

# Teanaway Community Forest Aquatic Restoration

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The background image shows a wide river with a large log jam in the middle. The riverbank is covered with evergreen trees, and the sky is overcast with some clouds. The foreground shows a rocky riverbank with some snow patches.



## North Fork Teanaway, 2019 - 2021

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





## Large wood trapping structures

- Designed to catch mobile wood and build jams
- Mimic the role of old growth trees in the river system

Before



After

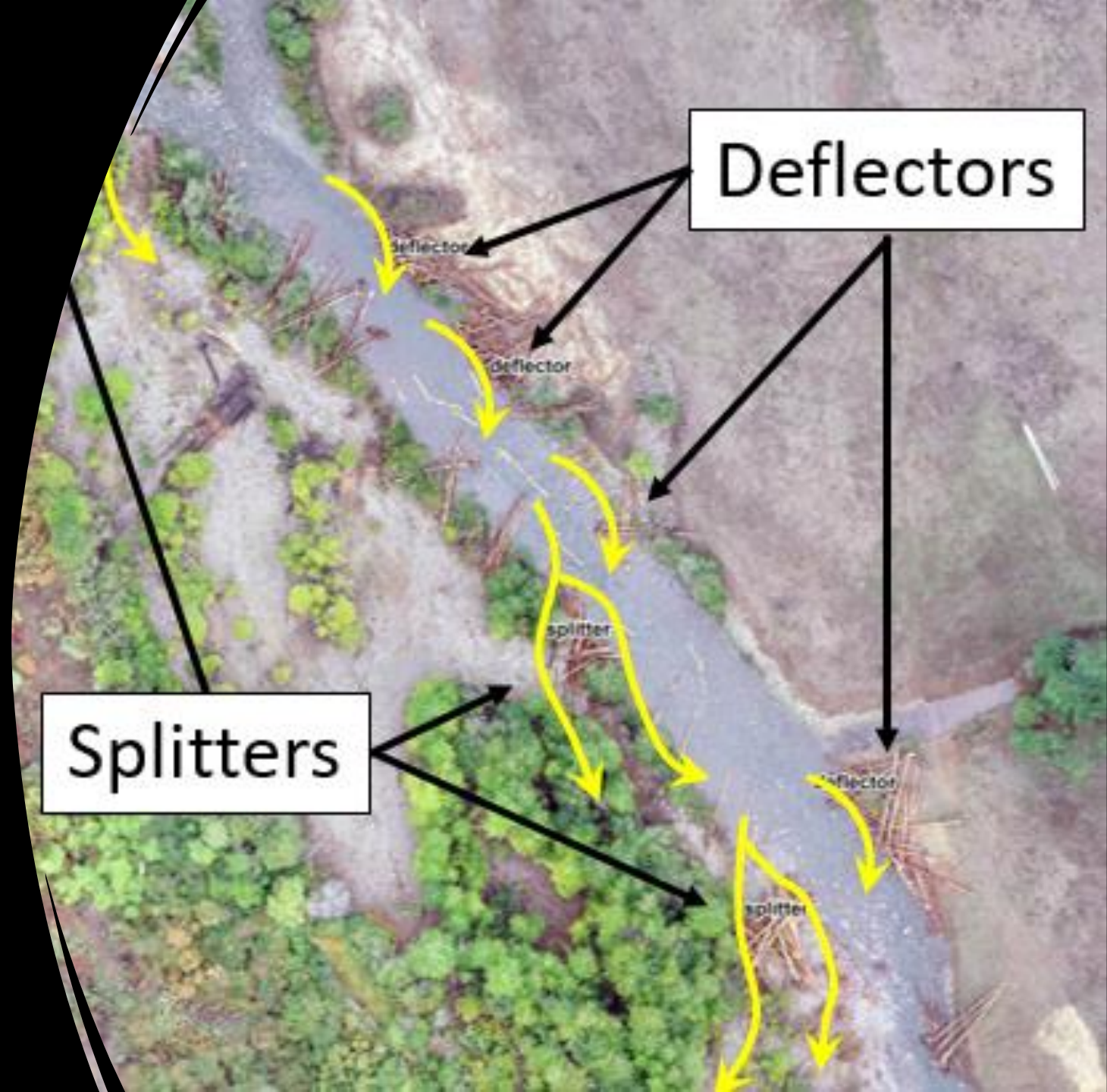


# Wood at work

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Splitting and deflecting flow:

