WASHINGTON STATE Recreation and Conservation Office

Final Report

Project #12-1306, Gold Creek Habitat Assessment + Conceptual Design

Submitted by Mitchell Long on 07/13/2015 Accepted by Kay Caromile on 07/31/2015

CONTACTS

Primary Sponsor: Kittitas Conservation Trust

Lead Entity: Yakima Basin FWRB LE

Managing Agency: Rec. and Conserv. Office

Project Contact: David Gerth
kct@inlandnet.com

Alt Project Contact: Mitchell Long
brooksideprojectmanagement@gmail.com

RCO Grant Manager: Kay Caromile
kay.caromile@rco.wa.gov

DESCRIPTION OF THE COMPLETED PROJECT

Project Start Date: 12/06/2012 **FundingEnd Date:** 06/30/2015 **RCO Closure Date:**

Kittitas Conservation Trust used this planning grant to conduct a comprehensive hydrologic, geomorphic and biologic habitat assessment in the lower 3 miles of Gold Creek and to develop conceptual engineering plans to restore perennial flow and improve degraded Bull Trout habitat in the watershed. Gold Creek is a head waters tributary to the upper Yakima River that originates in the Alpine Lakes Wilderness and then flows into Lake Keechelus near Snoqualmie Pass in northern Kittitas County (WRIA 39). The primary goal of the assessment was to investigate the causes of Bull Trout mortality such as seasonal dewatering, spatial constraints and habitat degradation, then design restoration actions that employ natural fluvial processes to reverse the decline in population. Bull trout were listed as Threatened under the Endangered Species Act in 1998.

The Gold Creek Bull Trout population became geographically isolated after completion of the Lake Keechelus Dam in 1917 and is designated as a high priority Action population in the Yakima Bull Trout Action Plan. The Action Plan identifies channel dewatering, low abundance, and passage barriers at Keechelus Dam as the primary factors for population decline. In addition to Bull Trout, the project will benefit anadromous fish populations in the upper Yakima River basin when fish passage at Keechelus Dam is restored.

SITE LOCATION

General Area of Project: The Gold Creek watershed - from where it originates in the Alpine Lakes Wilderness near Snoqualmie Pass southerly through the Wenatchee National Forest and other private

Waterbodies:

Cong District 2012:	08
County:	Kittitas
HUC:	Upper Yakima
Leg District 2012:	13
Salmon Recov Reg 05:	Mid Columbia
Section:	15
Township/Range:	T22NR11E
WAU:	KEECHELUS
WRIA:	Upper Yakima

Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

PROJECT NARRATIVE

This project entailed a two year study of the hydrology of Lower Gold Creek to inform conceptual designs aimed at restoring perennial flow and restoring degraded habitat for Bull Trout. The project location is at the headwaters of the Upper Yakima River above Lake Keechelus near Snoqualmie Pass and encompasses the lower reach of Gold Creek (RM 0 - 3.0). The population of bull trout that occupy Gold Creek are all that remain of a once more abundant population native to the original, smaller, pre-dam Lake Keechelus. KCT collaborated with regional stakeholders to better understand and address habitat limiting factors identified in the Yakima Basin Bull Trout Action Plan. The assessment work entailed extensive hydrologic monitoring in 2013 and 2014, geomorphic analysis, and habitat study. Data from these efforts was then used to produce detailed conceptual designs that address the causes of seasonal dewatering and habitat degradation in lower Gold Creek. Natural Systems Design, led by Dr. Tim Abbe, conducted the scientific assessments and geomorphic analyses that led to the restoration design concepts and development of final memo documents and associated figures. Abbe and his design team have previously worked with KCT to design and implement large scale projects that utilize natural processes to achieve restoration goals.

The project location has multiple landowners including a mix of private parcels, land development, non-profit land trusts, and various state and federal entities. KCT engaged with all associated landowners and stakeholders at 20 meetings to present the project, discuss details of the assessment work, and the resulting conceptual designs through the two year project period.

