Restoration in the White Salmon & Klickitat Basins

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Bill Sharp
Research Scientist
Yakama Nation Fisheries

Honor, Protect, Restore
ARTICLE 3.

“...The exclusive right of taking fish in all the streams, where running through or bordering said reservation, is further secured to said confederated tribes and bands of Indians, as also the right of taking fish at all usual and accustomed places...”
Klickitat & White Salmon Basins

Overview of Yakama Nation Fisheries' Efforts to Restore:

Aquatic Habitats
Stream Function
Fish Passage
Harvest Opportunities
 monitoring and Evaluation of Anadromous Salmonids in the Klickitat Subbasin

Joe Zendt
Yakama Nation Fisheries Program

Primary Monitoring Activities

- Spawner surveys (redd counts)
- Adult monitoring at Lyle Falls Fishway
- Juvenile outmigration monitoring (rotary screw traps)
- Juvenile and resident salmonid population surveys
- Biological/Demographic sampling:
  - Scale sampling
  - Genetic sampling
  - Pathogen sampling
- Sediment monitoring
- Habitat surveys
- Temperature and water quality monitoring
- PIT tagging of Spring Chinook juveniles at Klickitat Hatchery
Identify & Prioritize Restoration Reaches. Protect, Restore, and Enhance Priority Reaches to Increase Riparian, Wetland and Stream Habitat Values.

Project Partners:
Washington Dept. Fish & Wildlife
Mid-Columbia RFEG
Columbia Land Trust
Washington Dept. of Natural Resources
Yakama Nation Water Program
Washington State Parks & Recreation
Multiple Conservation District
BIA Forestry and BIA Range
private individuals
Resource Priority

- Ranked second highest priority of 21 priority areas within Lead Entity recovery plan
- Accounts for +/- 60% of observed mainstem steelhead spawning, for +/- 20% of basinwide spawning.
- Reach contains the greatest amount of mainstem channel complexity in lower river.
- Migration and rearing corridor for +/- 75% of steelhead and 100% of spring Chinook.
- Important spawning, rearing and migration area for coho and fall Chinook.
- Contains significant areas of disconnected off-channel habitat with high potential for future restoration.
Klickitat River Haul Road

Klickitat River (RM 18 to 32) Floodplain Conservation and Restoration

Overview Map

- Proposed Parcels
- Klickitat Wildlife Mgt. Area
- Klickitat River and main tributaries

Road Ownership
- Other
- Klickitat County
- Rainier
- Washington State

* boundaries are approximate and for illustration purposes only

Map created by:
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[Date: Month, Year]
Fish Passage and Instream Restoration
Groundwater Monitoring – Tepee Ck

Higher Water Table – 2’ - 4’ rise and less variation between and among wells
Habitat Enhancement Effectiveness Monitoring
Klickitat River Subbasin

David Lindley and Nicolas Romero
Yakama Nation Fisheries Program
Near shore reservoir (Bonneville Pool) habitats

- Avian & piscivorous predation hotspots
- Thermal source
- Invasive aquatic/riparian plants
Castile Falls Fishway Reconstruction & Monitoring Station Construction

- 2004/05 Rebuild opens 55 miles of habitat
- Year round operation
- Satellite data relay
- Adult Collection
  - biosampling
  - brood collection
Lyle Falls Fishway Passage Improvement Project and Monitoring Facility

- R,M&E Facility
- Meet NMFS passage & handling criteria
- Brood collection
- Lamprey passage
Yakima Klickitat Fisheries Project
Proper Broodstock Collection
Natural Rearing Techniques
Increased Adult Returns for:
C & S Harvest
Sport Harvest
Commercial Harvest
Natural Production
Nutrient Cycle
White Salmon Monitoring & Evaluation

- Monitor Abundance
- Monitor Distribution
- Genetic Stock Identification
- Juvenile Production
- EDT Model Updates
- Monitor Recolonization
- Research to Guide Restoration
White Salmon Basin Fisheries Resources

- Spring Chinook (LC, extirpated)
- Fall Chinook (LC, Threatened)
- Coho (LC, Threatened)
- Chum (CR, Threatened)
- Steelhead (Mid-C, Threatened)

Resident:
Rainbow trout, Cutthroat trout
Bull trout (Threatened), Whitefish
Brook & Pacific lamprey
East Sand Island

Tagged Sept 2004
Detected March 2005 in lower Rattlesnake Creek
Detected July 2006 moving up through adult fish ladder.
A one salt steelhead?

Tagged Oct 2004
Detected April 2005 in lower Rattlesnake Creek
Tag found Nov 2005 at Tern Colony

Bonneville Dam
2011 Tule Chinook Salvage

299 females transported
180 Redds

Redd Survey Results
• 180 total redd (estimate)
• 3.7 adults/redd
• 1.6 females/redd
Condit Dam Decommissioning
Breach day – October 26, 2011

~1.3M cu. yds mobilized of estimated 2.4M cu yds.

93 acre reservoir drained in 1.5 hrs (estimated to take 6 hrs.)
Post Breach Activities

Demolition - Dam
Post Breach Activities
Sediment management – the former reservoir
Old Cofferdam Removal

May 2012
~40,000 cu. yds.
White Salmon Actions Needed

- Passage projects on key tribs. Buck Creek, Spring Creek, Indian Creek
- Proper screening of irrigation diversions and withdrawals
- Protect and increase base flows in tributaries
- Restore hydrologic function of Upper Rattlesnake Creek
- Protect habitat in the lower river and “reservoir reach” as PacifiCorps divests of lands in the basin
Continued Education & Outreach

- Hatchery Tours
- Salmon in the Classroom
- Community Events
Questions?

ykfp.org/klickitat/S_ceded.htm

pacificorp.com/es/hydro/hl/condit