- Creates areas of variable velocity and scour for habitat
- Allows for deposition of gravels
- Connects off-channel habitat







# Large wood replenishment





**Pre-Restoration**

50

Meters



**1 yr Post-Restoration**

Bed Surface Fining





# Floodplain reconnection

Breached berms and built wood structures to activate side channels



2021 wood structure  
and berm breach  
(circled)



2021 wood structure  
and berm breach  
(circled)



Wood structure directing  
flow into berm breach  
area, Nov. 13, 2021

April 2022

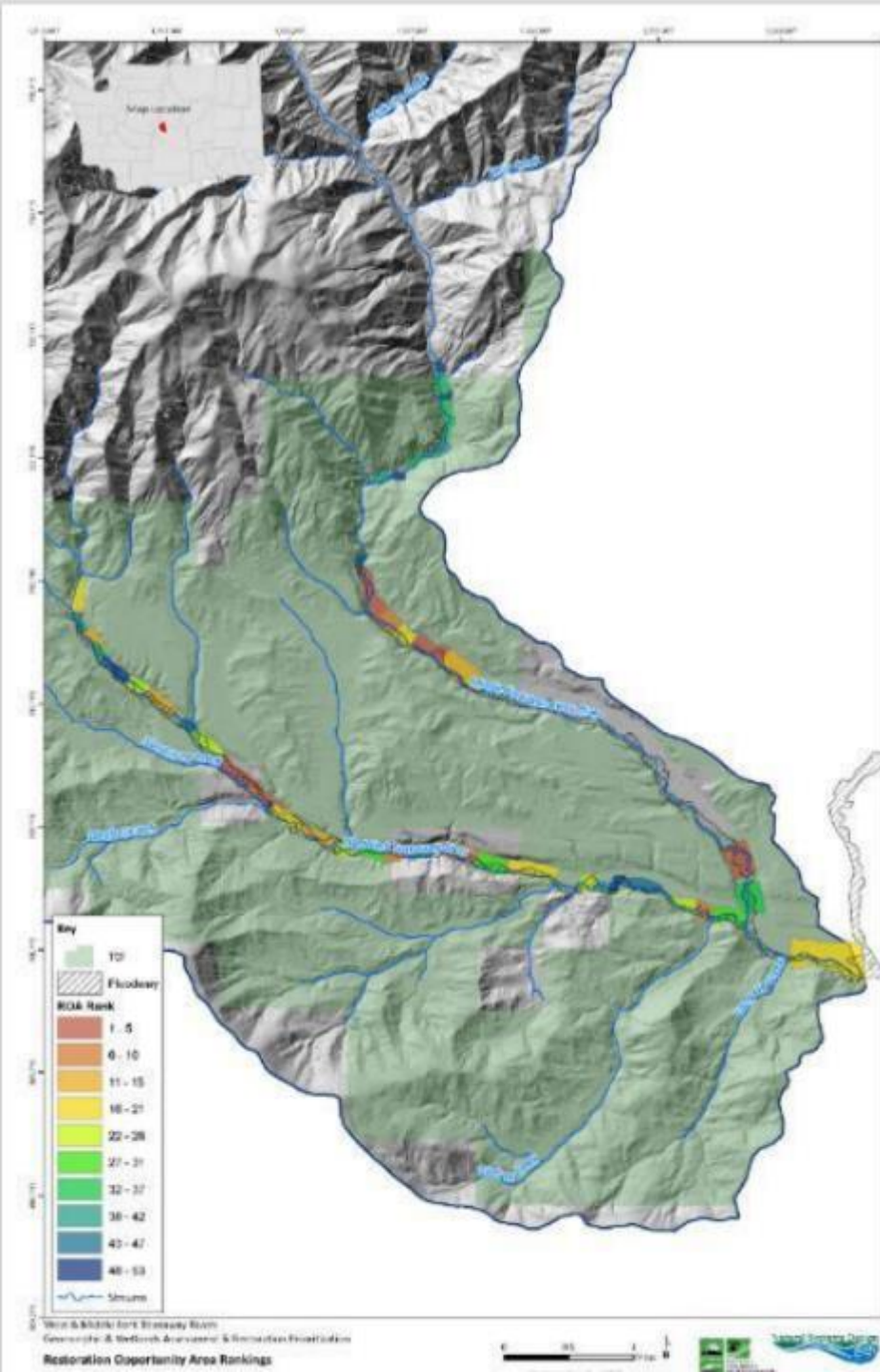


May 2023



# Looking forward: Middle and West Forks

Geomorphic assessment identified channel  
incision as primary constraint on function



