

West Fork Hood River “Red Hill” Large Wood Placement Project



A cooperative project between the
USFS – Hood River Ranger District *and* Confederated Tribes of Warm Springs



What ?

Instream fish habitat enhancement

Large Wood treatment

Main Channel, Side Channel,
& Floodplain structures

Tipped whole trees

Berm removal / side channel activation



Where ?

Upper West Fork Hood River Watershed



A priority watershed

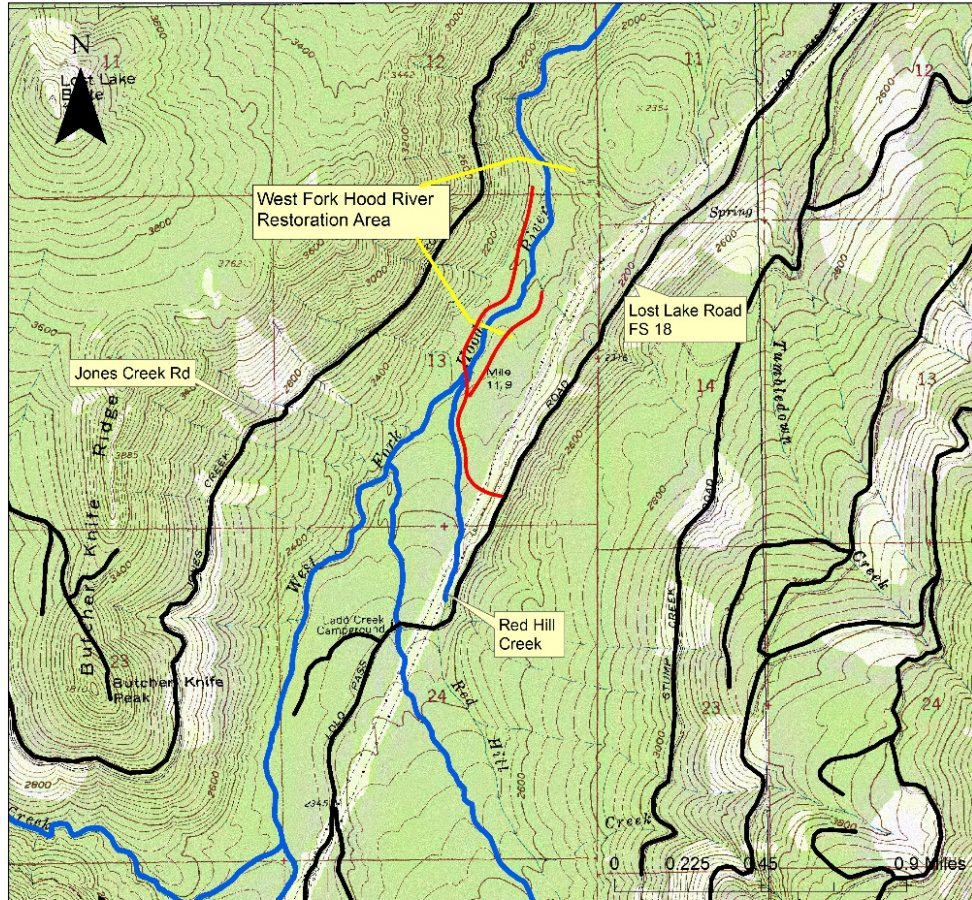
- CTWS: Production of salmon and steelhead
- USFS: One of two designated “focus” watersheds for restoration on the Mt. Hood National Forest

West Fork Hood River

Red Hill Cr confluence
downstream ~0.8 mi

Phase 1 – 0.4 mi

WF Hood River "redhill" Restoration Project Location



When ?

