



West Weaver Creek Salmonid Habitat Rehabilitation Project Summary

November 2017

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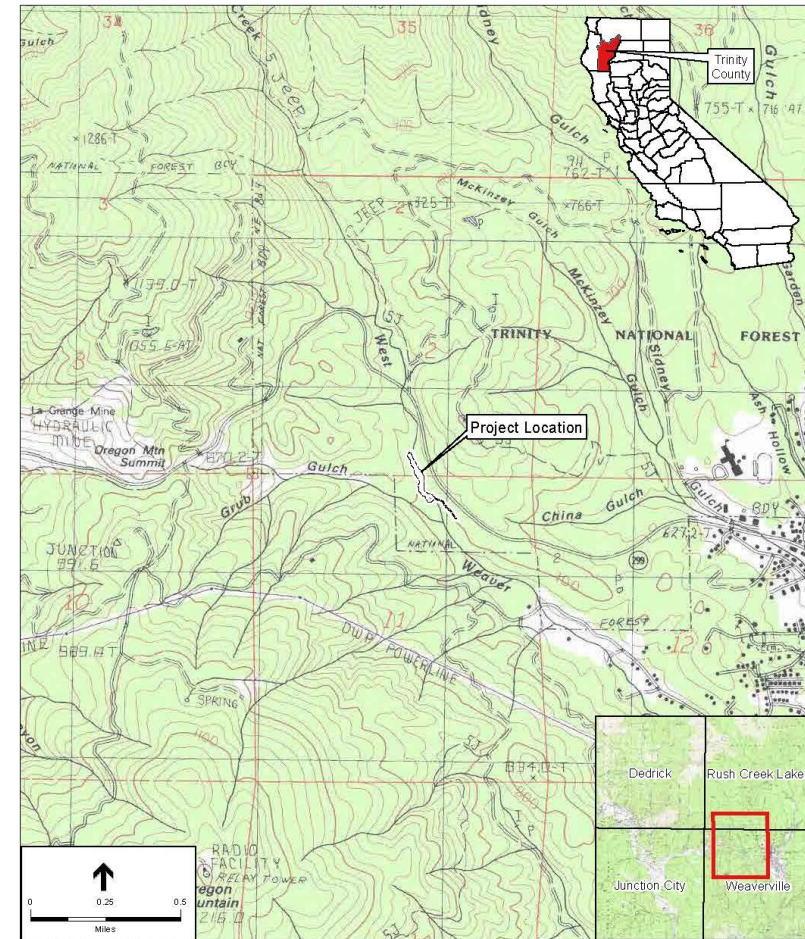
530-623-6004

Project Background

- Concepts began being discussed in 2012-2013
- Funding sought by TCRCD and received from both California Department of Water Resources (Prop 84) and Trinity River Restoration Program in 2014
- Total funding for project to date: \$626,500 (Additional funding for reveg resilience pending at about \$30,000)
- Unique collaboration between private property owners, ESA consultants, TCRCD, state and federal agencies.