# Project Objectives

Length	Increase perennial channel length (through process)
Substrate	Retain gravels
Cover	Provide overhead cover
Hydrograph	Slow surface runoff
Hyporheic	Increase hyporheic exchange
Riparian	Improve riparian health
Floodplain	Increase frequency & extent of floodplain activation
Beaver	Encourage beaver
Cost	Contain project costs



# Overall restoration potential

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222 floodplain acres reconnected at 2-yr flow (163% increase)

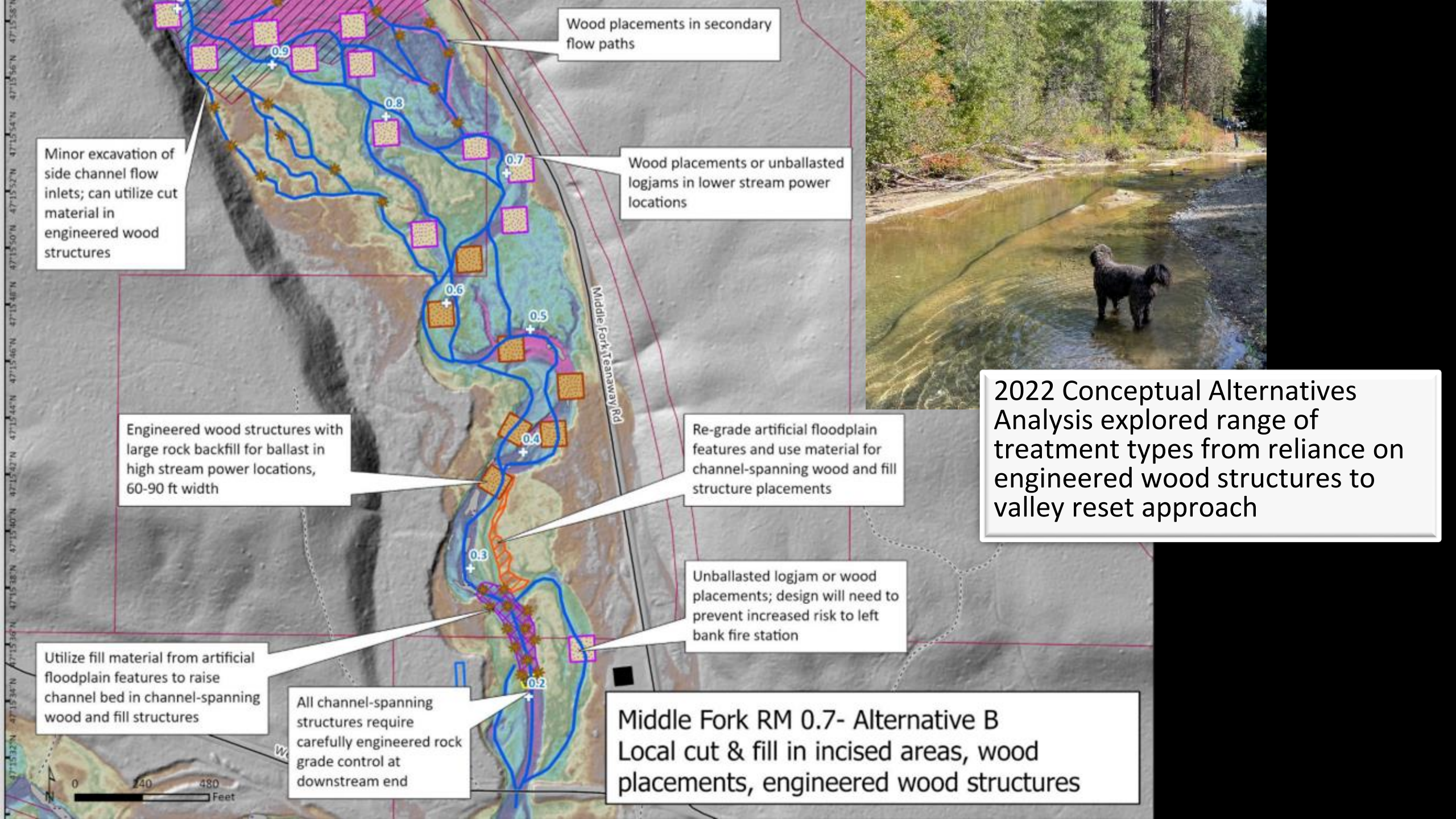
Increase in channel length from 23 miles to 41 miles (77% increase)

