Project Completion Report for OWEB Grant 218-6010-15634

Final Completion Summary

This project was located on Pine Hollow, a tributary to Rock Creek (which flows into the John Day River at Picture Gorge) located approximately 18 miles E-SE of Mitchell and 15 miles due west of Dayville on a property known as the Antone Ranch. The lower 3.4 miles of Pine Hollow is identified by ODFW as spawning and rearing habitat for steelhead. This project corrected two closely spaced passage barriers near the lower end of Pine Hollow. One was an unscreened diversion that requires annual maintenance and construction of a push up dam to extract the water right. The other barrier was a road crossing with a multi thread channel and two perched culverts The diversion was corrected through the installation of a stream simulation diversion with a concrete headwall. A fish screen was also installed to prevent entrapment. The existing culverts were replaced with a pre-fabricated steel bridge. Large woody debris was added to the project area along with 100 riparian plantings and the area around the diversion and fish screen was fenced to prevent livestock access. The project partners were ODFW, the landowner, and US Fish & Wildlife Services.

Background

Steelhead within the Middle Columbia River Basin, and specifically the John Day River system are currently listed as threatened. Two of the main limiting factors in the restoration of the species are passage and lack of suitable rearing habitat. This project corrected two passage issues along the lower portion of Pine Hollow, a tributary of Rock Creek which in turn is a tributary to the John Day River. Correcting the existing passage barriers opened up 1.27 miles of habitat that previously had limited access. A fish screen was also installed to prevent fish entrapment into the irrigation system. Restoration gains will be highly visible to the landowner, due to the project being located on the main thoroughfare connecting the ranch and its commercial lodgings to the highway. Up until recently, access and landowner cooperation have been severely limited with minimal correcting restorative actions being undertaken. Due to a change in management personnel, this critical area has become available to restoration efforts. To achieve the full realization of the watershed’s potential there will need to be good working relationships between Wheeler County SWCD and the land management personnel. This project was specifically designed to act as an introduction to watershed restoration by containing clear “Common Ground” benefits. This project will be mutually beneficial to the native aquatic species by improving and opening up additional habitat and to the landowner by providing an improved road crossing and a high quality low maintenance diversion structure.

Work Done

Both of the existing culverts were perched and presented fish passage barriers to both juveniles and adults at all flows. This crossing was corrected by removing the existing culverts and installing a pre-fabricated steel bridge. A stream simulation was also constructed through the crossing which provides passage to both juveniles and adults at all flow levels. In order to divert water the landowner would previously need to install a pushup dam just downstream of the existing headgate. This pushup dam presented a fish passage barrier as well as causing in-stream disturbance on an annual basis. A new

diversion structure was installed which consists of a concrete headwall with grade control riffles. The new structure is very low maintenance and will not require any in-stream disturbance in order to divert water. The landowner had previously leased the water in-stream from this point of diversion and the lease is expiring, and the landowner will begin using this diversion in the near future. The existing diversion was not screened and fish entrapment would have been an issue at this site if not for the fish screen installed by ODFW as part of this project. The area immediately surrounding the project site
and downstream of the road crossing has had extensive cattle presence which has compromised the vegetative community. The area was fenced with heavy duty materials and planted with native riparian species according the planting plan provided with this application. Four large wood structures were also placed in the channel and one was placed in the floodplain to provide enhanced habitat, and dissipate high flow velocities.

Changes from Proposed

No changes were made during the course of the restoration project.

Public Awareness or Education

Aspects of this project will be featured in displays at the Wheeler SWCD's annual meeting in December of 2020, as well as the districts published annual report.

Lessons Learned

"Washing in" materials of the constructed rifles/stream simulation under the new passage/crossing infrastructure is a viable and extremely successful construction method.

Aquatic Habitat

Wheeler SWCD has read the Oregon Aquatic Habitat and Enhancement Guide and all project components comply with this document.

Special Conditions

Special Conditions for the project have been satisfied through the uploads section of the online project completion reporting system.