2016 ODFW in-stream work window

22 July thru 2 August

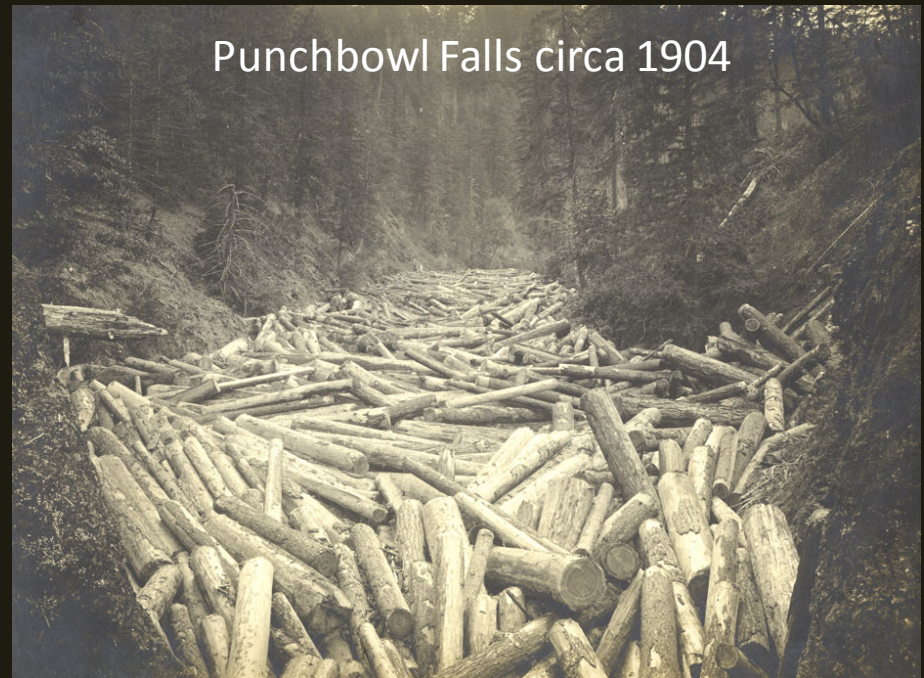
Implementation ~ 8 days



Why ?

Improve spawning and rearing habitat for ESA listed salmonids.

Chinook, Steelhead, Coho



