



Cle Elum River Floodplain Restoration

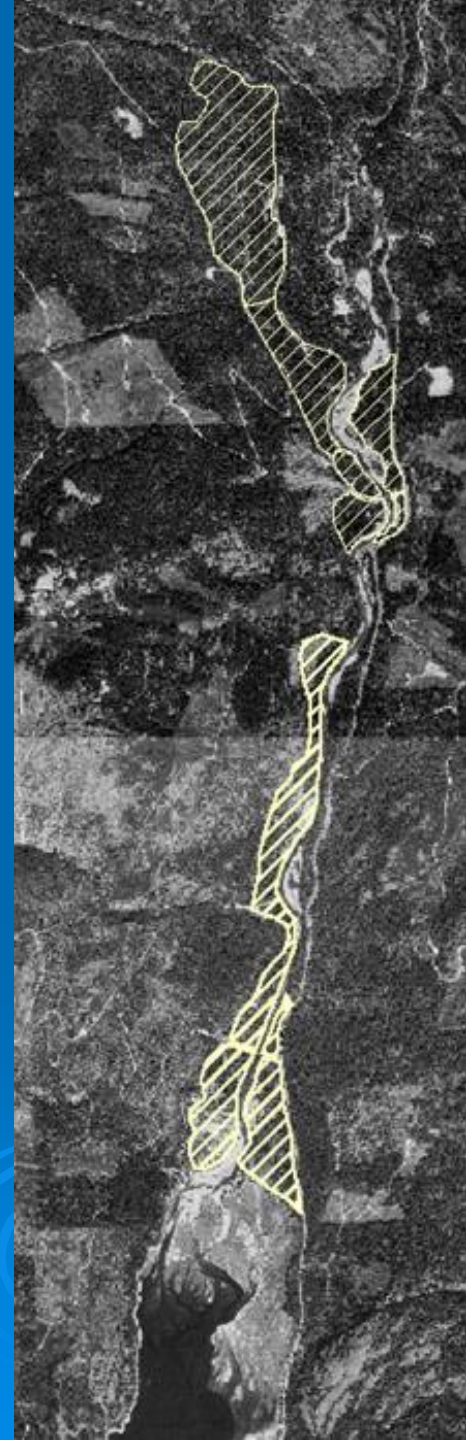
Okanogan & Wenatchee National Forests
Cle Elum Ranger District



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Upper Cle Elum River

- In the 4 miles between Lake Cle Elum and Salmon la Sac:
 - 33 pieces of large wood
 - 6571 feet of eroding bank (15%)
 - More than 300 acres of floodplain degraded by dispersed recreation
- Expanding use below Lake Tucquala