Project Location

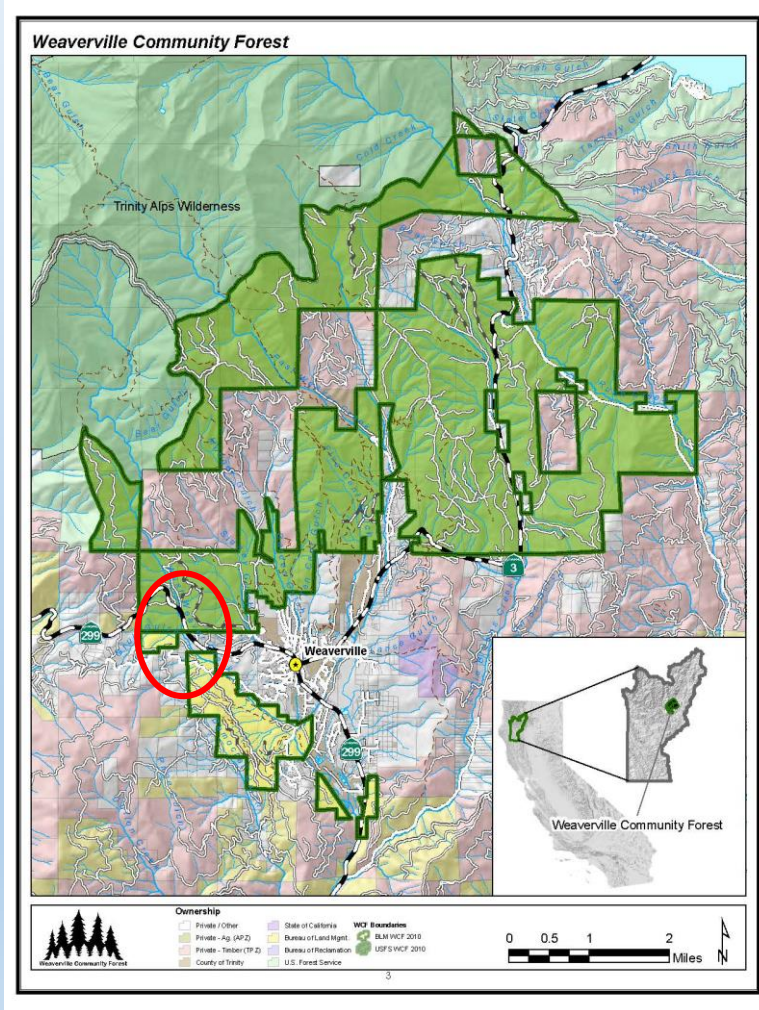
Less than two miles west of Weaverville,
California on State Highway 299



SOURCE: USGS Weaverville, Calif. 7.5-minute topographic quadrangle West Weaver Creek Salmonid Habitat Rehabilitation Project - 211670.01
Figure 1
Project Location

Project Property Ownership

The USFS portion of the project site is part of the Weaverville Community Forest.