Staff from the USFS indicated at a Technical Working Group Meeting that Conceptual Restoration designs should be included in the EIS for the Bureau of Reclamation's Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to Kachess Reservoir Conveyance project for Bull Trout Mitigation. The DEIS time frame was such that Conceptual Designs were included in the document and made public prior to KCT holding meetings with private landowners and other stakeholders. KCT is now working to rebuild a collaborative relationship with these groups to realize restoration goals for Bull Trout.

AMENDMENTS

#	Type	Applied Date	Description
3	Cost Change	08/01/2014	Adding $19,500 in Ecology Implementation Plan Funds (Interagency agreement 15-05) to conduct hydrological experiments to substantiate the hypotheses derived from the 2013 field work information. In brief- the water surface elevation in Gold Creek Pond will be temporarily raised 2.5 feet and the hydrologic response in the adjacent de-watered reach will be recorded. Results from this experiment will help clarify which restoration concepts will be most effective in achieving project goals.
1	Cost Change	10/21/2013	Adding $50,000 of Ecology's Integrated Water Resource Management Plan Funding through interagency agreement 15-05. The project deliverables remain the same. These added funds allow the sponsor to collect additional and more frequent monitoring data and to develop one additional conceptual design alternative to address the dewatering of the stream reach.
2	Time Extension	10/11/2013	The project period of 12/06/2012 to 12/31/2014 is extended to allow the contracting party until 06/30/2015 to complete the project.

EQUIPMENT

Item Description	Model #	Purchase Date	Amount	Serial #
			$0.00	

OVERALL PROJECT COSTS

Funding Formula:	Requested		Original		Final	
Salmon State Projects:	$97,750.00	(85%)	$97,750.00	(85%)	$167,250.00	(91%)
Sponsor Match:	$17,250.00	(15%)	$17,250.00	(15%)	$17,250.00	(9%)
Total:	$115,000.00	(100%)	$115,000.00	(100%)	$184,500.00	(100%)

Paid To Date:	$167,250.00			**Last Released Billing:**	08/14/2015
Remaining RCO Funds:	$0.00			**Pending Billing:**	No
Advance Balance:	$0.00	**Match Bank:**	$0.00	**Number of Billings:**	4
Admin Limit:	$0.00	**Admin Spent:**	$0.00		
A&E Limit:	$0.00	**A&E Spent:**	$0.00		

Billed Cost Summary:	Original Agreement	Expended	Non-Reimbursable	Total Billed
Non-Capital				
Non-Capital Costs		$184,513.01	$9,035.25	$193,548.26
Equipment				
Non-Capital Total	$184,500.00	$184,513.01	$9,035.25	$193,548.26
Total	$184,500.00	$184,513.01	$9,035.25	$193,548.26

Project Cost Metrics:	Original Agreement	Final
PCSRF Federal Funds (A.10):		
State Funds (A.11):	$167,250.00	$167,250.00
Other Federal Funding:		
Pending Billing - RCO Share Approved:		
Retainage - RCO amount retained:		$0.00
Amount of other monetary funding (A.12):	$10,000.00	$10,000.00
Project identifier for the other monetary funding (A.12.b):	USFWS Regional ESA funds CFDA# 15.657	USFWS Regional ESA funds CFDA# 15.657
Source of other monetary funding (A.12.a):	Kittitas Conservation Trust	US Fish and Wildlife Service
Value of Donated Unpaid Labor (Volunteers) (A.13.a.2):	$0.00	$0.00
Source of Donated Un-paid labor contributions (A.13.a.4):	Kittitas Conservation Trust	N/A
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):		N/A
Value of Donated Paid Labor (A.13.b.1):	$7,250.00	$16,298.00
Source of Donated Paid Contributions (A.13.b.2):	?	Kittitas Conservation Trust
Value of Other In-Kind Contributions (A.13.c.1):	$0.00	$0.00
Source of Other In-Kind Contributions (A.13.c.3):	?	N/A
Description of other In-Kind contributions (A.13.c.2):	N/A	N/A

PROJECT METRICS

	Original Agreement	Final
Completion Date		
Projected date of completion:	12/31/2014	07/15/2015
Project Goals		
Goals, purpose, and expected benefits (A.17):	Assess salmonid habitat in the Gold Creek watershed and produce a habitat restoration project conceptual design to restore year-roung water flow to improve habitat connectivity..	Assess salmonid habitat in the lower Gold Creek watershed (RM 0 - 3.0) and produce habitat restoration project conceptual designs to restore perennial water flow and improve habitat connectivity.

