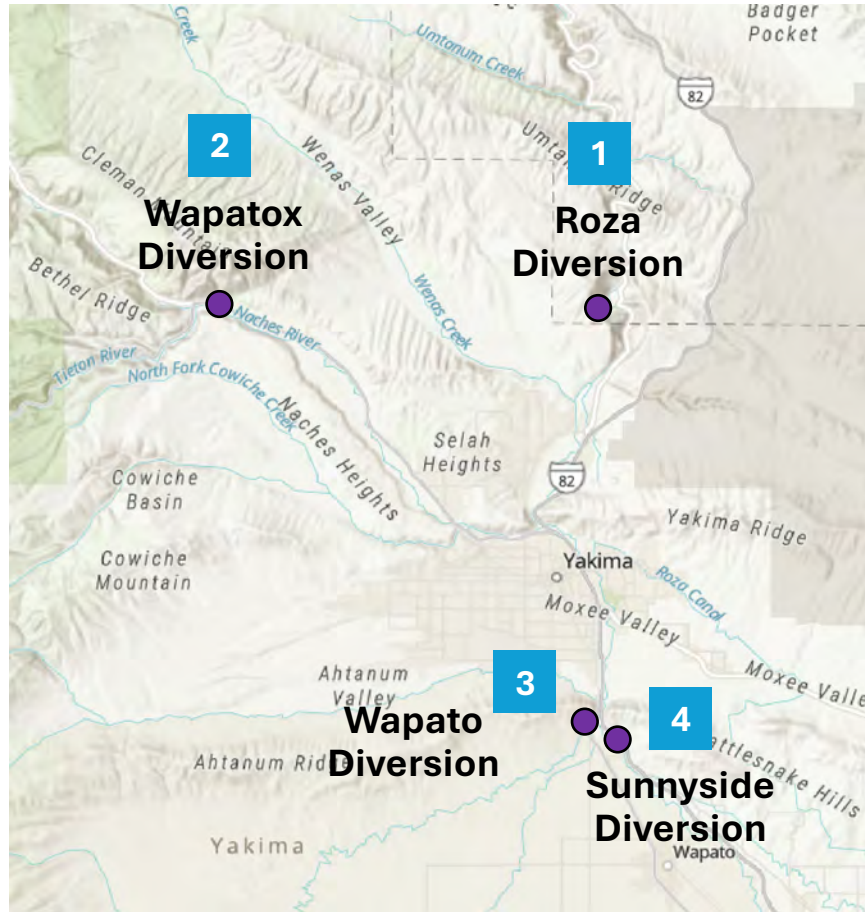


Fish Salvage - All Fish



● Fish Salvage locations

- 1 Roza Diversion
- 2 Wapatox Diversion
- 3 Wapato Diversion
- 4 Sunnyside Diversion
- 5 Chandler Diversion



Developing Bull Trout Habitat Restoration Projects: Upper Kachess River

- **Actions**

Pre and post Fish and Habitat Monitoring
\$300K USFWS funding (\$4M total)
Construction Oversight
Completed in 2023

- **Key Partners**

Kittitas Conservation Trust, Yakama Nation,
Washington Department of Fish and Wildlife,
Mid-Columbia Fisheries Enhancement Group,
Kittitas County Conservation District, US
Forest Service, Interfluve



Developing Bull Trout Restoration Projects: Gold Creek Valley

- **Actions**

Pre and post Fish and Habitat Monitoring
Implementation/oversight assistance
Gold Creek Pond Fish Salvage

- **Funding (\$16M of \$44M acquired)**

\$5.4M from USFWS
Others: DOE, BOR, YBIP, SRFB, YN, KCT

- **Key Partners**

Kittitas Conservation Trust, Yakama Nation, Washington Department of Fish and Wildlife, US Forest Service, Mid-Columbia Fisheries Enhancement Group



Advisory Work

- **YBIP Executive Committee, Workgroup, Habitat Subcommittee**
- **Systems Operations Advisory Committee**
- **Salmon Recovery Funding Board**
- **Yakima Basin Bull Trout Working Group**
- **Pacific Northwest Native Freshwater Mussel Workgroup**
- **Western Freshwater Mussel Initiative**