Within the restoration reach....

Lack of suitable sized spawning gravel

Lack of LW to collect, sort and store gravel

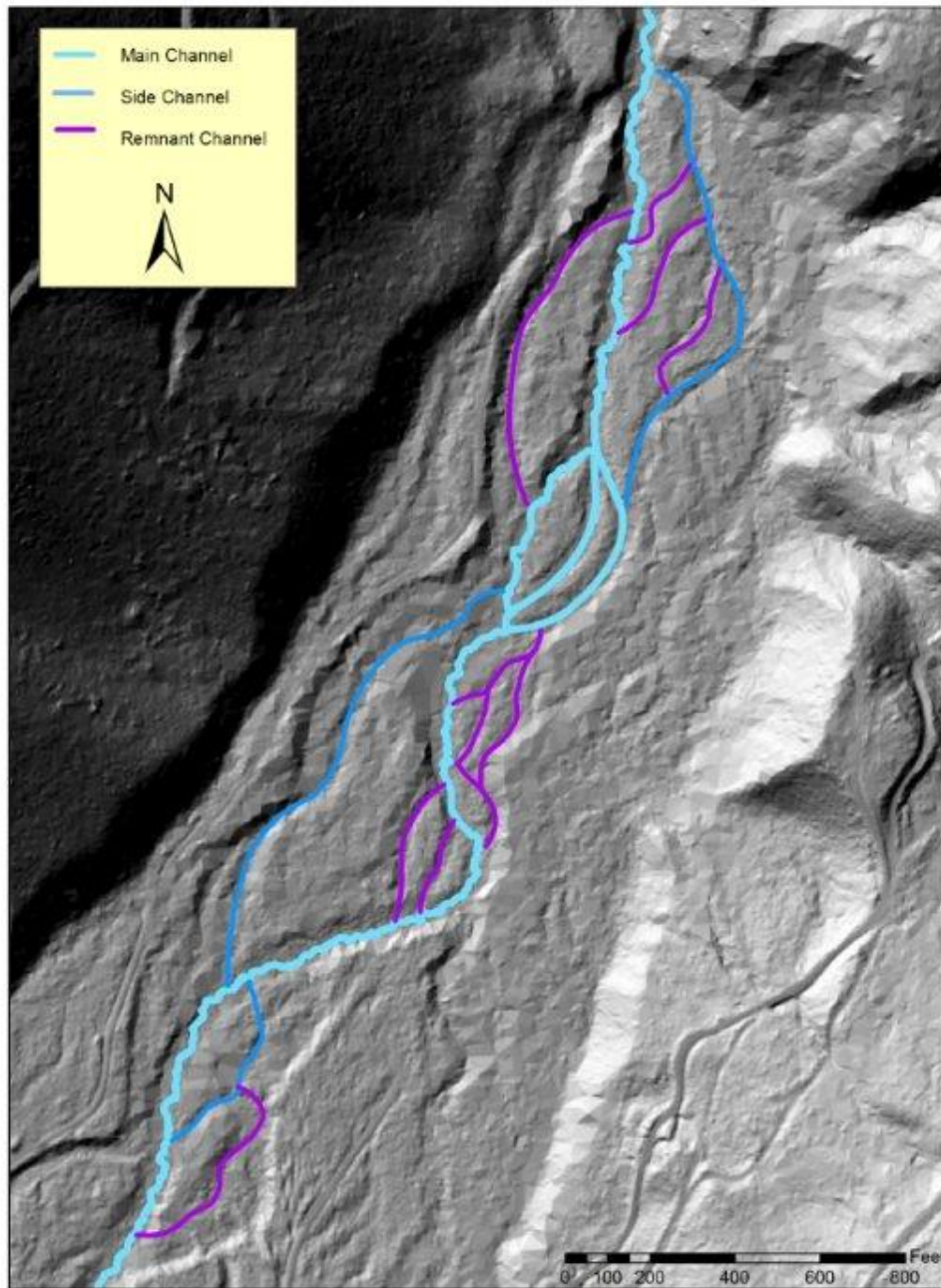
LW also provides rearing habitat and high flow refugia