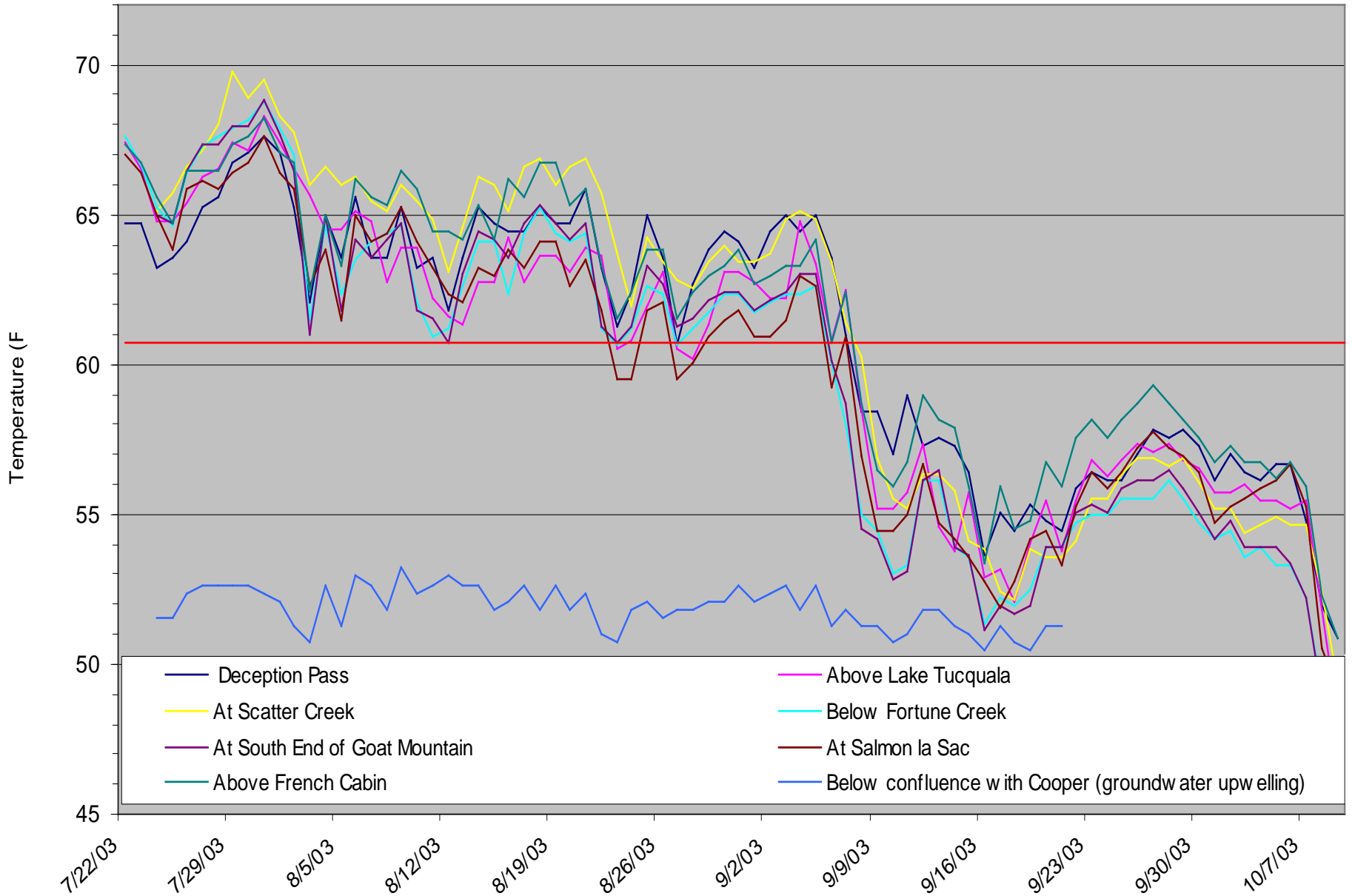
Water Quality and Habitat Issues

- **Compacted soil**
 - Decreased productivity
 - Interruption of surface and groundwater connectivity
- **Eroding banks**
 - Sediment input to river
- **Redd trampling**
- **Garbage and Human waste**
- **Loss of native vegetation**
 - Removal of shade
 - Decreased coarse wood recruitment



Maximum daily water temperature at Cle Elum River monitoring sites in summer of 2003.

The red line indicates 60.8 F, the Washington state standard for Class AA streams.



Respect the River Model

- Identify degraded sites
- Use contact rangers to get public input
- Work with interdisciplinary team to design sites
- Perform restoration work
- Post educational signs
- Monitor restoration and educate campers



Site Redesign & Restoration

- Change site use patterns to keep vehicles farther away from the river
- Change some sites to be walk-in only



- Narrow access to river by choosing and improving one footpath



- Use aesthetically pleasing barriers and signs to help campers adjust

- Scarify compacted soil and replant with native vegetation



Big Pine before restoration



Big Pine after restoration



15 9:11 AM

Project Components

- Inventory & prioritization of work
- Camper contact
- Environmental analysis
- Site redesign, creation, and elimination
- Education, maintenance and monitoring



Project Goals


- Riverine habitat improvement
 - Reduced soil compaction
 - Increased large wood recruitment and shade
 - Reduced sediment input to the river
 - Elimination of direct impacts on spawning habitat
- Terrestrial habitat improvement
 - Increased plant diversity in the riparian zone
 - Improved soil productivity
- Improvement in the recreational experience
 - Decreased law enforcement problems
 - Improved aesthetic quality
- Water quality protection
 - Protection of water supply for the city of Cle Elum.

Ways to Partner

- Project development and grant recruitment
- Restoration
- Volunteer recruitment
- Education and outreach
- Service learning



Project development and grant recruitment

- Identify projects with benefits for all partners
 - Assist with identifying funding sources
 - Assist with grant writing
 - Serve as administrator for grants
 - Challenge the Forest Service to share costs of a project
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Restoration

- Trail building
- Meadow rehabilitation
- Weed eradication
- Planting native plants
- Erosion control structures
- Fence building
- Site redesign

You're invited!

➤ What:

- A floodplain restoration field trip

➤ When:

- August 19, 2005 9:00 AM – 3:00 PM

➤ Where:

- Meet at Cle Elum Ranger Station, then caravan to field