Past Accomplishments supporting YBIP

- **Clear Creek Dam Fish Passage assessment**

Identify need for new fish ladder

Identify temperature patterns and other metrics for ladder development

- **Identify survival bottlenecks in Toppenish Creek**

Yakama Nation BIL funding from USFWS and NOAA

- **Demographic modeling informs Bull Trout Rescue and Rear Program**



A scenic photograph of a mountain stream flowing over rocks in a forest. The water is clear and blue, creating white rapids as it flows over dark, mossy rocks. The surrounding forest is dense with evergreen trees, and some deciduous trees with reddish-brown leaves are visible on the banks. The overall atmosphere is peaceful and natural.

Questions?

craig_haskell@fws.gov



Cle Elum Pool Raise

Project Update



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State of Washington



Current Status



- Completed work
 - Radial Gates Modification
 - Saddle Dikes 1, 2 & 3
 - Cle Elum River Campground
 - Speelyi Beach Day Use Area
 - Salmon La Sac Road embankment areas
 - Wish Poosh Campground & Boat Launch
 - Night Sky
 - Morgan Creek
 - Domerie Bay
- Work In-progress
 - Sandelin Lane Shoreline
 - Jackson Well
 - Timber Cove
- Remaining shoreline protection work
 - Speelyi Beach



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Morgan Creek Shoreline Protection Project



5:1 Sloped Perched Beach



3:1 Sloped Perched Beach



Anchored log habitat



YFO Crew



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Sandelin Shoreline Protection Project



Revetment #1



Revetment #2



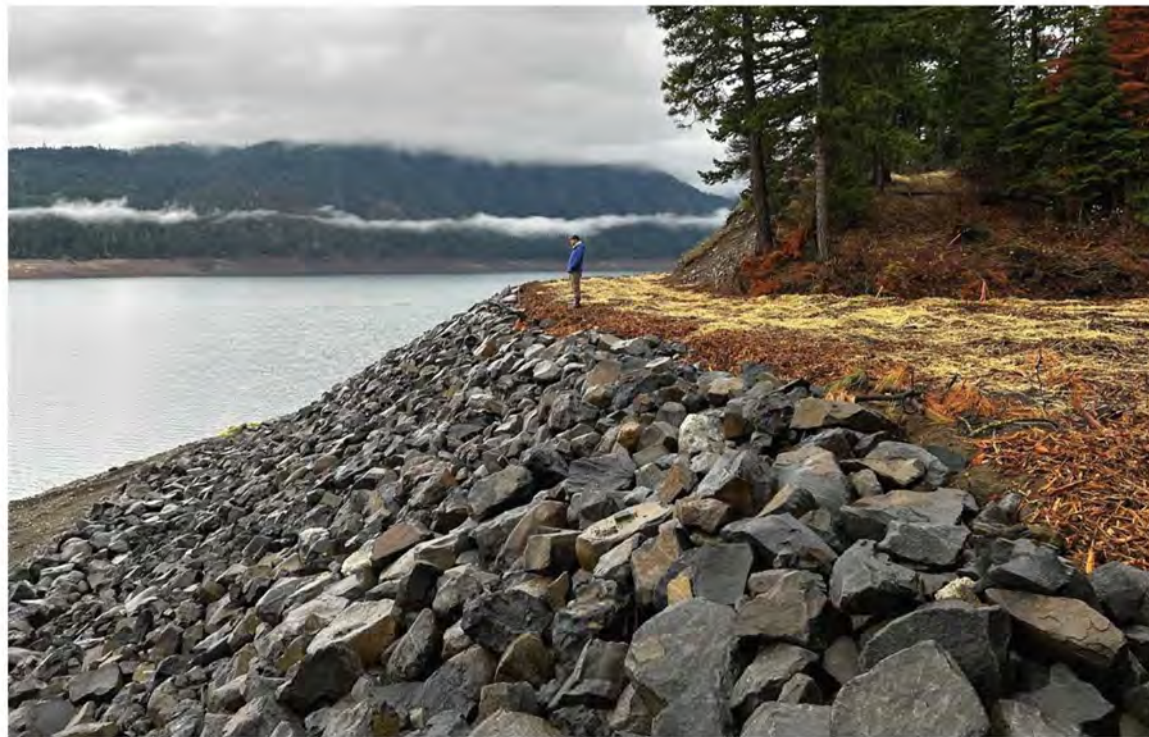
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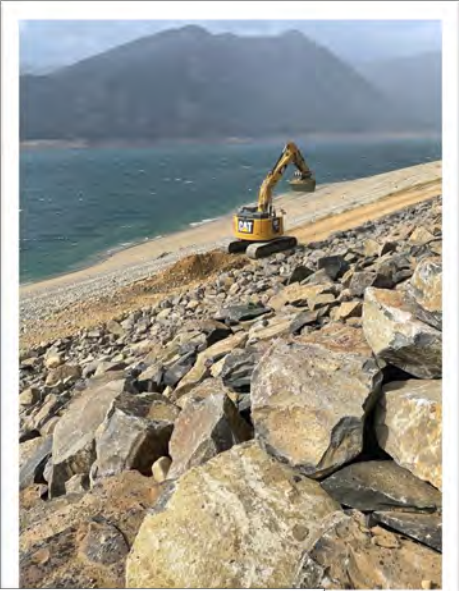
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Domerie Bay Shoreline Protection Project