Estimated 505 acre-feet of alluvial water storage

517 – 3856 acre-feet of new surface water storage

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Minor excavation of side channel flow inlets; can utilize cut material in engineered wood structures

Wood placements in secondary flow paths

Wood placements or unballasted logjams in lower stream power locations

Engineered wood structures with large rock backfill for ballast in high stream power locations, 60-90 ft width

Re-grade artificial floodplain features and use material for channel-spanning wood and fill structure placements

Unballasted logjam or wood placements; design will need to prevent increased risk to left bank fire station

Utilize fill material from artificial floodplain features to raise channel bed in channel-spanning wood and fill structures

All channel-spanning structures require carefully engineered rock grade control at downstream end

Middle Fork RM 0.7- Alternative B  
Local cut & fill in incised areas, wood placements, engineered wood structures



2022 Conceptual Alternatives Analysis explored range of treatment types from reliance on engineered wood structures to valley reset approach

# Next steps

- Steering committee meeting June 16 to select first phase reach or reaches
- Contracting for design and permitting support for first reach
- Grant proposals



# Teanaway Community Forest Updates

- Grazing
- Roads & Fine Sediment
- Fish Habitat Opened
- Temperature Monitoring

Right side  
for Cows....

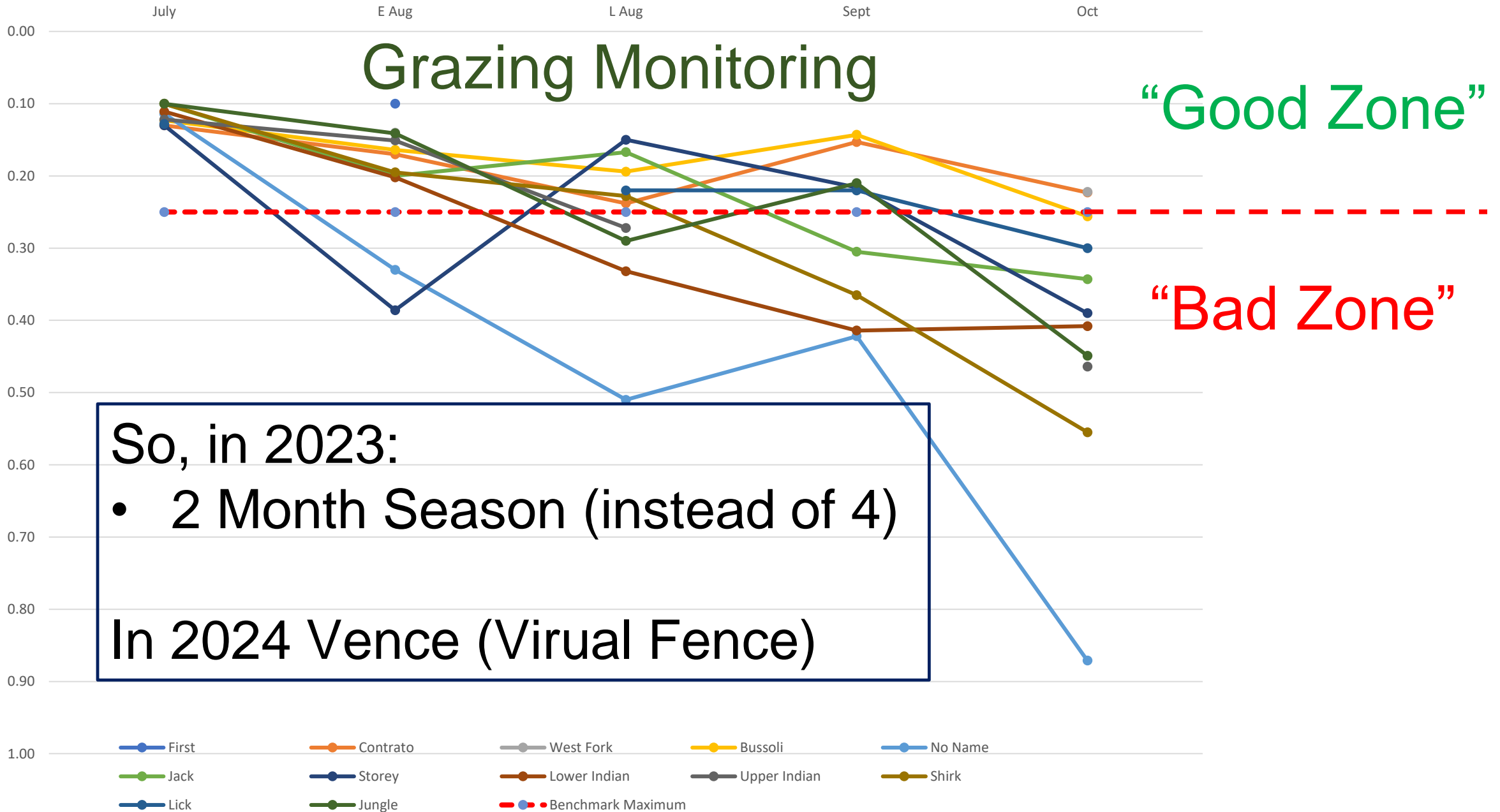
Wrong side  
for Cows....

