

Transforming Watersheds

Middle Tucannon River - Columbia County

The Place

The Tucannon River gets its start amid the forested foothills of the Blue Mountains in southeast Washington. During its journey to the Snake River near Starbuck, Washington, it will travel more than 50 miles through public forests and homesteaded farms. Along its course, the river traverses several precipitation zones. The mixed conifer headwaters typically receive more than 30 inches of precipitation per year, while the bunch grass and sage of the Snake River canyon indicate a drier climate. No more than ten inches of precipitation should be expected here. The Tucannon River is important to conservationists and is a cultural centerpiece for tribes in the area. The river serves as the treaty boundary between the Nez Perce Tribe to the east and the Confederated Tribes of the Umatilla Indian Reservation to the west. It is home for four species of endangered fish: spring and fall Chinook salmon, steelhead trout, and bull trout.

Irrigation Efficiency

In cooperation with the Columbia Conservation District, WA Dept. of Ecology, and BPA, landowners have installed enhanced irrigation systems on an incentive basis. These systems reduce irrigation water use and place the saved water in "trust" so that in-stream flow is enhanced. Current efforts leave approximately nine cubic feet per second (CFS) in the river. More water in the river means better habitat for endangered salmon and trout.



The Effort

Cattle grazing and wheat and hay production have supported families in the Tucannon River valley for generations. But in the 1990s, it became clear these activities were having unintended impacts. The river was failing state water quality standards and fish numbers were dwindling. To address these problems, landowners combined forces with the Columbia Conservation District (CCD), Bonneville Power Administration (BPA), and other agencies to create the Tucannon Model Watershed. The designation provided funding from BPA to enhance riparian health, fish habitat, water quality, and water quantity. With technical and financial assistance through the CCD, landowners continue to address watershed health. Since 2001, the Conservation Reserve Enhancement Program (CREP) and other funds have been used to install livestock exclusion fencing and plant thousands of trees. More than 27 miles of the river are now restored. Many tributary miles are also protected.



Tucannon River protected by a CREP riparian buffer

The Results

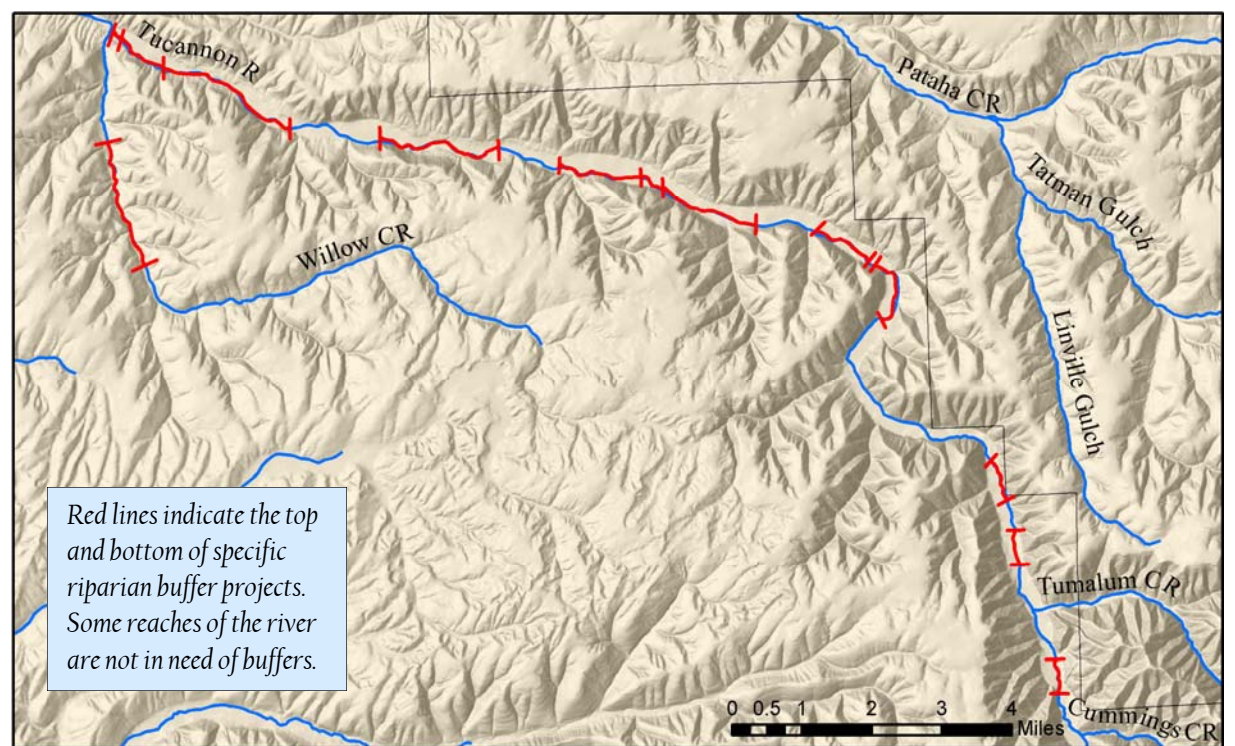
Riparian buffers and upland practices installed along the Tucannon River are working to reduce erosion and sedimentation, keep the water cool, prevent polluted run-off from entering the river, and improve fish and wildlife habitat. Many landowners realized healthy streams and agriculture do not need to be in conflict and took additional steps. In-stream structures for fish spawning, rearing and migration were installed. They also reduced water consumption by using efficient irrigation technologies. Furthermore, landowners reduced erosion by adopting conservation tillage practices.

The Future

Watershed recovery and enhancement continues to be a work in progress. Watershed and salmon recovery plans were developed through grass roots efforts. The plans identify additional strategies to improve water quality, water quantity, and fish habitat. One such effort is to increase the use of direct seed technology. Direct seed is the practice of seeding a new crop into existing residue with reduced soil tillage. This technique reduces erosion from fields and keeps soil out of the streams. Future improvements in the watershed depend upon maintaining tremendous landowner involvement as well as providing technical and financial support. But, all of the enhancements thus far bode well for the future. They are part of a local vision for sustainable agriculture: maintaining economically successful farms and ranches while protecting soil and water. The benefit of this vision is already seen in the improving water quality and fish habitat.



Fenced riparian corridor with a livestock water tank



Riparian buffers installed on the Middle Tucannon River

The People

Landowners installing riparian BMPs-
U.S. Forest Service; Pomeroy Ranger District; WA Dept. of Fish and Wildlife; Don and Janet Howard; Gerald and Lois Howard; Jerome and Diane Hovrud; Broughton Land Company; Rick and Val Turner; James and Laura Peterson; Russell Family Partnership; Robert Jacobs.

Technical and financial assistance provided by-
Columbia Conservation District (CCD), Southeast District Engineer; USDA Natural Resource Conservation Service; and USDA Farm Service Agency. A special thanks to the CCD Board of Supervisors for its vision, guidance, and support of clean water activities.

Funding for the Tucannon River projects provided by-
Bonneville Power Administration (BPA); Washington Salmon Recovery Funding Board; Washington Conservation Commission (WCC); WA Dept. of Ecology; USDA Farm Service Agency; and the Natural Resource Conservation Service.