Disconnection between stream and floodplain

Berms associated with splash damming



West Fork Hood River "redhill" Restoration Project Overview



A **central goal** of the project is to **restore salmonid spawning and rearing habitat** within the treatment reach **by maintaining and developing side-channel habitats**, and by maintaining and **improving the connection between the stream and the floodplain**.

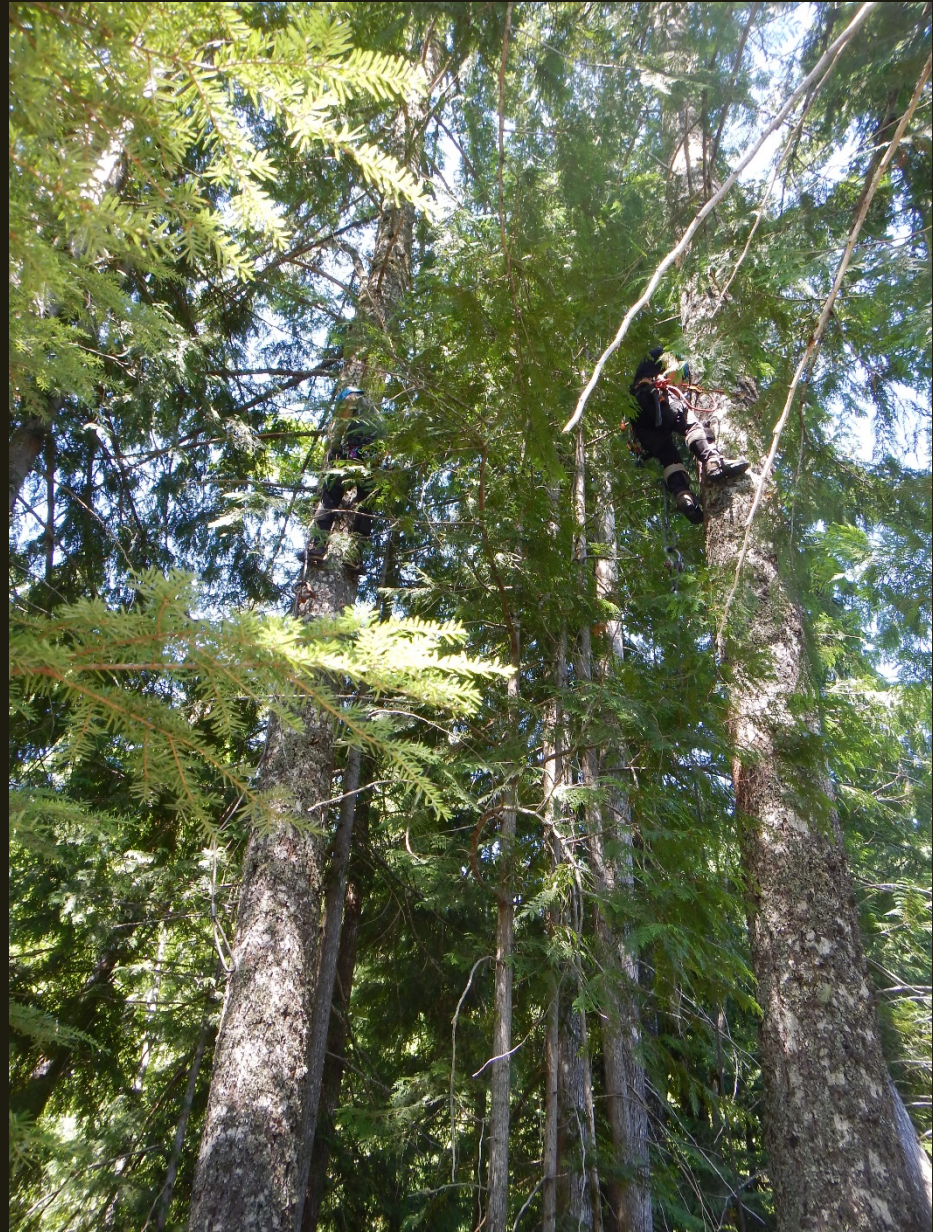
Measurable objectives are:

- Increase in-channel (main and side channels) LW to 150-200 / mile.
- Increase floodplain LW to 30 / acre.
- Increase wetted length of side channels associated w/ sites in the project reach.

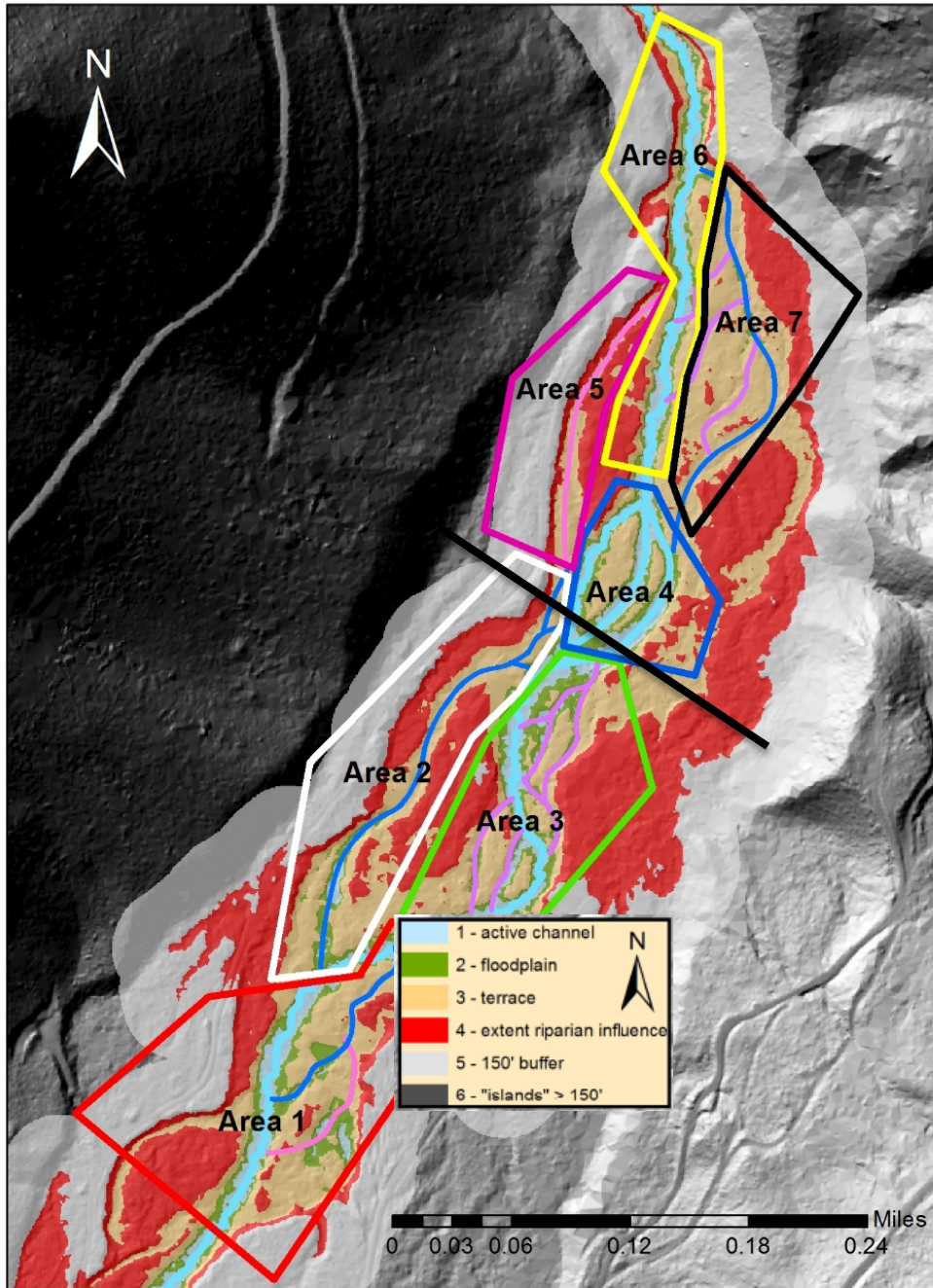


Challenges

- **Permission from Weyerhaeuser Columbia Timberlands**
 - Wyden Amendment Agreement
- **Tree-tipping and berm notching**
 - Approval from ODFW, ODF, Weyerhaeuser
 - Additional NEPA
- **Bridge not available for log staging**
- **Difficult to excavate in stream channel**