2021



# 2021 Woody Species Use (%)

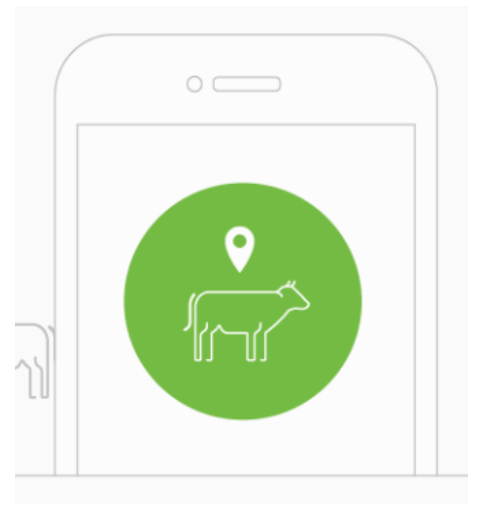
## Grazing Monitoring



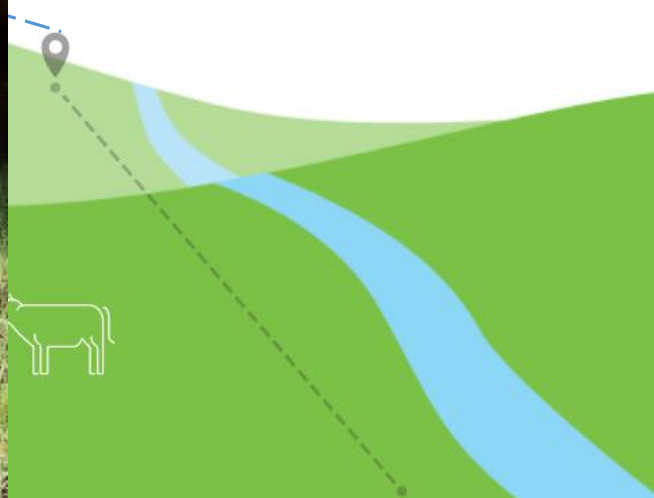
TCF Future:

Vence =

VENCE



About Product Blogs Contact



# Fine Sediment Roads:



Reduced by 193  
tons/Yr.  
or ~80%!

