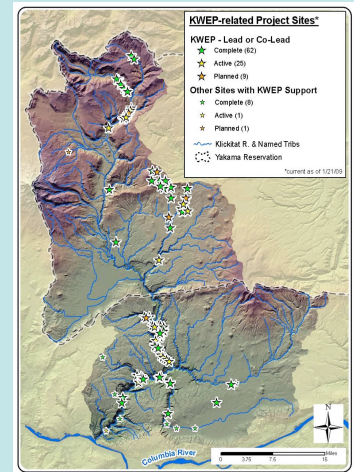
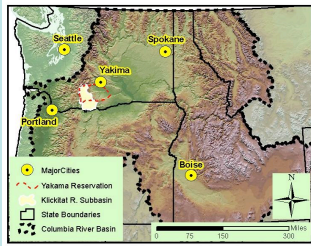


The Klickitat Watershed Enhancement Project

Will Conley, Watershed Restoration Specialist
Yakama Nation Fisheries Program

River Restoration Northwest
Stream Restoration Design Symposium
February 4, 2009

For More Information:
http://www.wfpo.org/klickitat/KWEP_sites.htm
(currently under development)



Introduction

The overall goals of the Klickitat Watershed Enhancement Project (KWEP) are to restore watershed health and aid recovery of native salmonid stocks in the 1350 square-mile Klickitat River subbasin.

Project actions target stream reaches and watersheds that support steelhead (*Oncorhynchus mykiss*; ESA-listed as "Threatened") and/or spring Chinook salmon (*O. tshawytscha*). Many project actions also benefit coho (*O. kisutch*) and fall Chinook salmon.

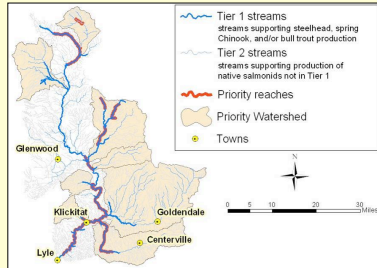
KWEP is implemented by the Yakama Nation Fisheries Program (YNFP) and comprehensively conducts watershed conservation and restoration in the Klickitat subbasin.

KWEP employs a three-pronged approach that:

- **Assesses** watershed and habitat conditions and **prioritizes** sites for restoration
- **Protects, restores,** and/or **enhances** priority sites
- **Monitors** to assess watershed conditions and effectiveness

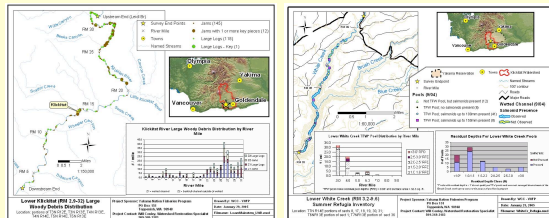
Assessment and Prioritization

KWEP played a critical role the development and description of priorities for the Klickitat Lead Entity Salmon recovery Strategy (SRFB), Klickitat Subbasin Plan (NPCC/BPA), and Recovery Plan for Mid-Columbia Steelhead (NOAA).



In addition to participating in basin-wide assessments and planning, KWEP has conducted spatially-targeted assessments for identifying limiting factors and refining project development, including:

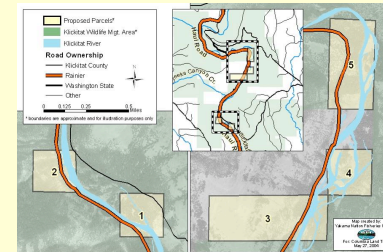
- hydrologic, geomorphic, hydraulic, habitat, and salmonid passage effects of over 145 miles (cumulative) of road and railroad
- geomorphic and habitat inventory and assessment of over 74 stream miles
- design, development, and implementation of GIS and relational databases to manage and analyze data



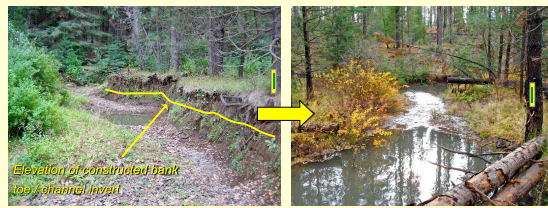
Restoration, Enhancement, and Protection

KWEP has completed 17 projects encompassing over 60 sites, resulting in fish passage restoration, side channel and floodplain reconnection, instream habitat restoration, road improvements, wetland creation, livestock control, revegetation, and erosion control. Project highlights include:

- Restoration of fish, sediment, and debris passage at 10 sites restoring fish access to over 18.1 miles of habitat
- Enhancement of >12,600' of stream and floodplain including 62 LWD jams
- Revegetation of >13,000' of stream with over 25,400 plantings
- Drainage improvements on 10.5 miles of forest road

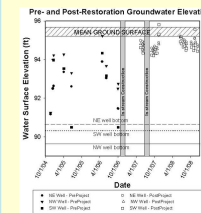
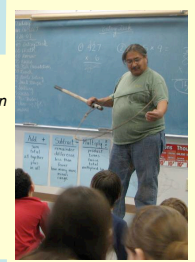


KWEP has partnered with Columbia Land Trust on 3 projects to help conserve over 1050 acres and 4 miles of fish-bearing streams and side channels as well as 11.3 miles of floodplain road for subsequent treatment



Other Functions

- **Technical Support** to landowners, non-profits, conservation districts, federal, local and tribal entities
- Purchase of a direct-seed drill for the Central & Eastern Klickitat County Conservation Districts for use by small landowners to assist and encourage **No-Till** agricultural practices
- **Outreach and Education** at five local elementary schools and YN-sponsored youth camp



Monitoring

KWEP conducts qualitative effectiveness monitoring on all projects and quantitative monitoring for many projects.

KWEP also operates 12 stream gages on 5 streams and assists basinwide status and trend monitoring for fish habitat (78 sites on 39 streams), water temperature (37 sites on 23 streams), and spawning gravel (12 sites on 5 streams).

Partners

- Columbia Land Trust
- Mid-Columbia Fisheries Enhancement Group
- Klickitat Data, Mgt., and Habitat Project (BPA # 198812035)
- Klickitat M&E Project (BPA #199506335)
- Washington Department of Fish & Wildlife
- Washington Department of Natural Resources
- Yakama Forest Products
- BIA Forestry and BIA Range

Funding and Materials

- Bonneville Power Administration
- WA Salmon Recovery Funding Board
- Columbia River Inter-Tribal Fish Commission
- Mid-Columbia Fisheries Enhancement Group
- BIA - Watershed Program
- Yakama Nation
- NOAA Fisheries
- Hancock Forest Management