1.5:1 Sloped Rock Revetment



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Night Sky Shoreline Protection Project



6:1 Sloped Perched Beach



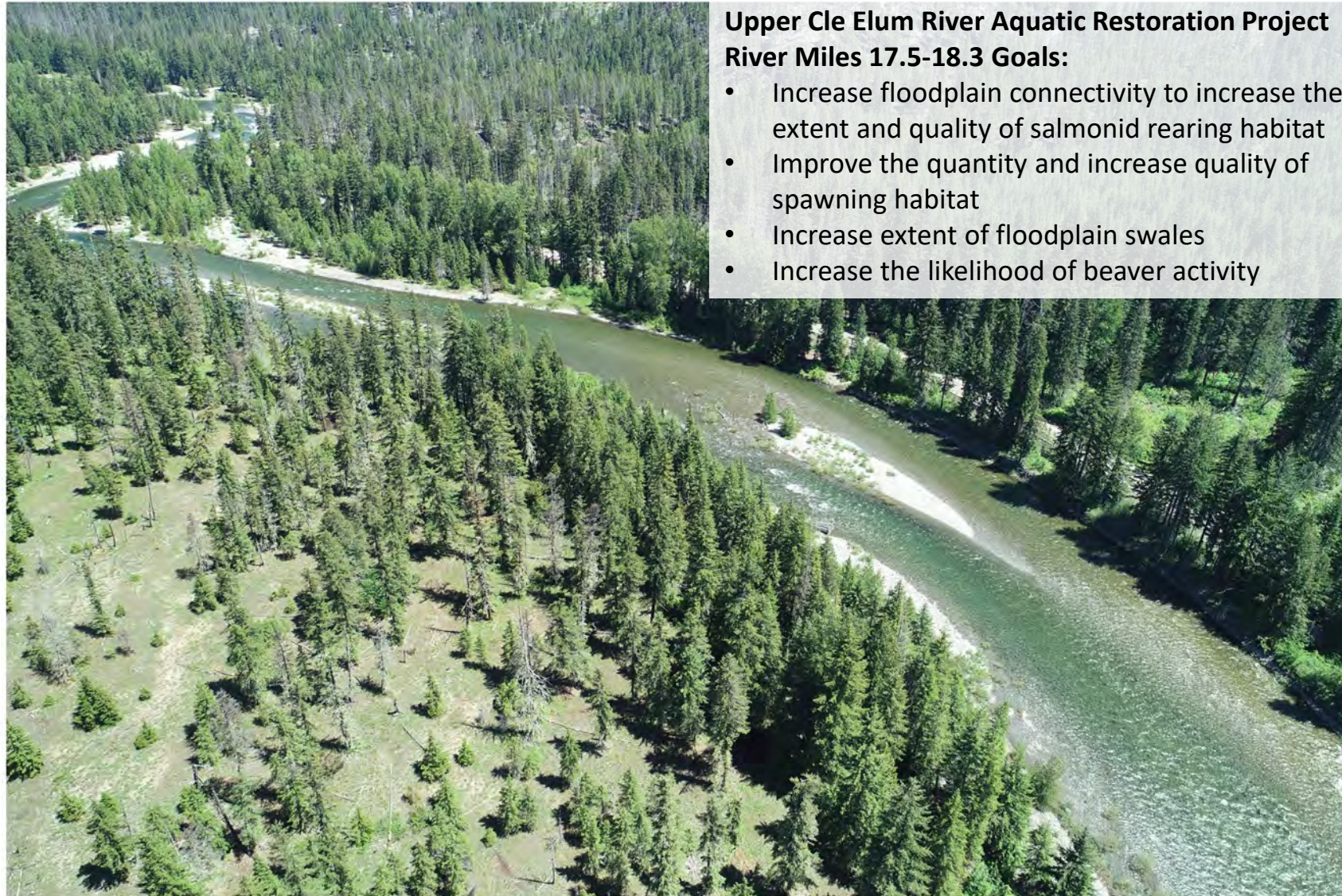
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Upper Cle Elum River Aquatic Restoration



