

Completion Report January 29, 2007

Document ID #P102711

Project Name:

Fly Creek Stream Restoration Project Phase I

BPA Contract #: 27853

Start Date: 9-18-2006

Ending Date: 9-24-2006

Project Contact:

Mark Gomez, La Grande Ranger District (541) 962-8521

Brad Lovatt, La Grande Ranger District (541) 962-8571

Project Description

Introduction

In the 1980s, log weirs were constructed perpendicular to the stream flow in Fly Creek to create pool habitat. Pools that were created are typically wide and shallow with very little cover and complexity. Log weirs have resulted in streambank erosion, creation of a wide and shallow stream channel with very little habitat complexity, and creation of a passage barrier to juvenile salmonids. This section of Fly Creek has very few pieces of large wood due to historic land use activities.

Project Objectives

1. Provide juvenile fish passage
2. Prevent lateral channel and streambank erosion
3. Reduce channel width
4. Create habitat complexity in pools

Project Description

A total of 28 sites were addressed by this project (see map for location of all sites). These sites include 25 perpendicular log weirs that have been either completely removed (two sites), partially removed (three sites), or modified (20 sites). Partial removal entails cutting out an approximate 15 foot section of weir to help center the flow and maintain scour. Log weir modification entails cutting out a much larger notch, which removes the juvenile low flow barrier while maintaining scour and centering flow. Modification was used only at sites where there was not lateral channel expansion and log weirs presented a juvenile passage barrier only.

Large wood was added to 24 of the log weir sites and three non-weir sites. One weir site had the center removed and no large wood added. Large wood included 20 pieces of ELWD placed at 19 sites. One site incorporated two pieces of ELWD while a single ELWD were used at the remaining 18 sites. Large logs were obtained from a nearby blow down salvage sale along with numerous lodgepole pine trees with rootwads and branches attached for use with ELWD to increase stability and complexity of structures. Material was placed in a configuration that would aid in centering flow, maintaining scour,

providing habitat complexity, providing stream bank protection, and maximize stability in the stream system. ELWD was chosen as an experimental approach to a large wood source, which has considerable more surface area for fish habitat than single logs and may be more stable in the stream system. Large wood and ELWD was placed and was not “keyed in” or cabled. See attached photos for site examples.

Non-weir sites: 1a, 2a, and 11a

A single ELWD was used at the following sites: 1, 1a, 2a, 3, 6, 7, 8, 74, 73, 72, 69, 68, 67, 66, 65, 64, 63, and 62.

Two ELWD were used at the following site: 9

Weir site where center was removed, but no LWD added: 2

Actual project implementation has slightly changed from the original proposal. The table below summarizes items that changed between the proposal and project implementation.

Changes between project proposal and project implementation

Proposal	Address 25 log weirs			
Implementation	Addressed 25 log weirs			
Proposal	Address 25 “sites”			
Implementation	Addressed 28 “sites”			
Proposal	Add large wood to all 25 log weir sites.			
Implementation	Added large wood to 24 weir sites and three non-weir sites (27 total)			
Proposal	Add ELWD to 10 sites (typo?, should have been 20)			
Implementation	Added ELWD to 19 sites (one site with two ELWD)			
	Complete Weir Removal	Partial Weir Removal	Weir Modification	Weir Left intact
Proposal	3	3	8	11
Implementation	2	20	3	0

Project Map

- A new map identifying all sites will be submitted.

Project Accounting

Summary of Expenditures

Line Item	Original Budget	Total BPA Funds	Total Title II Funds	Total Wallowa Resources	Total USFS Funds	Remaining Budget
Materials & Supplies	\$13,900	\$11,800	\$0	\$0	\$0	\$2,100
Contracts	\$14,227	\$6,960	\$7,227	\$0	\$0	\$40
Miscellaneous	\$2,500	\$0	\$0	\$0	\$2,500	\$0
Personnel	\$19,374	\$0	\$0	\$0	\$19,374	\$0
Monitoring (BPA)	\$1,500	\$532	\$0	\$0	\$0	\$968
Monitoring (WR)	\$4,500	\$0	\$0	\$4,500	\$0	\$4,500
Travel	\$3,720	\$0	\$0	\$0	\$3,720	\$0
Administration	\$2,474	\$0	\$0	\$0	\$2,474	\$0
TOTALS	\$62,195	\$19,292	\$7,227	\$4,500	\$28,068	\$7,608
Percent Expended		% 86	% 100	% 0	% 100	

Project Participants

USDA FS, La Grande RD – NEPA, Consultation, Design, Permits, Contract
Implementation
BPA/GRMW - Funding
Wallowa Resources - Monitoring

Project Assessment

All objectives were met with project implementation.

1. All low flow juvenile fish passage barriers have been removed (perpendicular log weirs).
2. Log weir treatments (complete or partial removal, or modification of weirs) has removed the hydraulic mechanism for lateral channel and stream bank erosion.
3. Weir treatments have reduced the bankfull channel width at weir sites and will lead to decreased channel width.
4. Large wood, ELWD, and smaller woody debris placement has created habitat complexity where no cover had existed previous to this project. Large wood and ELWD will also facilitate in the centering of flow, maintain scour for pool habitat, collect other woody debris, and trap sediment for streambank recovery and revegetation at weir sites.

Project Monitoring

- ◆ The WWNF- La Grande Ranger District will monitor disturbed ground for invasion of noxious weeds and control when necessary.
- ◆ Wallowa Resources will conduct the effectiveness monitoring, which will consist of habitat mapping of the physical structures of the log jams structural stability, they will also conduct implementation monitoring which will consist of photo points of selected sites.

A complete photo inventory of sites, including upstream and downstream photos of all structures is on file at the La Grande Ranger District.

Photo 1. Fly Creek - Upstream view of site 7. Note ELWD on right and larger notch created in log weir (center of photo).



Photo 2. Fly Creek - Upstream view of site 8. Note ELWD on right.



Photo 3. Fly Creek - Upstream view of site 9. Note ELWD on right and left in combination of other large wood. Center of log weir has been removed.



Photo 4. Fly Creek - Upstream view of site 72. Note ELWD on right.

