A photograph of a stream flowing through a forest. In the upper middle of the stream, there is a large pile of logs and branches, creating a barrier. The water flows around this barrier, creating white rapids. The stream is bordered by green vegetation and trees. In the bottom right corner, a fish is jumping out of the water, creating a splash.

Aquatic Restoration on the Teanaway Community Forest

Yakima Basin Science and
Management Conference

June 17, 2025



A Tour of the Teanaway

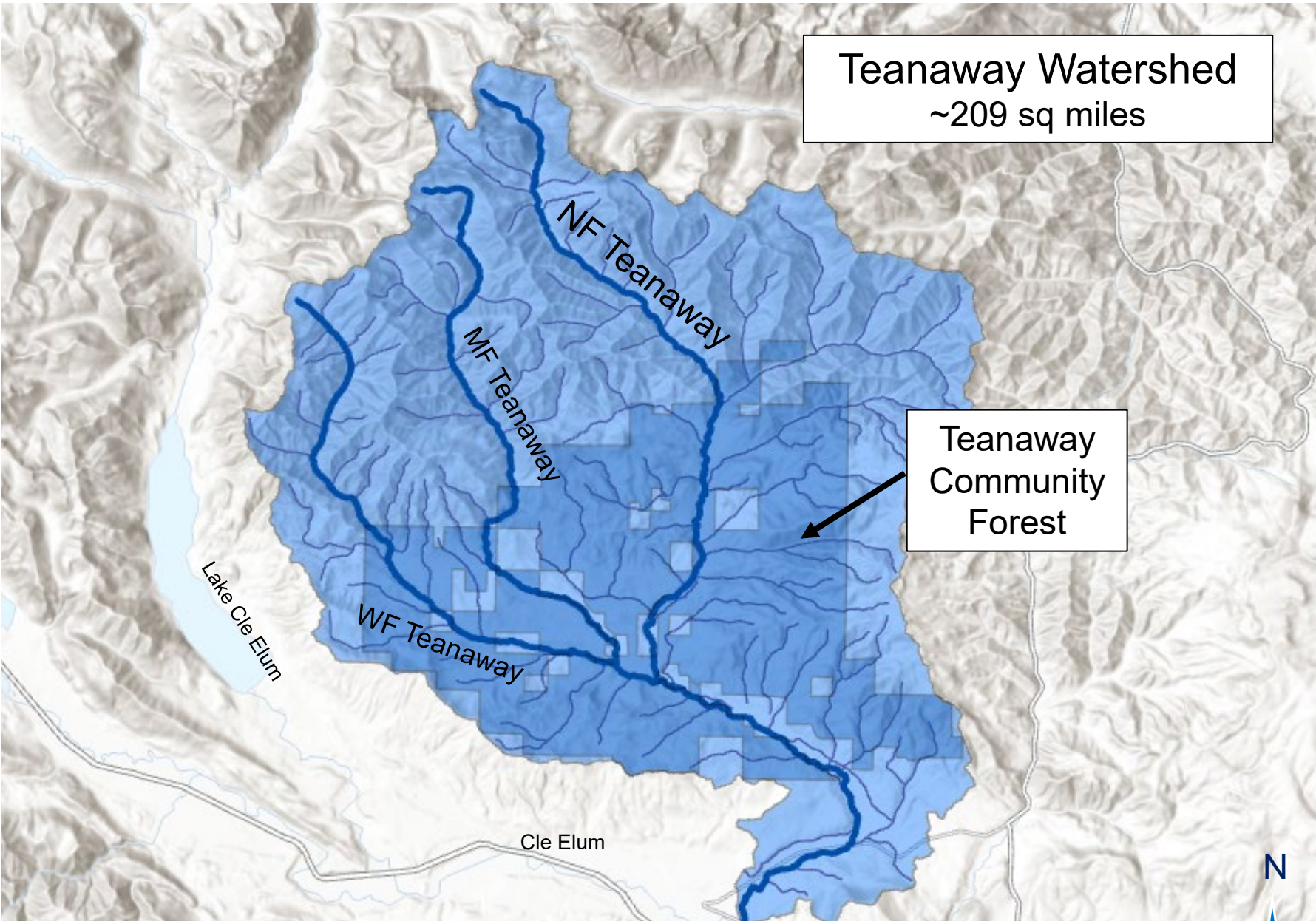
- Teanaway Community Forest and Partnerships
- Why We Care (in the context of science and management)
- Restoration Approach
- Monitoring
- Public Outreach
- Ways to Help

Teanaway Community Forest

- Established in 2013
- Managed by WDNR & WDFW
- Guided by Advisory Committee
- Managed as Community Forest at least until 2035



Teanaway
Community Forest
Management Plan



Teanaway Watershed
~209 sq miles

Teanaway
Community
Forest

Teanaway Forks Restoration Project
Teanaway Watershed

10 miles



Partners (*doesn't capture everyone!)