Upper Cle Elum River Aquatic Restoration Project River Miles 17.5-18.3 Goals:

- Increase floodplain connectivity to increase the extent and quality of salmonid rearing habitat
- Improve the quantity and increase quality of spawning habitat
- Increase extent of floodplain swales
- Increase the likelihood of beaver activity

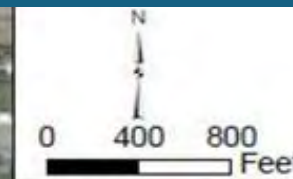
Offsite anchored
log fish habitat
log structure

Bateman Island Update

December 2024 Workgroup

Joe Blodgett, Yakama Nation; Mike Livingston, WA State Department of Fish & Wildlife; Cindy Boen, US Corps of Engineers

Bateman Island



Mid-Columbia Fisheries Enhancement Group
Bateman Island
Causeway Concept Design Project
Figure 1.1
Project Location Map



M:\MCPE\014542 Bateman Island Causeway\03 Survey\GIS\Map and Figure\data\project_area.mxd



Orthophoto Source: Google Earth









MIKE LIVINGSTON

-SOUTH CENTRAL REGIONAL DIRECTOR,
WASHINGTON DEPARTMENT OF FISH & WILDLIFE



DRAFT PLAN WOULD REMOVE BATEMAN ISLAND CAUSEWAY
▶ RICHLAND

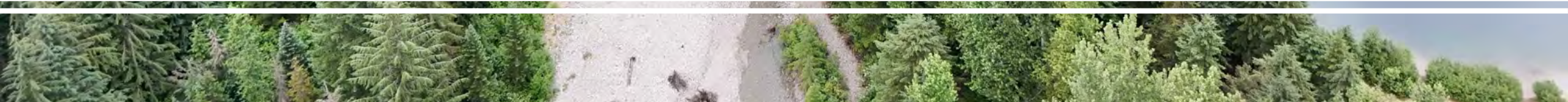
6:14 Tri-Cities 31°
Yakima 29°

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Mission Impossible: Gold Creek Valley Restoration




Gold Creek limiting factors:

- Eroding, over widened
- Single thread channel
- Lack of instream habitat complexity
- Disconnected floodplain
- Channel seasonally dewater



