

## Final Report

### Project #12-1648, Ninemile Creek Riparian Restoration

Submitted by Aaron Penvose on 07/20/2015

Accepted by Marc Duboiski on 07/21/2015

#### CONTACTS

**Primary Sponsor:** Trout Unlimited Inc.

**Lead Entity:** Upper Columbia Salmon Rec. BD

**Managing Agency:** Rec. and Conserv. Office

**Project Contact:** Aaron Penvose  
apenvose@tu.org

**Alt Project Contact:** Lisa Pelly  
lpelly@tu.org

**Billing Contact:** Phaedra Booth  
pbooth@tu.org

**RCO Grant Manager:** Marc Duboiski  
marc.duboiski@rco.wa.gov

#### DESCRIPTION OF THE COMPLETED PROJECT

**Project Start Date:** 12/06/2012

**FundingEnd Date:** 06/30/2015

**RCO Closure Date:**

The project protected and restored the riparian function of approximately 1.5 miles of Ninemile Creek, a tributary to Lake Osoyoos and the Okanogan River. Historically, the limiting factor in Ninemile Creek was instream flow restoration, because Ninemile Creek is naturally flow limited and the uppermost surface diversion exasperated the problem by withdrawing nearly all surface flow beginning in April annually. In early 2012, in cooperation with the landowner and WDFW, TU secured all surface water flows from the historic surface diversion, effectively creating a natural hydrograph for the basin. Ninemile Creek is unique; the creek is located upriver of Zosel Dam and just south of the US/Canada border, making it the northernmost anadromous tributary in the Okanogan. This project is important because it offers restoration of this unique tributary, where land and water projects have already been completed.

The proposal replaced the old dilapidated road crossings on the property to improve passage and decrease sedimentation in Ninemile Creek. The third stream crossing on the property will be left alone because it already acts as a hardened crossing. We believe because this crossing is rarely used and stream disturbance is minimal it is the best option. The restoration also includes the installation of over 2.6 miles of livestock exclusionary fencing in the riparian area, the removal of the historic surface water diversion, watering facility rehabilitation and metering. This project's benefits primarily steelhead, but also some chinook and sockeye have been identified in the system.

#### SITE LOCATION

**General Area of Project:** North of Oroville, east side of Lake Osoyoos.

##### Waterbodies:

**Cong District 2012:** 04  
**County:** Okanogan  
**HUC:** Okanogan  
**Leg District 2012:** 07  
**Salmon Recov Reg 05:** Upper Columbia  
**Section:** 12  
**Township/Range:** T40NR27E  
**WAU:** Tonasket Creek  
**WRIA:** Okanogan



##### Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

Tributary to the Okanogan River



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , Attachment #151106, Protected reach proposed



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , 05/23/2012, Attachment #151167, Aaron Penvose - TU Project Manager, Pre-Work



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , 05/23/2012, Attachment #151171, Creek Reach for Riparian Restoration, Pre-Work



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , 05/23/2012, Attachment #151173, Road Crossing Barrier to be Corrected, Pre-Work



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , Attachment #222118, New Upstream BR and PIT Tag array, Interim



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , Attachment #222119, Another New Will, Pump and Meter, Interim



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , Attachment #222123, Downstream Bridge, Interim



Trout Unlimited Inc.; Ninemile Creek Riparian Restoration (#12-1648), , Attachment #222129, Upstream BR, Livestock Deterrent, PIT Tag, Interim

## PROJECT NARRATIVE

Actions by the landowner, WDFW and TU-WWP have returned 5 cfs in the primary reach to Ninemile Creek and .97 cfs in the secondary reach. This effort set the stage for complete reconnection and restoration of the Ninemile Basin from stream-mile 1.5 to ~ 7.0 where a natural fall restricts further passage of anadromous species.

The riparian area is heavily impacted from agricultural production and influence of cattle within the riparian area is the root cause. The stream crossings on the property are severely dilapidated and are at a minimum fish impediments and need to be replaced to augment all of the previous conservation efforts, as well as bolster the riparian protection effort currently being implemented. At present, below the project area there is 1.5 miles of functioning riparian habitat. Upstream of the project area there is approximately 1 mile of functioning habitat before the historic surface water diversion which has been removed. Habitat conditions above the diversion are good.