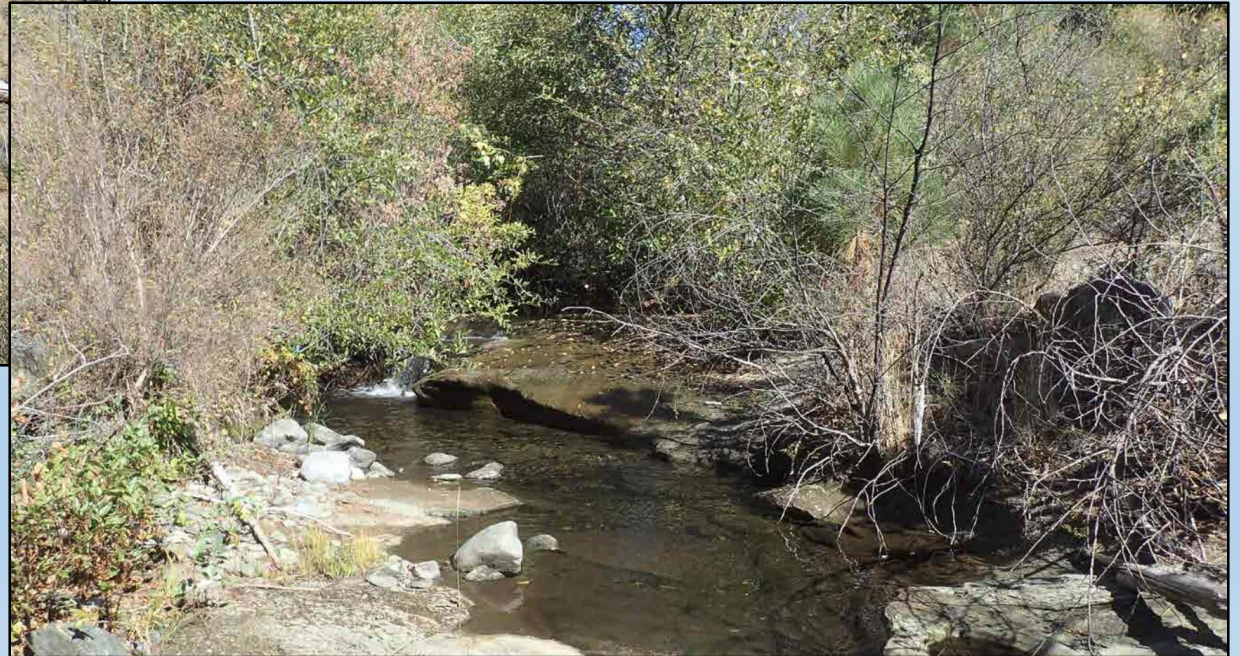
SOURCE: ESA 2015

West Weaverville Creek - 211670
Figure 3
Land Ownership

Prior Site Conditions



- Highly degraded from historical mining – clay pan and bedrock stream conditions