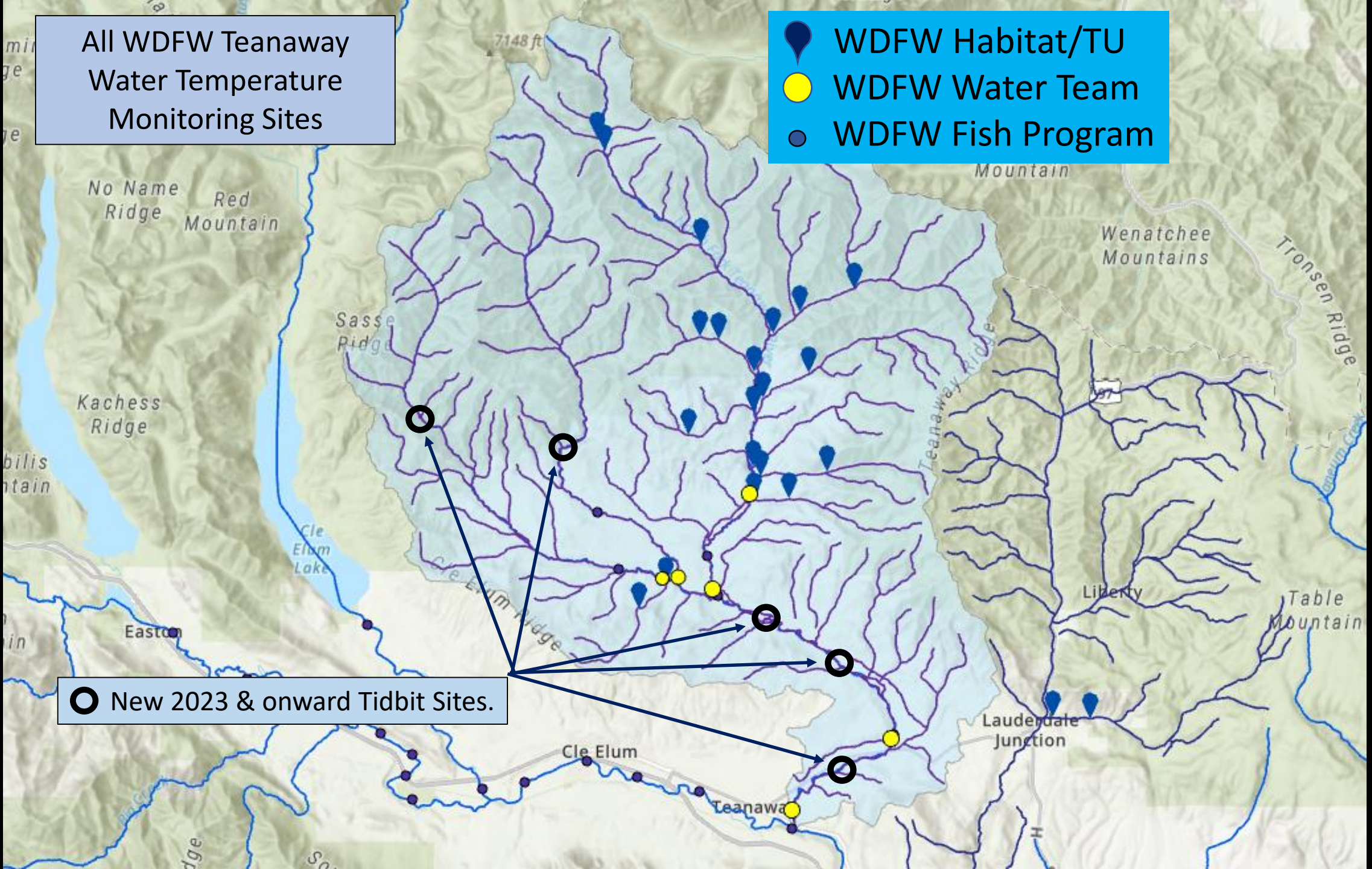


Fish Habitat Opened = ~15 miles!