West Fork Hood River "redhill" Restoration Areas



Phase 1

Areas 1-3

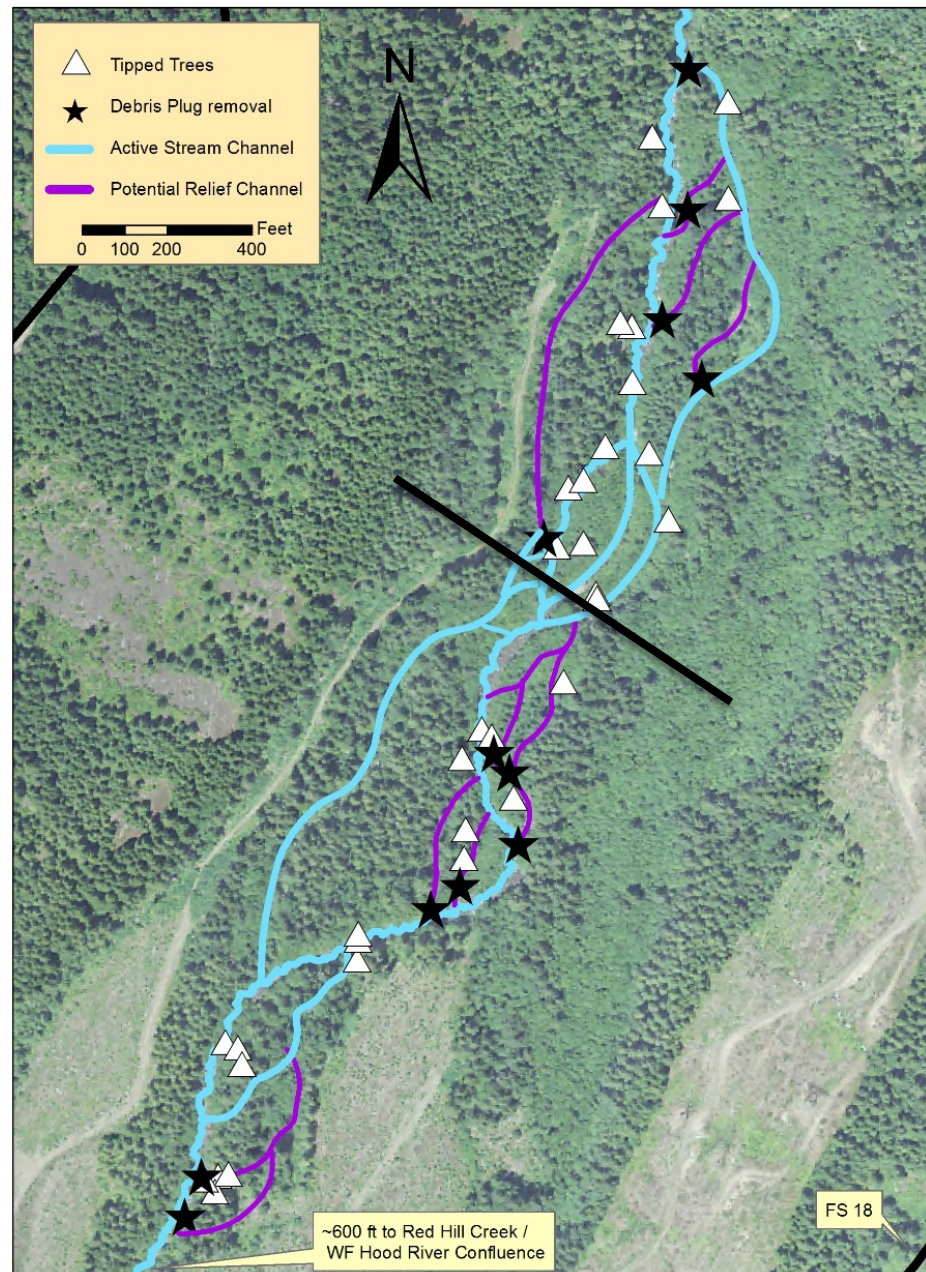
430 Logs

42 tipped trees

7 berms / side channels

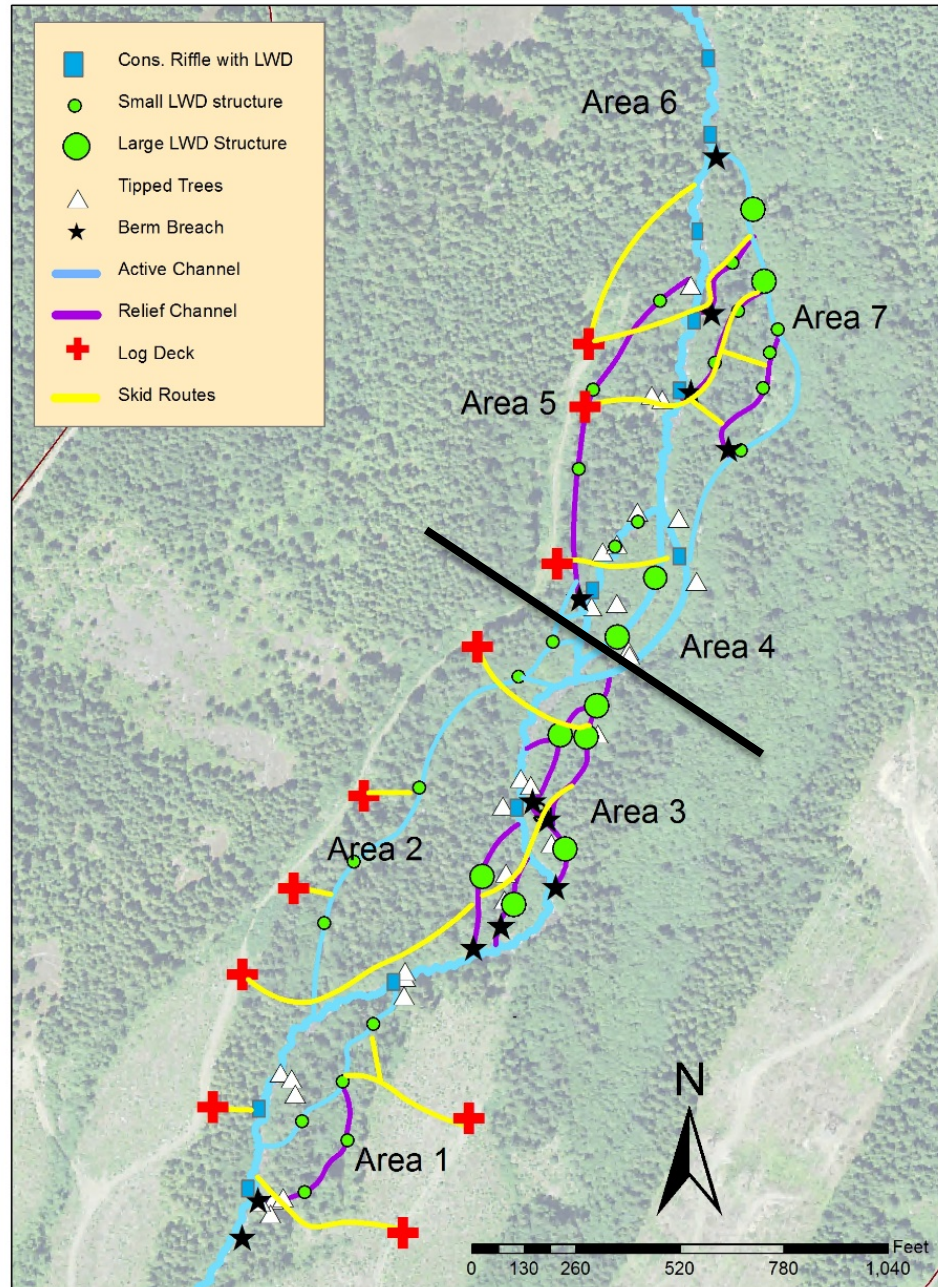
Project Elements

West Fork Hood River "redhill" Restoration Project Elements



Site Locations

WF Hood River "redhill" Restoration Project Access Routes



Implementation



08/10/2016

Implementation



Tree Tipping





Site
1a



Site
1b





PHOTO: BIOFISHENVIRONMENTAL.COM



Site
1c



Site 1c
berm
←
Side
channel
structure
→





PHOTO: BIOFISHENVIRONMENTAL.COM



Site
3d



Site
3x





PHOTO: BIOFISHENVIRONMENTAL.COM





Site
3g



Side channel reconnection



Site
3f



Berm notching

August 2, 2016

November 9, 2016



Funding

Total project cost: \$195,368

- Confederated Tribes of the Warm Springs: \$135,100
- Whole Watershed Restoration Initiative (Ecotrust/OWEB via HRSWCD): \$22,400
- USFS: \$37,868

Project costs:

- Log haul: \$21,800
- Excavator/skidder contract: \$64,320
- Whole tree purchase (Weyerhaeuser Columbia Timberlands): \$6,100
- SDS log purchase (CTWS): \$49,000
- Salary: \$54,148



Summary

21 structures, 430 logs added to the stream and floodplain.
7 side channels opened; 4 watered
42 whole trees tipped

0.4 miles treated.

Pre-restoration instream LW count = 56

Post-restoration instream LW count = 224

4 X increase in LW

Post Restoration LWD Count (in-channel, below bankfull elevation)

	Small 6-16" dia, >20' L	Medium 16-24" dia, >35'L	Large >24" dia, >35' L	Total
Old wood	29	24	3	56
New Wood	28	103	37	168
Totals	57	127	40	224

All other LW (430 pieces total) was either placed in the floodplain or incorporated into the LW structures; but is currently above the bankfull elevation - these logs may be recruited by the stream in the future.

Partners

- Confederated Tribes of the Warm Springs
- USFS – Hood River Ranger District and Regional Assistance Team for Streams
- Weyerhaeuser Columbia Timberlands
- Hood River Soil and Water Conservation District
- Oregon Department of Fish and Wildlife
- Oregon Department of Forestry

Questions?



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