The focal species of Ninemile Creek restoration efforts are identified in the Okanogan Subbasin Plan as: summer steelhead, secondarily Sockeye salmon, and summer/fall Chinook salmon. Summer Steelhead are observed annually in Ninemile creek and addressing limiting factors represents an opportunity to restore important spawning and rearing habitat. Among the limiting factors are: sediment, temperature, loss of habitat diversity and lost floodplain connectivity. The Subbasin Plan identifies following, "the highest priority for this watershed is...to locate and protect spawning and rearing areas, maintain or improve flows, and reduce fine sediments." This proposal supplements the land and water protection priorities that have been completed by WDFW and TU, and by addressing anthropogenic related passage issues on the agricultural lands this proposal will further improve spawning and rearing in the Creek.

The project goals were to improve passage, restore riparian conditions and generally enhance habitat in the basin. This work was conducted with help from the Salmon Recovery Board and the Confederate Tribe of the Colville Reservation. By implementing this project we replaced old, dilapidated road crossings on the property to improve passage and sedimentation. We were also able to decrease sedimentation by installing 2.6 miles of cattle exclusion fencing in the most degraded reach of the system. a suitable location for stock watering with less impact on the resource, and for project objectives to be met.

TU-WWP focused on two main components of this project: restoring passage and decreasing sediment.

The passage project was completed in spring 2015, after TU-WWP and the landowner removed the historic diversion structure in Ninemile Creek. TU-WWP negotiated an agreement with a landowner to leave water in Ninemile Creek for instream flow benefit through abandonment of a surface diversion. TU-WWP worked with WDFW for permitting the physical removal of the diversion and the mainline of the old surface water system. TU-WWP and the landowner also agreed on a plan for removal of the diversion intake pipe, conveyance pipeline and all associated infrastructure. In late 2013 TU had completely removed the other two passage barriers and replaced the crossings with channel spanning bridges. With the diversion and channel crossings addressed TU worked to fence a highly degraded area of the creek to exclude cattle and replanted all disturbed areas with native grass mix. The 1.5 mile exclusion area is being left to reestablish itself now that the cattle are excluded and TU will continue to monitor the riparian condition, but is already seeing a rebound in vegetation along the creek in this reach. To further this effort and to ensure cattle exclusion of the riparian area we also provided stock watering to an off channel area.

Lastly TU coordinated with biologists to install an array that detected two wild steelhead above the upstream barrier. This area is now open as a result of the instream flow improvement, barrier removals, revegetation and bridge installation.

## AMENDMENTS

#	Type	Applied Date	Description
3	Cost Change	06/04/2015	Adding \$1,525 to the project costs, primarily for accounting, or project administration. This cost increase would not have been necessary if TU hadn't donated \$15,000 of this grant to the Frazer Creek Emergency Response project (14-2260) in November 2014.
1	Cost Change	11/06/2014	The TU-Washington Water Project has scrubbed their remaining budget to return \$15,000 to go toward the Frazer Creek Fish Passage Emergency Response grant (#14-2260). The Ninemile Creek Riparian Restoration scope of work is still scheduled to be completed with the reduced funding.
2	Time Extension	10/28/2014	The project period of 12/06/2012 to 12/15/2014 is extended to allow the contracting party until 06/30/2015 to complete the project.

## OVERALL PROJECT COSTS

Funding Formula:	Requested		Original		Final	
Salmon Federal Projects:	\$0.00	(0%)	\$165,783.00	(85%)	\$152,307.28	(83%)
Salmon State Projects:	\$165,783.00	(85%)	\$0.00	(0%)	\$0.00	(0%)
Sponsor Match:	\$29,300.00	(15%)	\$29,300.00	(15%)	\$30,863.07	(17%)
<b>Total:</b>	<b>\$195,083.00</b>	<b>(100%)</b>	<b>\$195,083.00</b>	<b>(100%)</b>	<b>\$183,170.35</b>	<b>(100%)</b>
<b>Paid To Date:</b>	\$152,307.28				<b>Last Released Billing:</b> 07/22/2015	
<b>Remaining RCO Funds:</b>	\$0.00				<b>Pending Billing:</b> No	
<b>Advance Balance:</b>	\$0.00		<b>Match Bank:</b>	\$0.86	<b>Number of Billings:</b> 6	
<b>Admin Limit:</b>	\$0.00	5.00%	<b>Admin Spent:</b>	\$0.00		
<b>A&amp;E Limit:</b>	\$43,287.25	30.95%	<b>A&amp;E Spent:</b>	\$31,537.07	17.21%	

Billed Cost Summary:	Original Agreement	Expended	Non-Reimbursable	Total Billed
Restoration				
Construction	\$138,689.97	\$151,633.28		\$151,633.28
AA&E	\$42,918.03	\$674.00	\$30,863.07	\$31,537.07
Restoration Total	\$181,608.00	\$152,307.28	\$30,863.07	\$183,170.35
Total	\$181,608.00	\$152,307.28	\$30,863.07	\$183,170.35