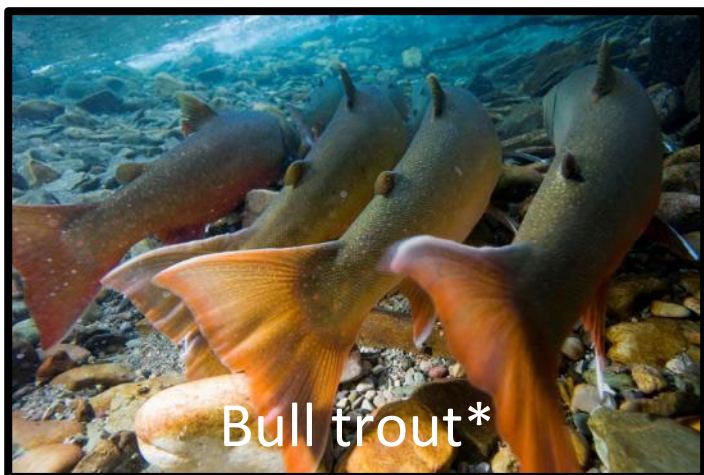
- Yakama Nation
- Mid-Columbia Fisheries
- WA Department of Fish and Wildlife
- WA Department of Natural Resources
- Central Washington University
- Mountains to Sound Greenway
- Steering Committee Members
- Grant Managers!