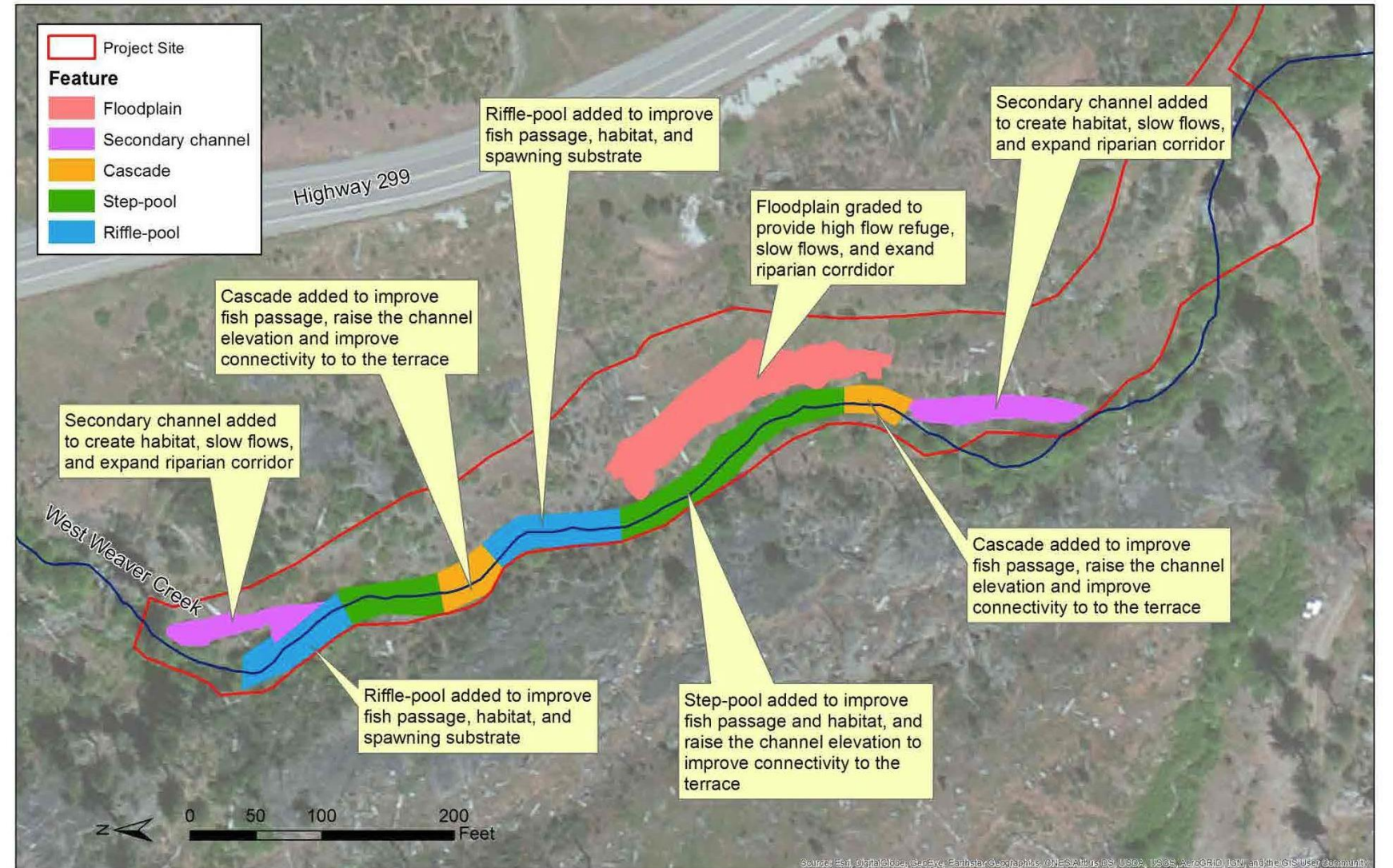


- Highly degraded from wildfire

Project Improvements

- Increase fish habitat: riffle pool, step pool and boulder cascade
- Spawning gravel augmentation
- Large wood structures and willow clumps to create habitat in channel and sediment recruitment on floodplain
- Floodplain grading to raise water surface elevation and improve connectivity

Project Plan Overview



Environmental Permitting

Some unique circumstances

NEPA

- Initial difficulty getting this project on Program of Work
- USFS requested that USACE be designated federal lead on Section 7 consultation for ESA. This allowed the use of the NOAA/NMFS Programmatic Biological Opinion to be used for the project, as the Army Corps provided the “nexus” on the project.
- USACE also was federal lead on Section 106. No tribal input was received on project.
- Decision Memo signed July 18, 2017, as Categorical Exclusion under restoration.

Environmental Permitting

Some unique circumstances

CDFW – 1600 SAA

- Application deemed complete June 8, 2017
- Foothill yellow-legged frog recommended for review under CESA – mid-June 2017. Incidental take permit would have been required adding \$10,000+ permit to project.
- CDFW staff comes to the rescue (for the rescue and relocate.)
- Streambed Alteration Agreement received August 3, 2017