Project Cost Metrics:	Original Agreement	Final
PCSRF Federal Funds (A.10):		\$152,307.28
State Funds (A.11):		
Other Federal Funding:		
Pending Billing - RCO Share Approved:		
Retainage - RCO amount retained:		\$0.00
Amount of other monetary funding (A.12):		\$30,863.00
Project identifier for the other monetary funding (A.12.b):		NA
Source of other monetary funding (A.12.a):		NA
Value of Donated Unpaid Labor (Volunteers) (A.13.a.2):		\$0.00
Source of Donated Un-paid labor contributions (A.13.a.4):		NA
Number of hours volunteers contributed to the project (A.13.a.1):		0
Describe how the value of the volunteers was determined (A.13.a.3):		NA
Value of Donated Paid Labor (A.13.b.1):		\$0.00
Source of Donated Paid Contributions (A.13.b.2):		NA
Value of Other In-Kind Contributions (A.13.c.1):		\$0.00
Source of Other In-Kind Contributions (A.13.c.3):		NA
Description of other In-Kind contributions (A.13.c.2):		NA

## PROJECT METRICS

	Original Agreement	Final
<b>Completion Date</b>		
Projected date of completion:		06/30/2015
<b>Project Goals</b>		
Goals, purpose, and expected benefits (A.17):		Restore Ninemile Creek fish passage, riparian habitat and instream flows.

## WORKSITE #1: Ninemile road crossings and fencing

**Worksite Description:** Improve road crossings on Eder property on Ninemile Creek to improve passage and decrease sedimentation in the Creek. Protect creek by fencing riparian area.

**Driving Directions:** 237 Eder Road, Oroville, WA

-119.352936 decimal degrees

Coordinate 2: 48.979103 decimal degrees

**Coordinates for Worksite Directions - Latitude:** 48.98 **Longitude:** -119.35

### Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

## WORKSITE #1 COSTS

Worksite Billed Cost:	Estimated	Expended	Non-Reimbursable	Total Billed
AA&E	\$36,620.00	\$674.00	\$30,863.07	\$31,537.07
Construction	\$158,463.00	\$151,633.28		\$151,633.28
Worksite Total	\$195,083.00	\$152,307.28	\$30,863.07	\$183,170.35

Worksite Costs by Category:	Original Agreement	Final
Fish Passage Funding (C.2.a):		\$120,745.00
General Restoration Activity Funding:		\$30,888.00
Architectural & Engineering Funding:		\$31,537.07

## WORKSITE #1 METRICS

	Original Agreement	Final
Targeted salmonid ESU/DPS (A.23):		Steelhead-Upper Columbia River DPS
Targeted species (non-ESU species):		None
Miles Of Stream Treated/Protected (C.0.b):		1.75
Project Identified In a Plan or Watershed Assessment (C.0.c):		Upper Columbia Salmon and Steelhead Recovery Plan
Type Of Monitoring (C.0.d.1):		Implementation Monitoring
Monitoring Location (C.0.d.2):		Onsite
<b>Fish Passage Improvement</b>		
Number of blockages / impediments / barriers impeding passage (C.2.b.4):		3
Type Of Barrier (C.2.b.3):		Culvert
Miles Of Stream Made Accessible (C.2.b.1):		6.00
Square Miles Of streambed made accessible (C.2.b.2):		1.0
<b>Bridge installed or improved (C.2.g.1)</b>		
Miles of stream made accessible by bridge installation/repair (C.2.g.3):		5.00
Number of bridges (C.2.g.2):		2
<b>General restoration activities</b>		
<b>Restoration fencing and gates</b>		
Number of gates:		4
Linear feet of fencing:		12000
<b>Architectural &amp; Engineering</b>		
<b>Architectural &amp; Engineering (A&amp;E)</b>		
Total cost for Architectural & Engineering (A&E):	\$36,620.00	
Did A&E costs exceed billed amount (Yes/No):		No

## PROPERTY DESCRIPTION (Eder property)

**Activity:** Restoration

### Control & Tenure:

**Instrument Type:** Landowner Agreement

**Timing:** Proposed

**Term Length:** Perpetuity

**# yrs:**

**Expiration Date:**

**Landowner Type:** Private

**Note:**

### Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

### Sponsor Clarifications:

## SPONSOR CERTIFICATION

☒ I certify that this project has been completed in accordance with the project agreement.

☒ I certify that, to the best of my knowledge, the information in the Final Report is true and correct.

Submitted by Aaron Penvose on 07/20/2015