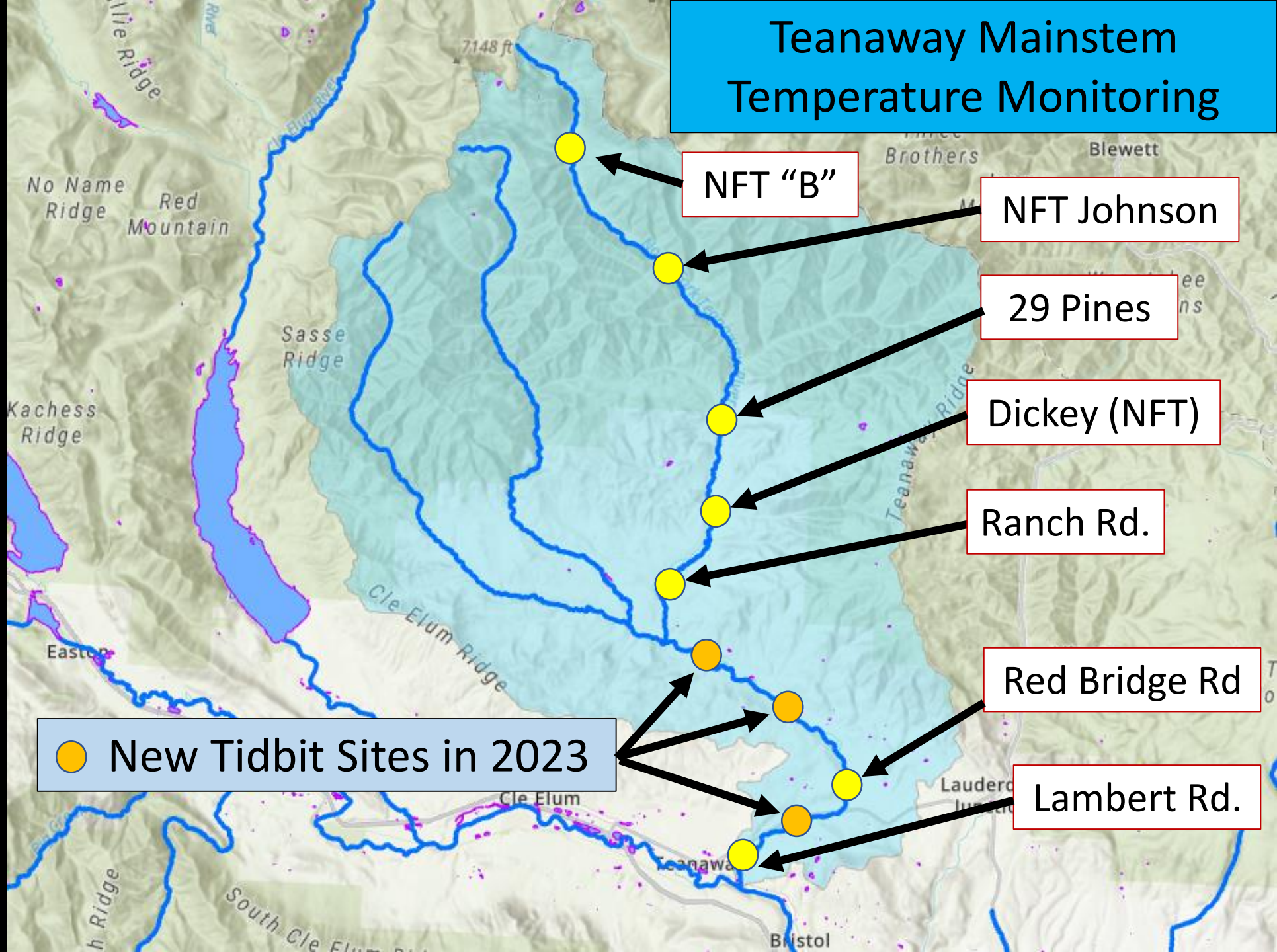
All WDFW Teanaway  
Water Temperature  
Monitoring Sites

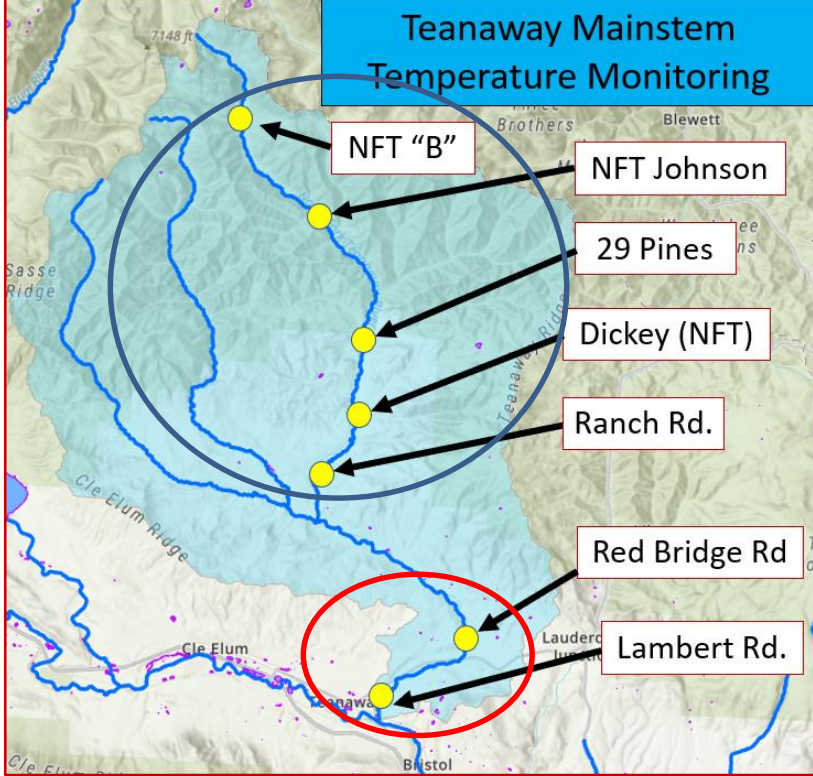
- WDFW Habitat/TU
- WDFW Water Team
- WDFW Fish Program