RWQCB – 401 Certification issued May 15, 2017

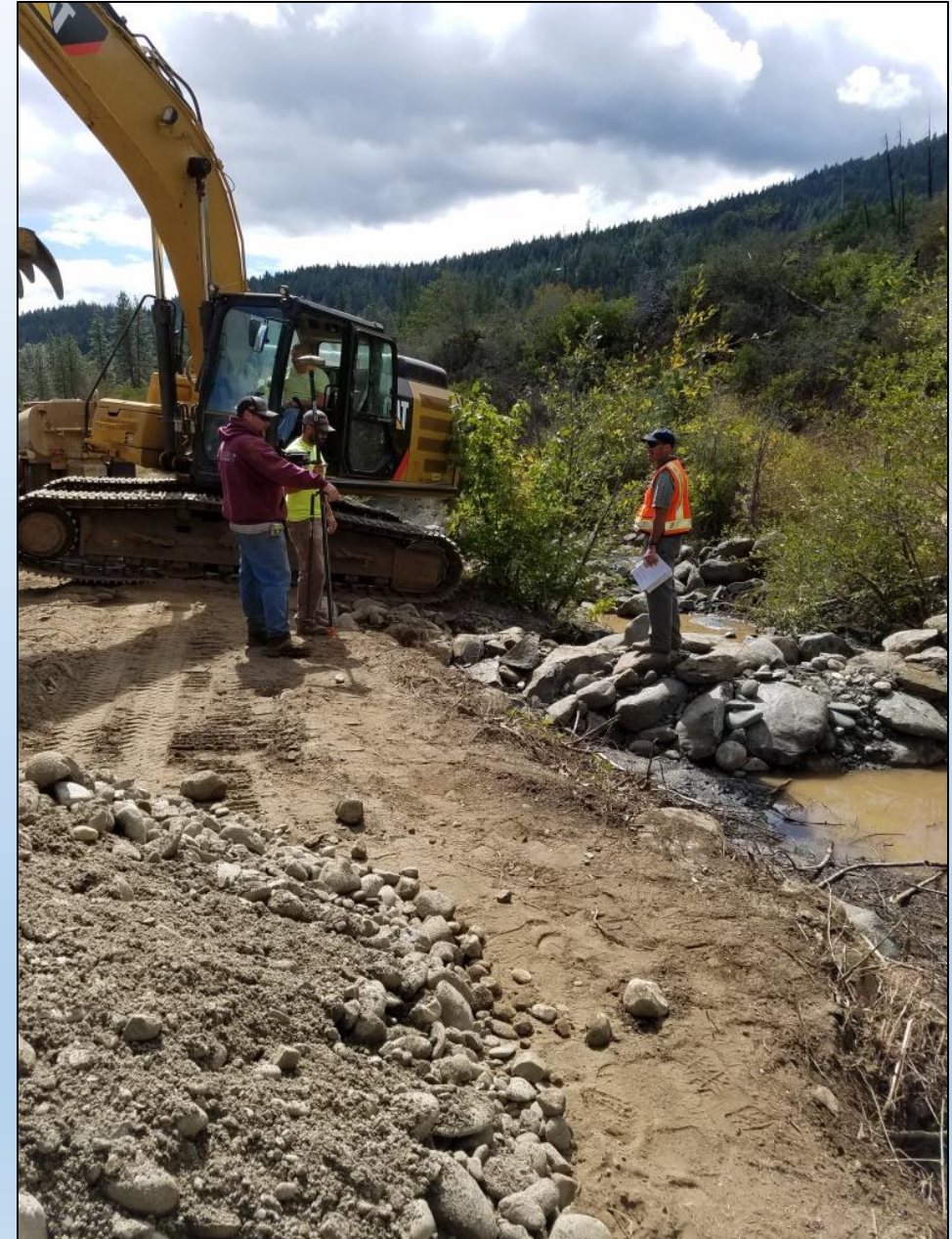
USACE – 404 permit (NWP 27) issued June 15, 2017

CEQA – IS/MND Notice of Determination signed June 23, 2017

Photo: E. Wiseman

Contracting

- Bid Announcement May 10, 2017
- Mandatory Bid walk May 26, 2017
- Bids due June 9, 2017 – three submitted, two were valid.
- Open at TCRCDD Board meeting June 21, 2017 and awarded to lowest bidder- McCullough Construction, Inc.
- Engineer's Estimate = \$301,000
- Winning Bid = \$312,402



