

Wenatchee Watershed Riparian Enhancement Chelan County Natural Resources Department

WQC-2016-ChCoNR-00298

August 02, 2015 – July 31, 2019

Final Total Project Cost: \$34,580

Final Ecology Grant Contribution: \$32,600

Project Description

The *Wenatchee Watershed Riparian Enhancement* project evaluated riparian habitat conditions at the parcel level and developed a prioritization mapping report that Chelan County, and other local organizations, can use for selecting the most effective riparian planting projects for increasing shade. This project also planted one acre of riparian buffer on the highest priority parcel in Nason creek as identified by the report (river mile or RM 11). As part of this project, Chelan County Natural Resources Department (CCNRD) also contacted 100 landowners with the highest priority parcel identified in the report for riparian planting and a few will likely participate in the development of future projects. Last, this project continued shade monitoring of several previously planted sites.

Project Accomplishments

This project documented existing riparian conditions of over 2000 parcels in the Wenatchee basin. CCNRD ranked each parcel for its priority for riparian planting at the sub-watershed scale based upon the amount of existing herbaceous vegetation and the potential to add shade and improve water quality by additional planting. CCNRD completed one acre of planting on the highest priority riparian parcel identified in Nason creek. CCNRD sent outreach mailers to 100 riparian landowners resulting in identification of a few additional riparian planting projects.



Nason creek, river mile (RM) 11, had an eroding bank due to mowed vegetation. Yakama Nation installed wood on the banks and planted the banks in 2013.



This photo, taken five years post bank treatment (2018), shows the Ecology funded CCNRD tree and shrub planting along the top of the bank creating a 75' buffer.

Water Quality Improvements

CCNRD planted over 600 linear feet of riparian area in Nason creek. Nason creek has a TMDL for temperature and is the highest priority watershed in the Wenatchee basin for restoration actions to improve habitat for ESA listed fish species. Over time, plantings at this site, and others installed by CCNRD and funded by Ecology, will increase shade and improve water quality throughout the Wenatchee basin. This project helped to identify the highest priority riparian parcels for increasing shade with riparian plantings in the future.

The Next Step for Continued Success

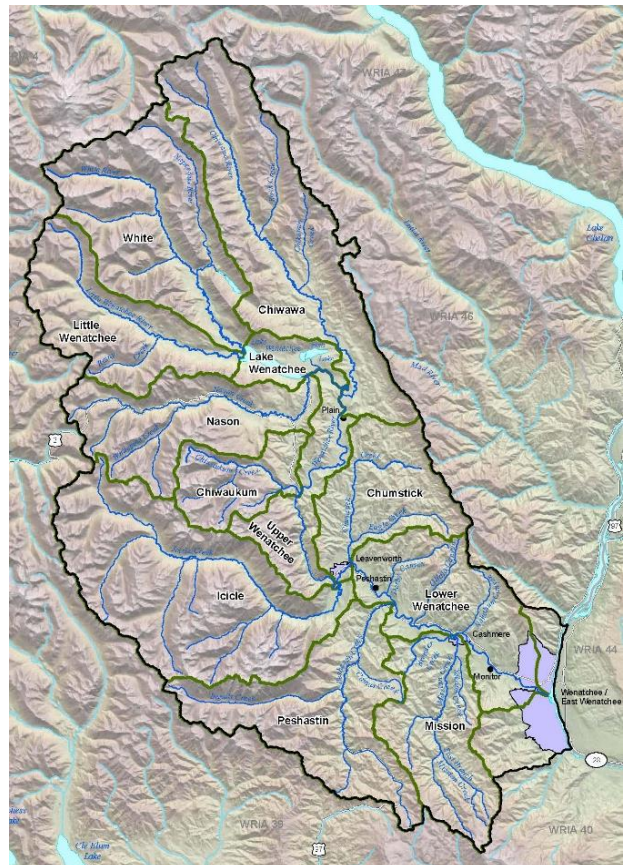
CCNRD will continue outreach efforts to landowners started in this agreement, with the goal of developing future sites for native tree and shrub planting in the riparian area. CCNRD installed riparian plantings at the RM 11 site in Nason creek and Ecology recently funded a follow-up project to address the temperature TMDL in Nason creek by evaluating stream temperature and sediment levels. Nason Creek needs these ongoing efforts throughout the watershed to restore cool waters for fish and other aquatic life.

Lessons Learned

During the development of the prioritization model, we used 20 feet tall for future vegetation height to evaluate the potential of increased shade under future planted conditions; this evaluated the benefit of plantings in a shorter time frame. As a result, only 25-50% of parcels demonstrated a potential for a significant shade increase to the river if plantings reach the full 20 feet. This is partly due to the small width of some streams (that may be already mostly shaded), aspect, and the low predicted height of selected vegetation. If CCNRD has the opportunity to expand this study with additional funds, we would want to see if those results would change if we increased the proposed vegetation height scenario to 100 feet. This would provide a better picture of shade potential in a longer time frame through re-vegetation efforts.



Nason Creek River Mile 11 riparian planting site (~1 acre) pictured above. Wenatchee watershed location map pictured to the right.



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