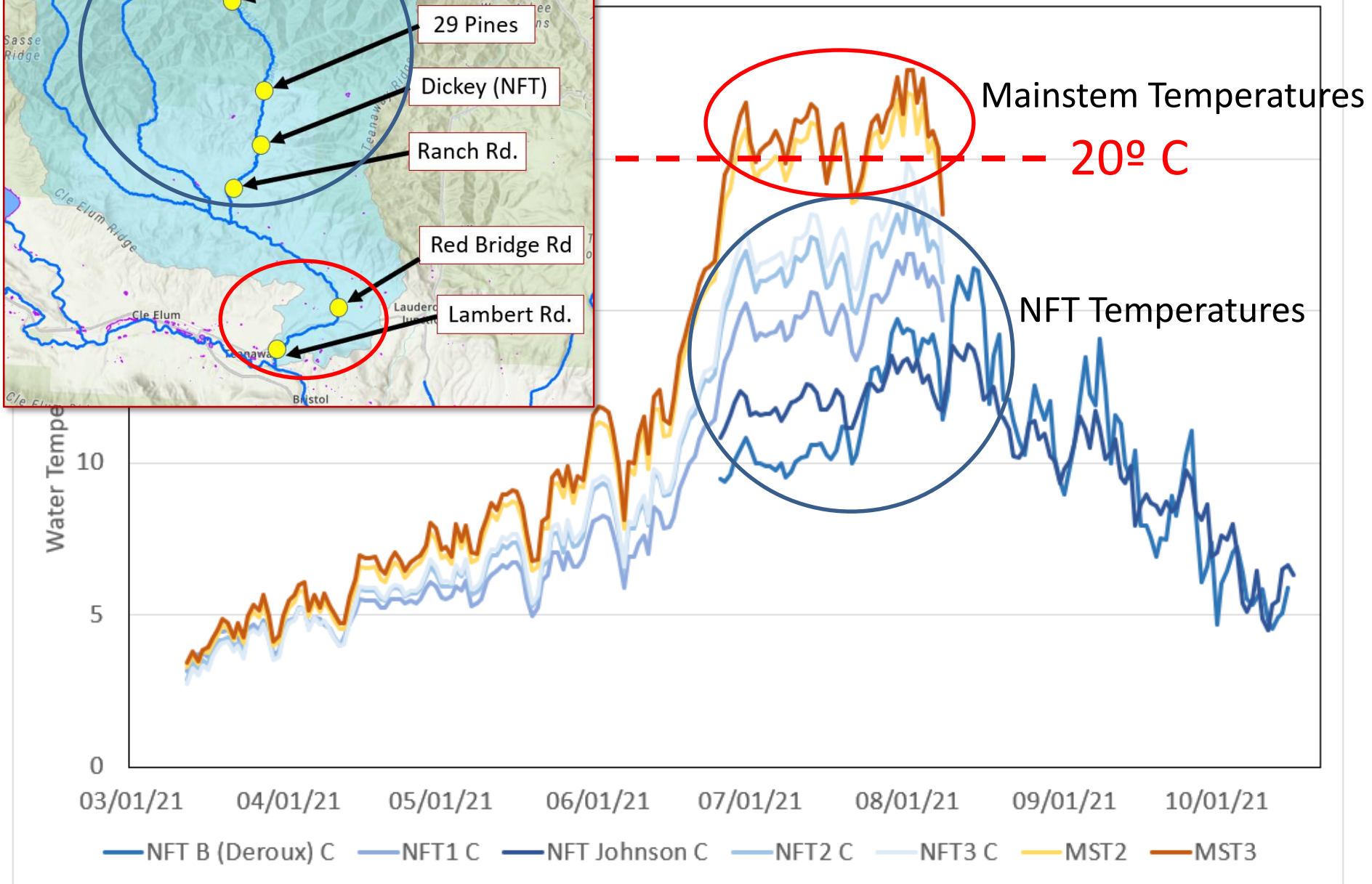
○ New 2023 & onward Tidbit Sites.

# Teanaway Mainstem Temperature Monitoring





Mainstem Temperature Profile



# Thank you to . . .

Waterfall Engineering and Water Pushing Dirt

Thayer Excavating

ReClaim and Gibson and Son

Natural Systems Design

Salmon Recovery Funding Board

Yakima Basin Integrated Plan

Bonneville Power Administration

NOAA Fisheries

Trout Unlimited

Agency partners: WDFW, WDNR

Teaway Community Forest Advisory Committee

Teaway Forks Restoration Steering Committee