Steelhead

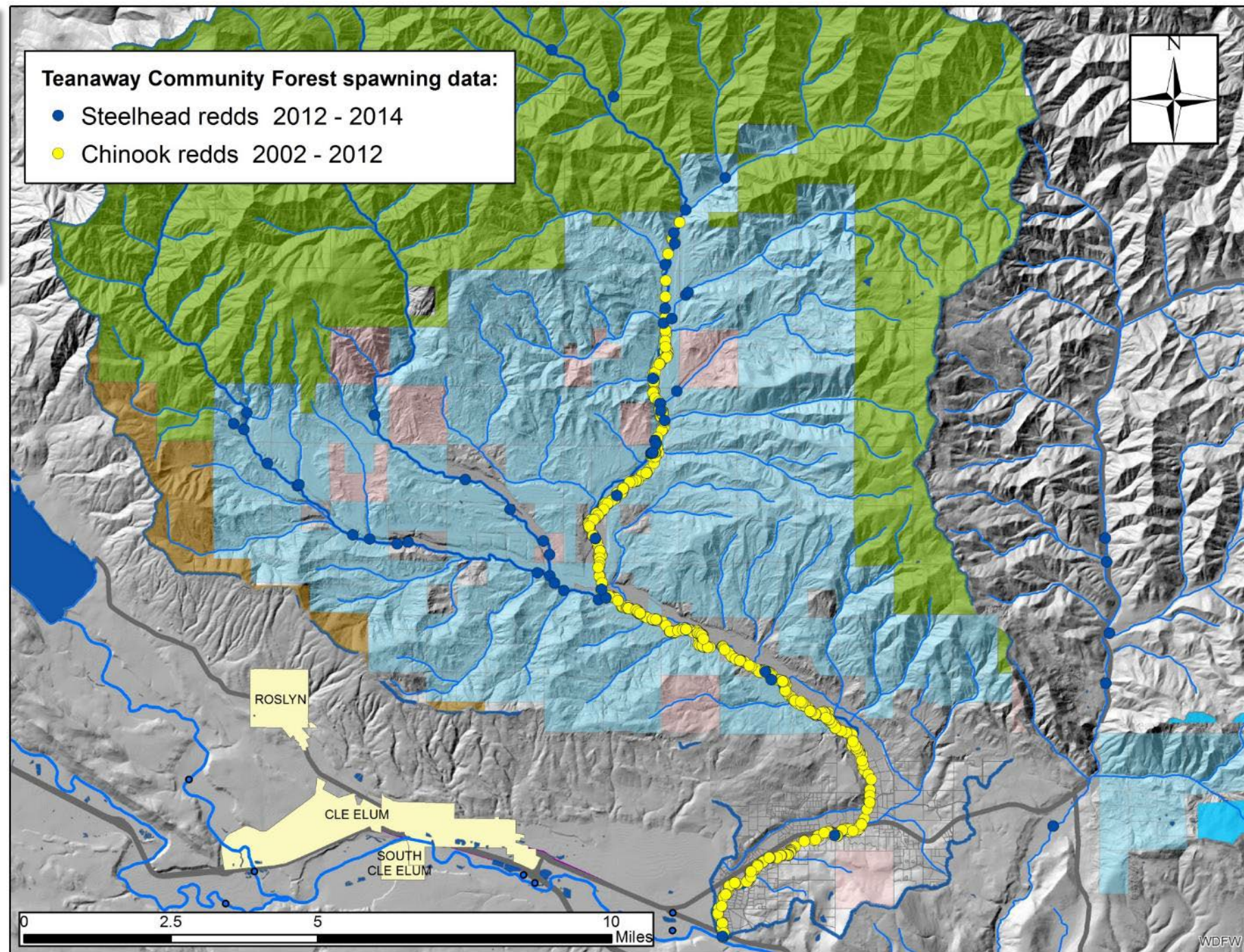


Spring Chinook



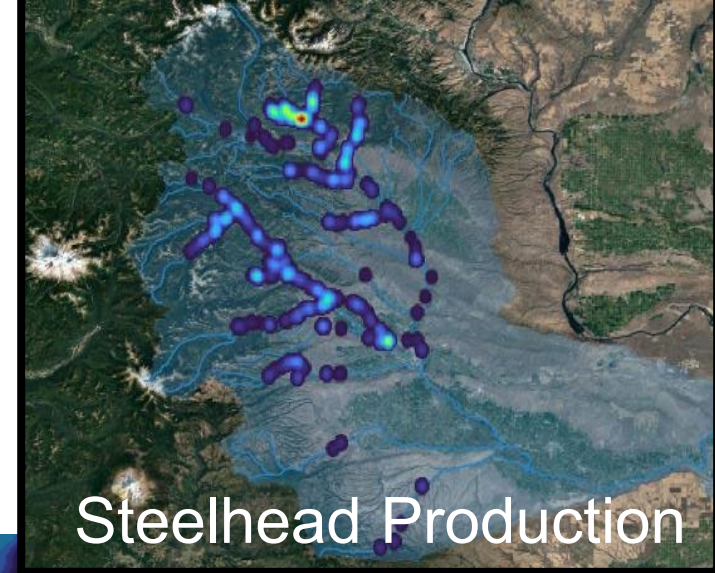
Bull trout*

*extirpated, but may be reintroduced

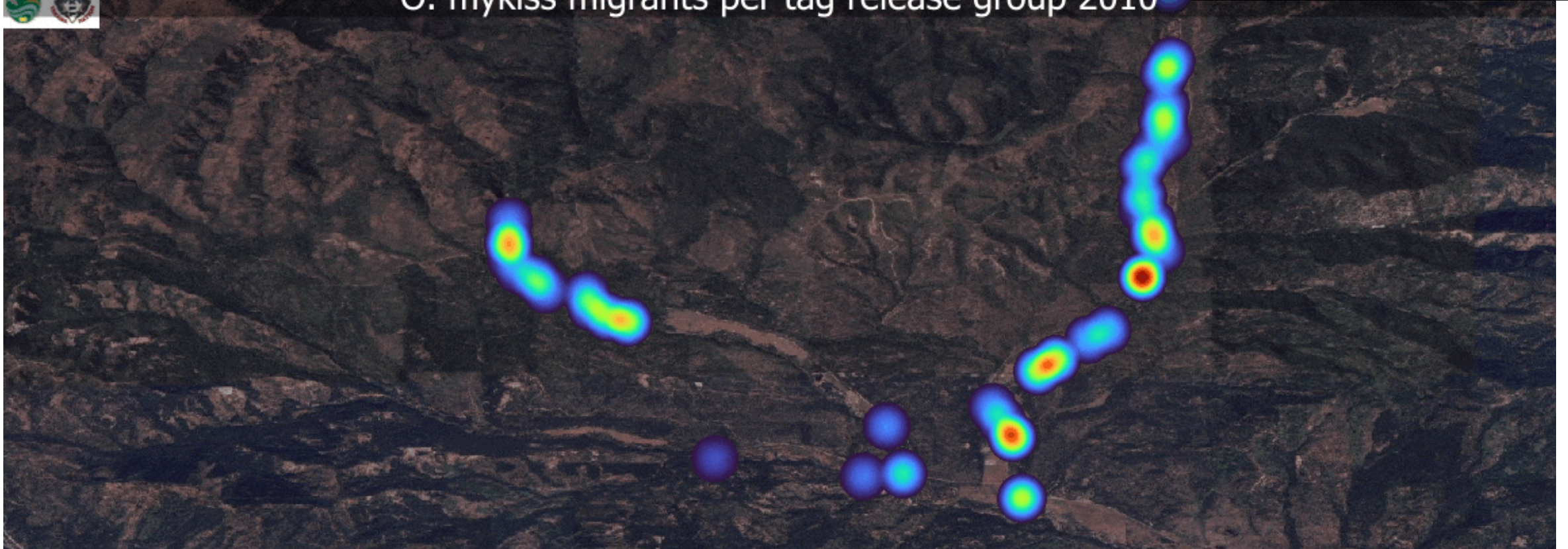


Steelhead hotspot:

on average, 3-4% of tagged *O. mykiss* are steelhead (G. Temple, pers. Comm.)



O. mykiss migrants per tag release group 2010



Restoration Approach

First, conserve the landscape (thanks, Washington State and the Yakima Basin Integrated Plan!).

Then...





Mitigating effects from upland land use

- Road decommissioning and upgrades
- Culvert replacements
- Fencing (physical and virtual) to reduce impacts on riparian
- Forest health treatments