Funding Sources

Source	Indentifier	Cash	InKind Type	Inkind
Landowner	Landowner	$0.00	Materials	$16,650.00
ODFW	In-kind	$41,443.00		$0.00
OWEB	218-6010-15634	$102,146.63		$0.00

Totals

OWEB Amount	Non OWEB Cash	Inkind Total	Non OWEB Amount	OWEB Match	Total Project Cost
$102,146.63	$41,443.00	$16,650.00	$58,093.00	57.0%	$160,239.63

Uploaded Files

Image Type	File Name	Description
Photo Point	IMG_5873_resize.JPG	Before instream grade control riffles were installed.
Photo Point	P4026907 - Copy.jpg	After instream grade control riffles were installed.
Photo Point	P8235818.jpg	Upstream of bridge, before instream grade control riffles were installed
Photo Point	P4026933.jpg	Upstream of bridge, after instream grade control riffles were installed
Photo Point	IMG_5819_resize.JPG	Before HD fencing and riparian plantings.
Photo Point	IMG_5482.JPG	Photo of caged riparian plantings, showing HD fencing in the background.
Photo Point	P8235869.jpg	Before fencing and riparian plantings.
Photo Point	P4026934.jpg	Caged riparian plantings, showing wire fencing in the background.
Photo Point	P8235841.jpg	Before large woody placement in side channel.
Photo Point	P4026916.jpg	Large woody structure placed in side channel.
Photo Point	IMG_5834_resize.JPG	Stream channel before large woody placement.

Photo Point	P4166973.jpg	Stream channel with large woody placement.
Photo Point	IMG_5860_resize.JPG	Before riparian plantings were planted.
Photo Point	P4166974.jpg	Caged riparian plantings, showing wire fencing in the background.
Photo Point	IMG_5869_resize.JPG	Before large woody structure placement on stream bank.
Photo Point	P4166988.jpg	Showing large woody placement on stream bank.
Photo Point	P8235854.jpg	Showing high flow side channel, before large woody placement.
Photo Point	P4166983.jpg	Large woody placement in side channel.
Photo Point	IMG_5835_resize.JPG	Before HD riparian fencing was installed
Photo Point	P4166987.jpg	HD riparian fencing installed, showing gate access.
Photo Point	IMG_5842_resize.JPG	Before HD riparian fencing was installed.
Photo Point	P4166978.jpg	Showing HD riparian fencing across creek and instream large woody structure.
Photo Point	IMG_5836_resize.JPG	Before placement of large woody structure.
Photo Point	P4166984.jpg	Showing large woody structure place in stream.
Photo Point	IMG_5870_resize.JPG	Project overview, before project work had begun.

Photo Point	P4166989.jpg	After project completion. Showing large woody structures, HD fencing, new diversion, and Riparian plantings.
Photo Point	P8235837.jpg	Old diversion
Photo Point	P4026928.jpg	New diversion structure
Photo Point	IMG_5820_resize.JPG	Old diversion
Photo Point	P4026911 - Copy.jpg	New diversion structure
Photo Point	IMG_5846_resize.JPG	Before fish screen and flow monitoring device were installed
Photo Point	P4026923.jpg	Fish screen installed
Photo Point	IMG_5874_resize.JPG	Downstream, before bridge installation
Photo Point	P4026906 - Copy.jpg	Downstream, after bridge installation
Photo Point	P8235819.jpg	Upstream, before bridge installation
Photo Point	P4026932.jpg	Upstream, after bridge installation
Map	Lower_Pine_Hollow_Bridge_and_Diversion-Submitted_With_Edits 40.jpg	Map showing details of final project components.
Map	Photo_Point_Map.pdf	Map showing photo point locations.
Photo (other)	P4026935.jpg	Photo showing the stream channel under installed bridge
Federal Lobbying Certificate	218-6010-15634 Fed. Lobbying & Lit. Cert.pdf	Federal Lobbying Certificate
Exhibit B	218-6010 EXHIBIT B Final.pdf	