Goals and Restoration Approach

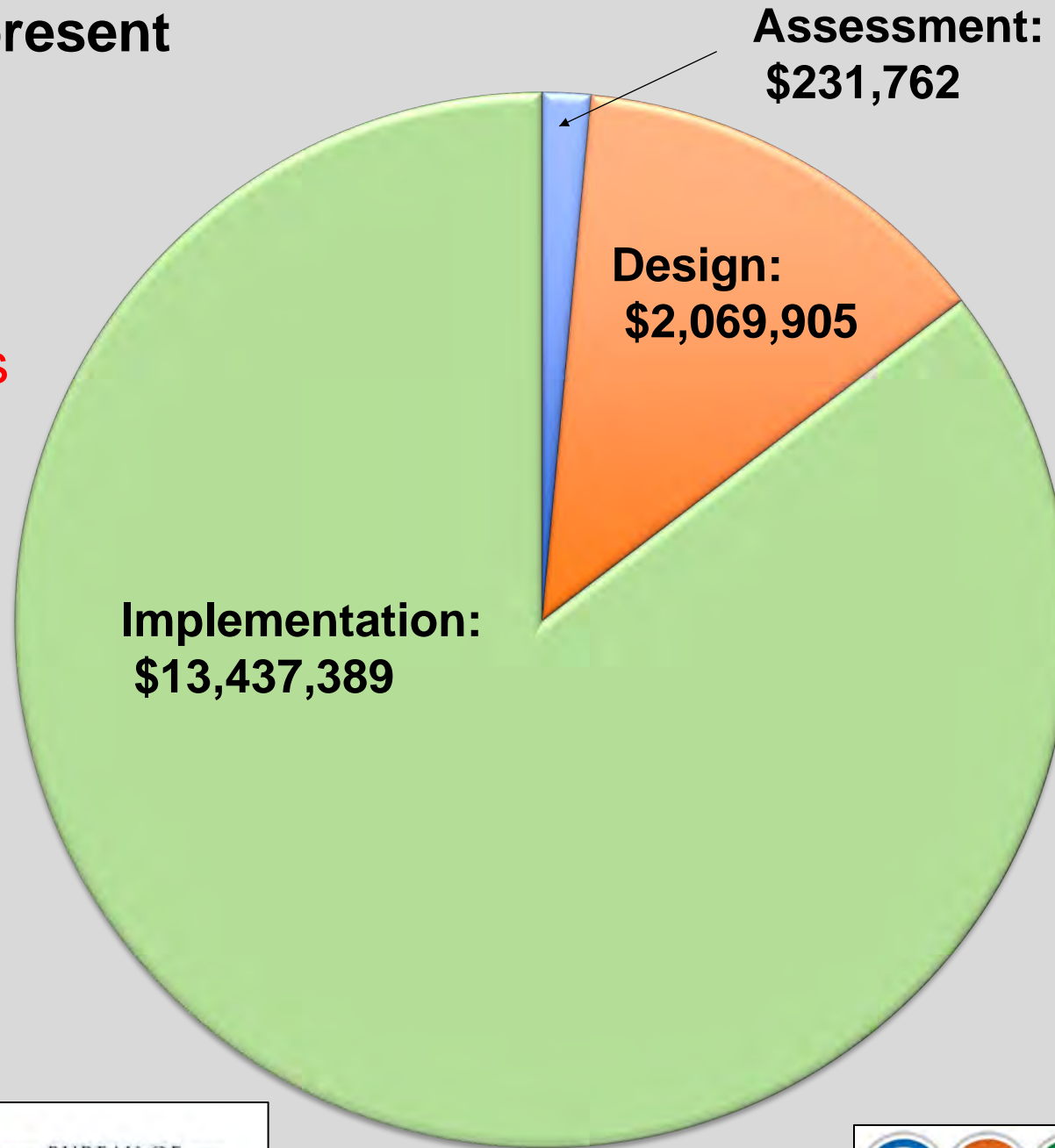
An aerial photograph showing a dense evergreen forest covering a valley. A prominent, light-colored, dry stream bed or gully runs diagonally through the center of the forest. The surrounding terrain is rugged and mountainous.

To reduce the extent and duration
of dewatering & add habitat
complexity

- 1) Add 141 ELJs in 2.5 miles of creek
- 2) Excavate 1.4 miles side channels
- 3) Fill 30 acres of legacy borrow pits
- 4) Remove levees isolating creek
- 5) Planting 118,134 native plants

Investments 2012- present
\$15,739,056

Implementation Costs
~\$38M



Next steps to a healthy watershed....

Timeline	Metric <i>*=funded ~=partial fund</i>
<i>any day now</i>	*NEPA
Winter 2025	*Permits
Spring 2025	*Bid/Contract
Summer 2025	*Site prep/ material stage
Summer 2025	*Pond fish exclusion structure
Summer 2026-27	*Instream restoration
2026-2031	~Pond fill
2030-2031	Recreational amenities