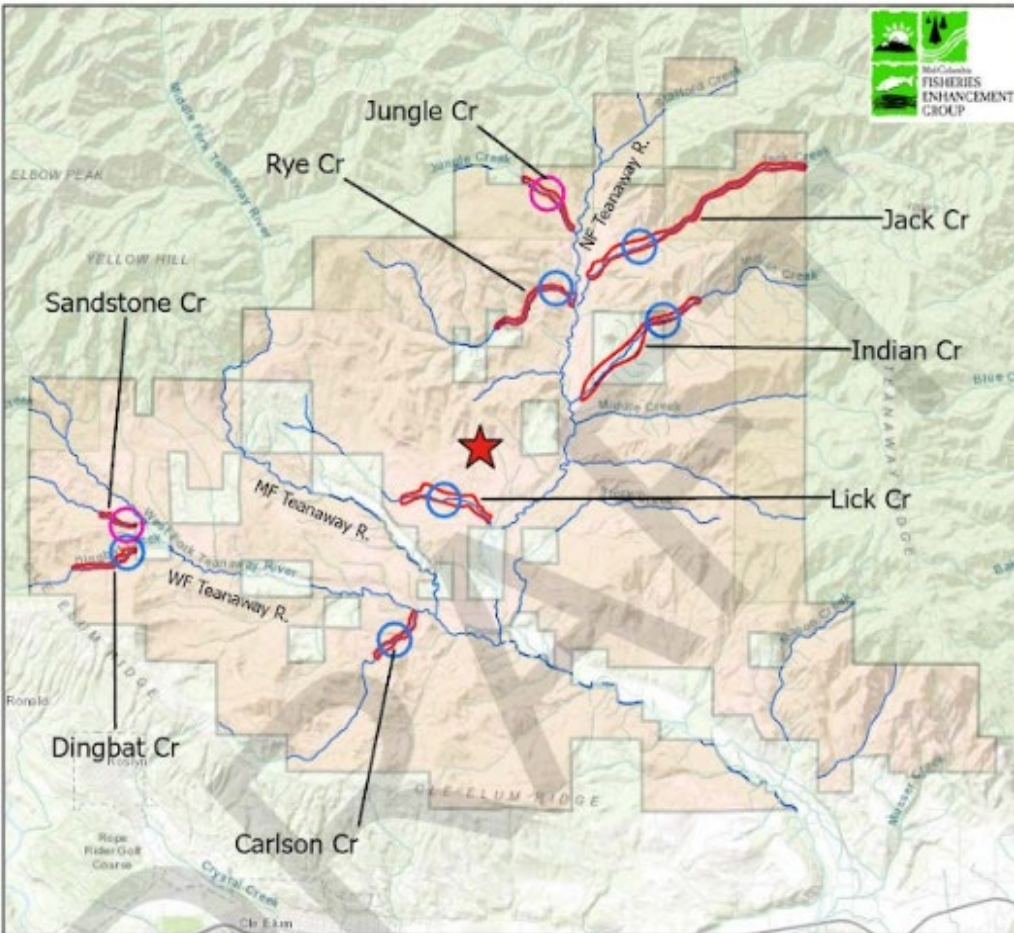
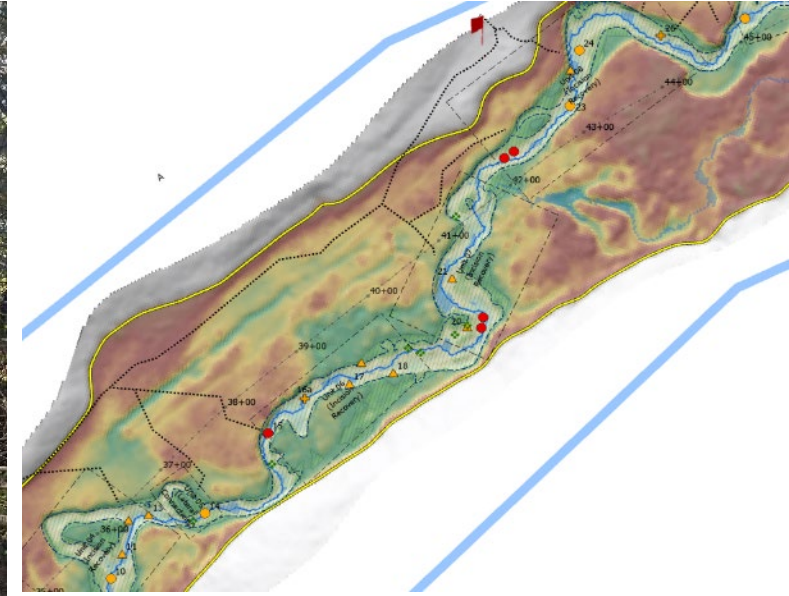
Tributary restoration: fighting hysteresis

Prior large wood projects are serving their purpose, but not reversing incision. Restoring a stream requires more effort than what caused the damage in the first place.



Beaver restoration principles

Restoration, Coexistence, Education,
Translocation





North Fork Teanaway Watershed Stewards

Restoration in the Forks

- 4 miles North Fork Teanaway
 - 2019 – 2021
 - 2024
- 2 miles West Fork Teanaway
 - 2026
- 2 miles Middle Fork Teanaway
 - 2027
- Future work to be determined





North Fork Teanaway, 2019 - 2021

- 4 miles of large wood replenishment
- 10 engineered wood structures
- 25 splitter/deflector structures
- 2000 logs placed
- 2 berms breached



Adaptive Management: 2024 work (coming attraction)