Ground breaking August 21, 2017

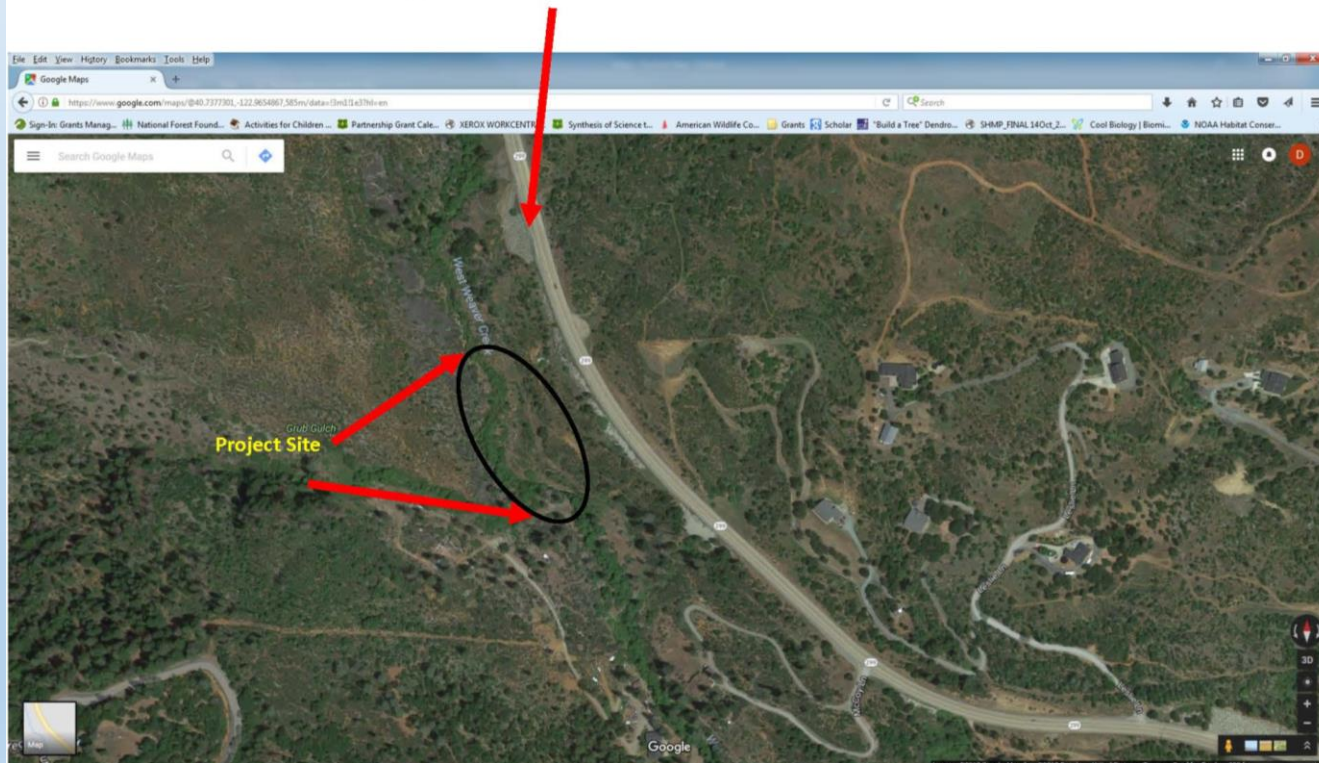


Access Road – McCoy Lane rather than Oregon Street



Temporary Highway Signage

TCRCD West Weaver Project sign location on Highway 299,
approx. 1.75 miles west of Weaverville.



Fish Rescue and Relocation – Yurok Tribal Fisheries Department + CDFW



- High water year meant BIG diversion pipe
- CDFW staff stepped in on the rescue days so we didn't have to get the FYLF take permit – couldn't have done it without them!



Helena Fire started August 30. Smoke from fire (at right) on August 31 – but they all came back to finish the rescue and relocation.





Rescue Results



August 30-31 Rescue Results

	Day 1	Day 2	Totals
Coastal Rainbow Trout (<i>Oncorhynchus mykiss irideus</i>)	446	186	632
Young of the Year (YOY)	315	129	444
1 year old and older (1+)	131	57	188
Pacific Giant Salamander (<i>Dicamptodon tenebrosus</i>)	23	9	32
Pacific Lamprey (<i>Entosphenus tridentatus</i>)	1	0	1
Foothill Yellow Legged Frog (<i>Rana boylei</i>)	12	12	24



Downstream extent – add boulders to streambed



Downstream secondary channel August vs. November



Small
Oak

Big Leaf Maple



Downstream Step pools



April 2017



Step pools looking downstream

November 2017



Downed debris from past fires was set aside during construction and then replaced on the floodplain to create micro-habitats.



Boulder Cascades and Riffles





First post-construction monitoring by USFS fish biologists November 7, 2017

They have been monitoring and tagging fish on the USFS part of this reach for 5 years.

- Typical recapture rate in USFS reach over past 5 years averaged 40%
- November 2017 recapture (including release pool which is outside of study reach because it is on private property) was 24% (15 of the 62 tagged in June)
 - Caught 10 fish total in the restoration reach, 4 of them tagged.
 - The “rescue pool” yielded another 11 tagged fish (with around 100 caught in the rescue pool).



Questions?