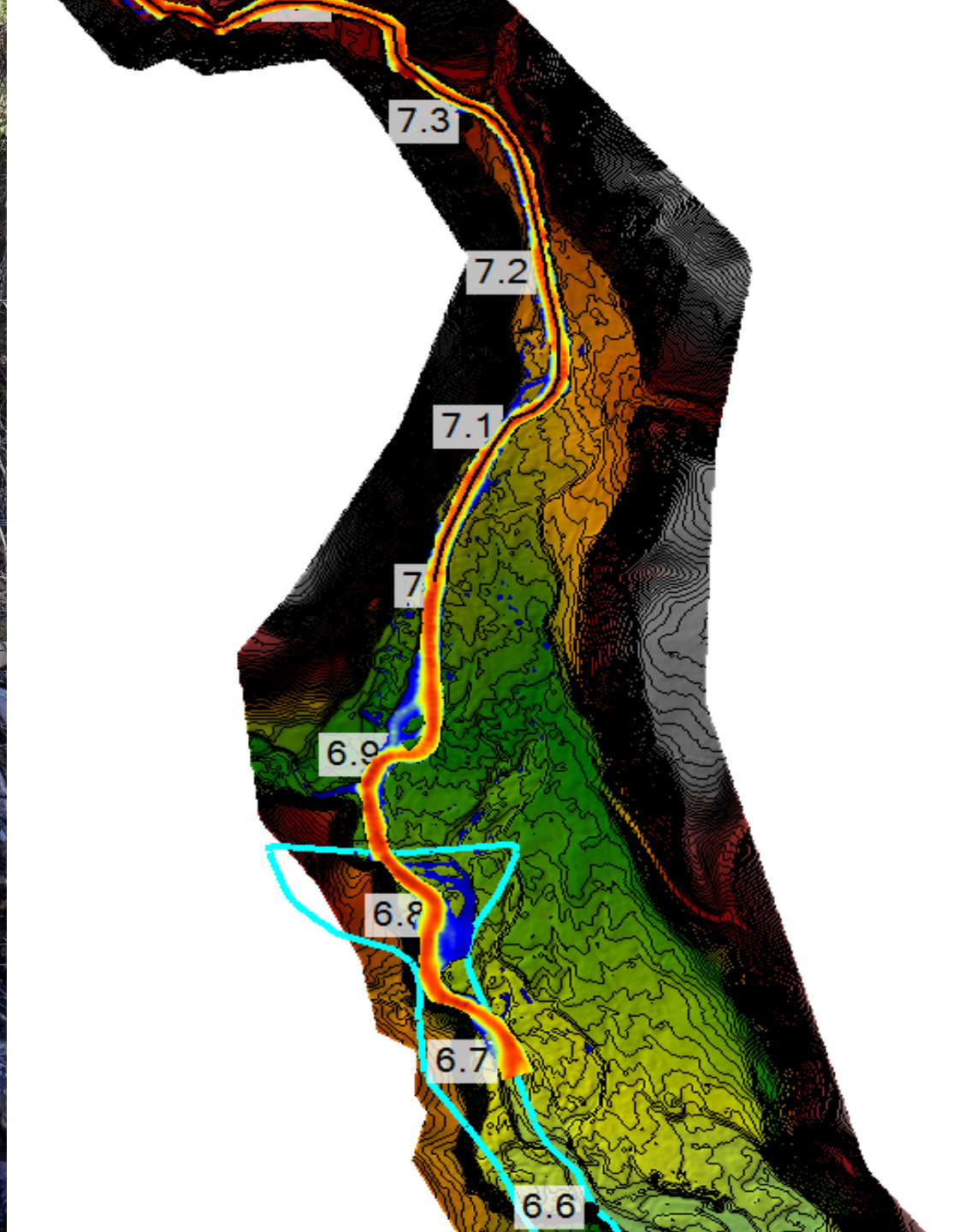


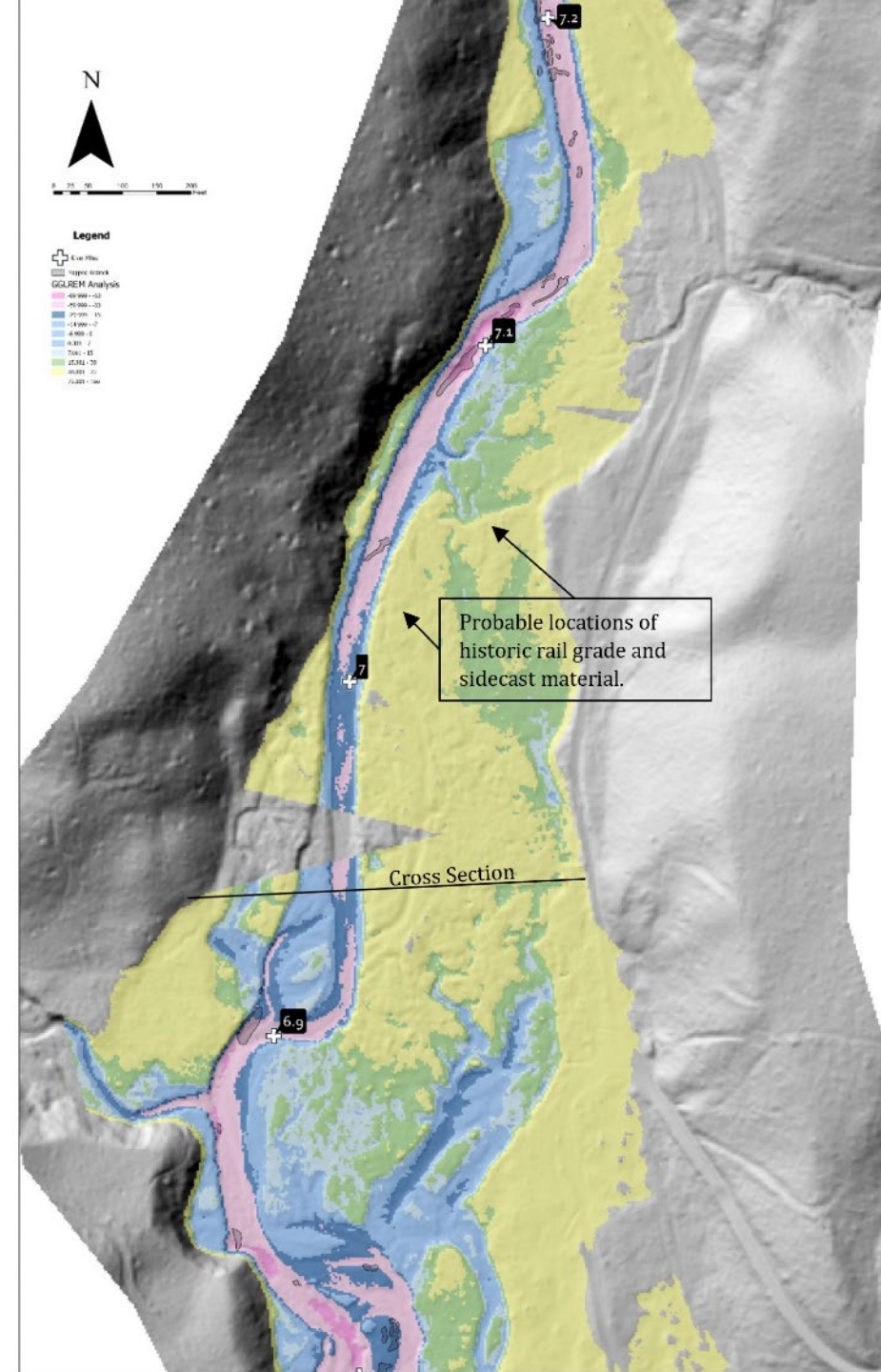
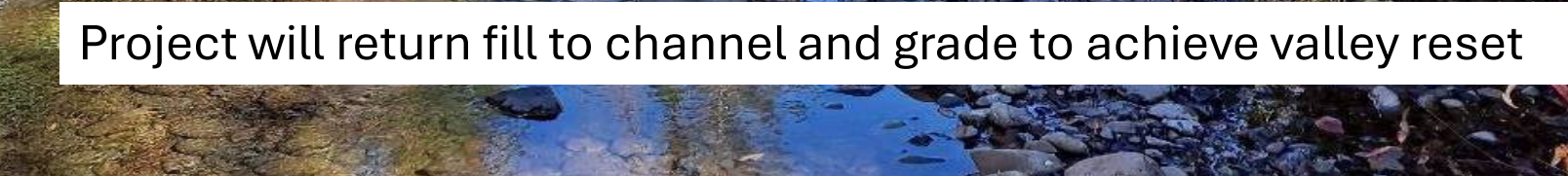
2021



2023

West Fork RM 6.85 – 7.2





West Fork RM 5.1 – 6.85

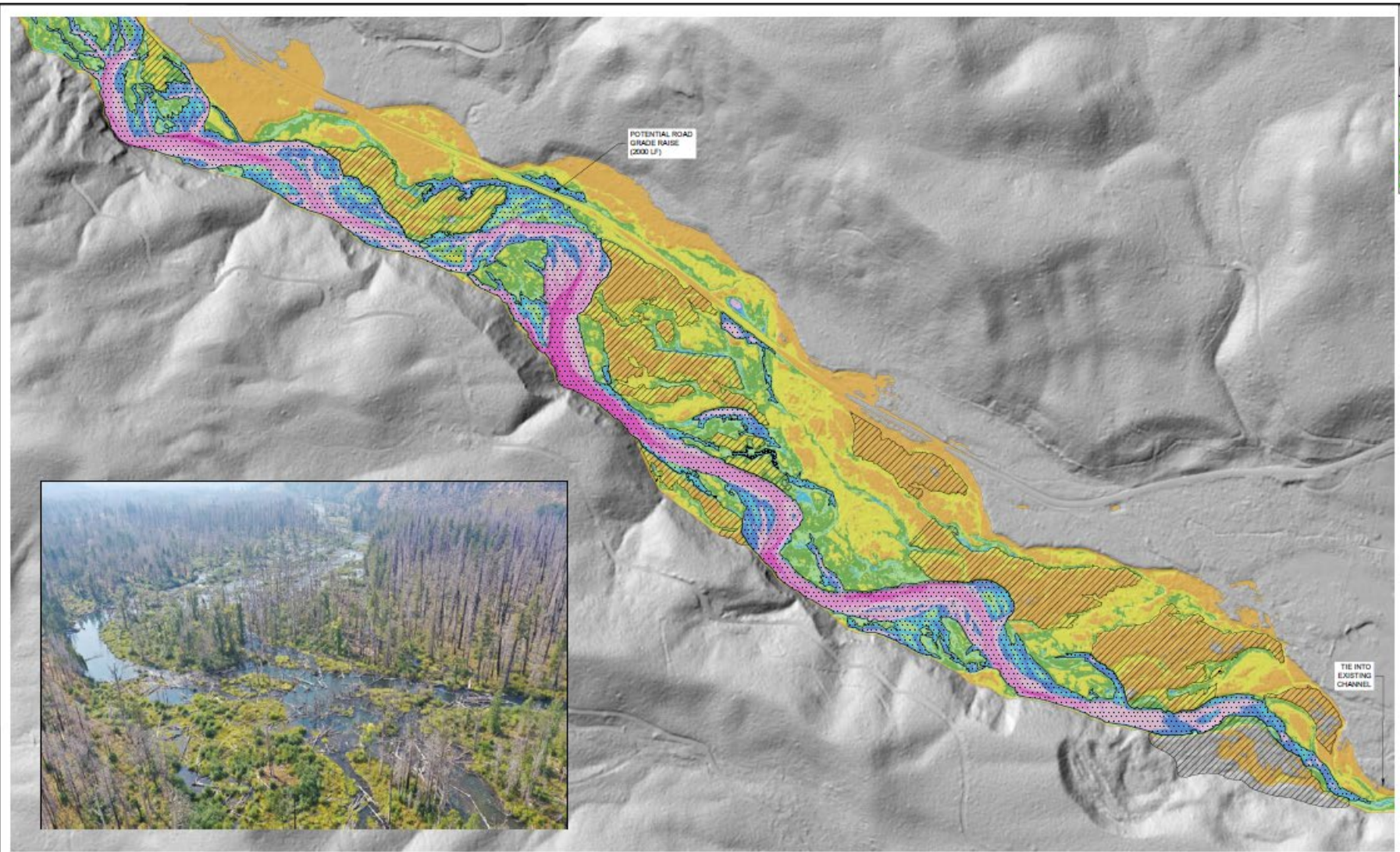


Middle Fork RM 3.2 – 5.4



*Middle Fork Teanaway near
River Mile 4.3, August 2012*












Middle Fork Teanaway near River Mile 4.3, August 2012



LEGEND

-  CUT ZONE / WOOD PLACEMENT
-  FILL ZONE / WOOD PLACEMENT

Elevation Relative to Target Surface
(meters, target = 0)

-  < -2
-  -2 - -1.5
-  -1.5 - -1
-  -0.5 - -0.2
-  -0.2 - 0
-  0 - 0.2
-  0.2 - 0.5
-  0.5 - 1
-  1 - 2



PRELIMINARY
NOT FOR
CONSTRUCTION

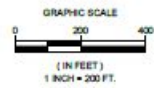
REV	DATE	DESCRIPTION	BY

MIDDLE FORK TEANAWAY
RESTORATION
RIVER MILE 3.2-5.4
KITITITAS COUNTY, WASHINGTON

DESIGNED: ---
DRAWN: ---
CHECKED: ---
DATE: 4/11/08
SCALE: ---
PROJ #: ---
APPROVED: ---

PROPOSED
CONDITIONS
(DOWNSTREAM)

SHEET:
C3



DRAWING IS REDUCED TO 50%
OF FULL SCALE

0 1" BAR IS 1 INCH ON ORIGINAL DRAWING.
IF NOT 1 INCH ON THIS SHEET,
ADJUST SCALES ACCORDINGLY.

Looking upstream and downstream...

- NOAA funding requested for design of additional West and Middle Fork reaches, and for the confluence area
- North Fork Teanaway adaptive management may be needed



So how will we know if it works?

- Groundwater & flow
- Temperature
- Topography
- Riparian condition
- In-stream habitat



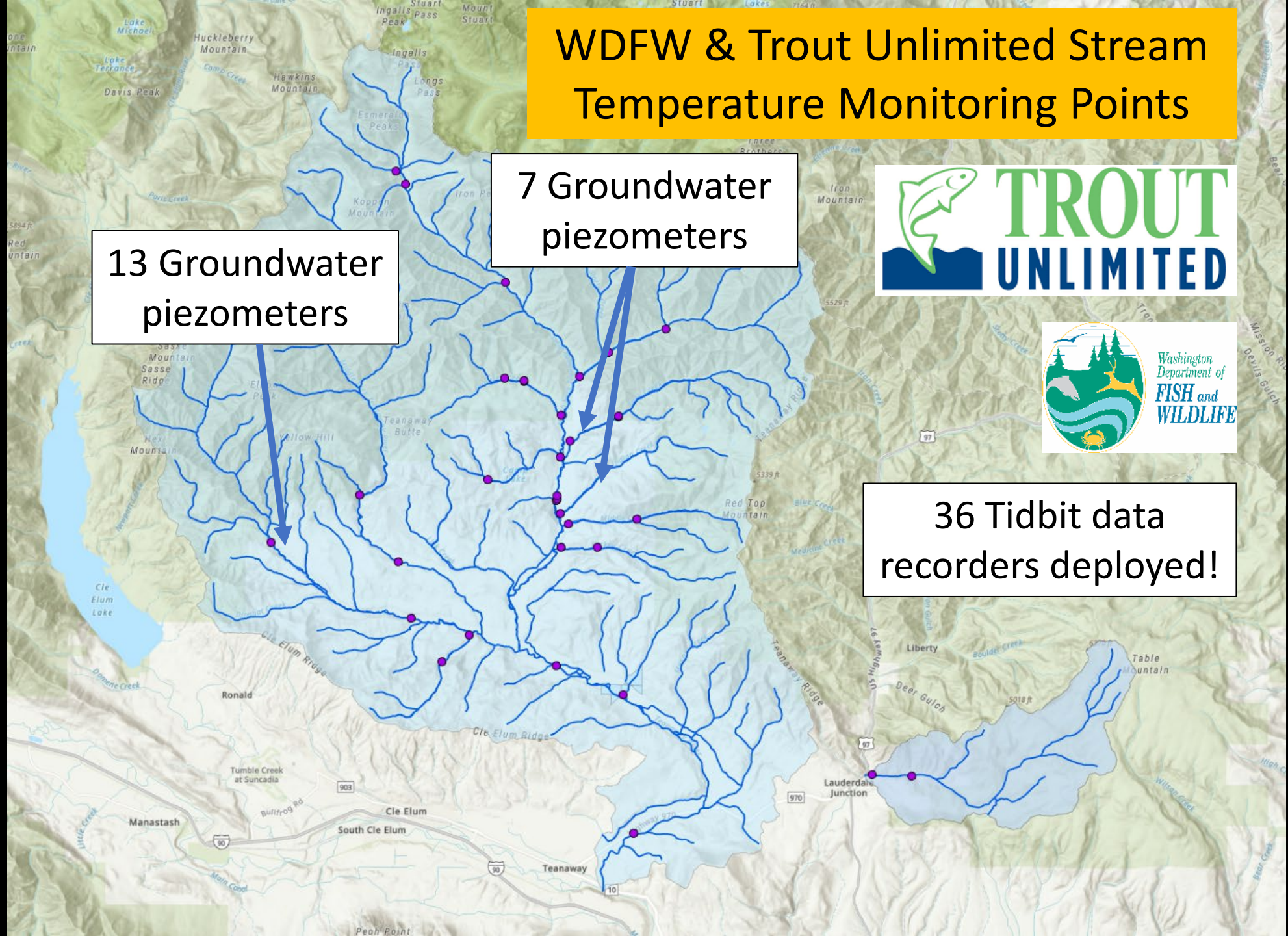
WDFW & Trout Unlimited Stream Temperature Monitoring Points

13 Groundwater piezometers

7 Groundwater piezometers



36 Tidbit data recorders deployed!



And how are we getting the word out?



AQUATIC RESTORATION IN THE TEANAWAY RIVER FORKS

HOW PARTNERS ARE WORKING TOGETHER TO RESTORE FISH HABITAT IN THE NORTH, MIDDLE AND WEST FORK TEANAWAY RIVERS

WHO'S INVOLVED?

Yakama Nation Fisheries, Mid-Columbia Fisheries Enhancement Group, WA Department of Fish and Wildlife and WA Department of Natural Resources, with guidance from the Teanaway Community Forest Advisory Council, are working to improve habitat in the rivers.

Simplified bedrock channels can't support fish

COMPLEX HABITAT BENEFITS FISH, WILDLIFE, AND PEOPLE!

Wood added to the North Fork Teanaway has increased habitat complexity

WHY DOES WOOD MATTER?

Past land management has reduced the amount of wood in rivers. Rivers need wood to maintain and restore natural processes. In-stream wood builds spawning habitat, scours deep pools, increases food availability for fish, and reconnects floodplains.

CHINOOK, COHO, STEELHEAD, AND RESIDENT TROUT ALL CALL THE TEANAWAY FORKS HOME

INCREASED COMPLEXITY IN THE RIVERS:

1. Improves salmon and steelhead growth and survival
2. Allows floodwaters to spread across the floodplain, decreasing downstream damage
3. Holds water on the landscape and makes it available for the forest

And finally, how can you help?

- Monitor more things – there are so many questions to be asked!
- Donate large wood to the project. Please.
- Help WDFW and Trout Unlimited with temperature monitoring.
- Help the TCF Goal 5 committee with TCF stewardship and public outreach.
- Help rescue fish and plant trees during project implementation.





Thank you to:

Agency partners: WDFW, WDNR
Archaeological Services, LLC
Bonneville Power Administration
GG Environmental, LLC
Gibson and Son
Interfluve
Mountains to Sound Greenway
National Fish and Wildlife Foundation
Natural Systems Design
NOAA Fisheries
ReClaim
RivHab/Revive
Salmon Recovery Funding Board
Teanaway Community Forest Advisory Committee
Teanaway Forks Restoration Steering Committee
Thayer Excavating
Trout Unlimited
USDA Forest Service Enterprise Team
Washington Department of Ecology
Water Pushing Dirt
Waterfall Engineering
Yakima Basin Integrated Plan