WORKSITE #1: Gold Creek

Worksite Description: The Gold Creek watershed - from where it originates in the Alpine Lakes Wilderness near Snoqualmie Pass southerly through the Wenatchee National Forest and other private parcels, under Interstate-90 and into Lake Keechelus in Township 22N, Range 11E. northwestern Kittitas County.

Driving Directions: Take I-90 to Exit 54 (Hyak) and then take FS Rd. 4832 (frontage road) SE across the Gold Creek bridge to Huckleberry Peak Rd. Turn left (north) and go about a mile to Gold Creel Pond.

Coordinates for Worksite Directions - Latitude: 47.40 **Longitude:** -121.38

Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

WORKSITE #1 COSTS

Worksite Billed Cost:	Estimated	Expended	Non-Reimbursable	Total Billed
Equipment				
Non-Capital Costs	$115,000.00	$184,513.01	$9,035.25	$193,548.26
Worksite Total	$115,000.00	$184,513.01	$9,035.25	$193,548.26

Worksite Costs by Category:	Original Agreement	Final
Planning/Coordination funding (B.1.a):	$115,000.00	$193,548.00

WORKSITE #1 METRICS

	Original Agreement	Final
Targeted salmonid ESU/DPS (A.23):	Chinook Salmon-Middle Columbia River spring-run ESU, Coho Salmon-unidentified ESU, Sockeye Salmon-unidentified ESU, Steelhead-Middle Columbia River DPS	Chinook Salmon-Middle Columbia River spring-run ESU, Steelhead-Middle Columbia River DPS
Targeted species (non-ESU species):	Brook Trout, Bull Trout, Cutthroat, Kokanee, Rainbow	Brook Trout, Bull Trout, Cutthroat, Kokanee, Rainbow
Area Encompassed (acres) (B.0.b.1):	188.0	188.0
Miles of Stream Affected (B.0.b.2):		3.00

Restoration Planning And Coordination Project

Conducting habitat restoration scoping and feasibility studies

Description of the Plan (B.1.b.8.b):	Results of habitat assessment and conceptual habitat restoration design for Gold Creek	The reports present the results of a comprehensive hydrologic, geomorphic and biologic habitat assessment in the lower 3 miles of Gold Creek and 4 conceptual design alternatives to address dewatering of Gold Creek and improving Bull Trout habitat.
Name of the Plan (B.1.b.8.a):	To be determined	See "Note" for a complete list of documents developed by this project.

Natural Systems Design. 2013. Technical Memo: Gold Creek Data Inventory & Data Gap Analysis. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

Natural Systems Design. 2013. Gold Creek Habitat Assessment Memo. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

Natural Systems Design. 2013. Gold Creek Hydrologic Assessment Memo. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

Natural Systems Design. 2014. 2014 Gold Creek Hydrologic Assessment Memo. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

Natural Systems Design. 2014. Gold Creek Geomorphic Assessment Memo. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

Natural Systems Design. 2015. Gold Creek Conceptual Restoration Design Memo. Prepared for the Kittitas Conservation Trust, Roslyn, WA.

** The designs were not implemented at the close of this project*

Total cost for Conducting habitat restoration scoping and feasibility studies:	$115,000.00

PROPERTY DESCRIPTION (Gold Creek - Forest Service)

Activity: Planning

Control & Tenure:

Instrument Type: Landowner Agreement

Timing: Proposed

Term Length: Fixed # of years **# yrs:**

Expiration Date:

Landowner Type: Federal **Note:** not needed for assessment

Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

Sponsor Clarifications:

PROPERTY DESCRIPTION (Gold Creek - Forterra)

Activity: Planning

Control & Tenure:

Instrument Type: Landowner Agreement

Timing: Proposed

Term Length: Fixed # of years **# yrs:**

Expiration Date:

Landowner Type: Private **Note:** not needed for assessment

Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

Sponsor Clarifications:

PROPERTY DESCRIPTION (Gold Creek - SkiTur Assoc.)

Activity: Planning

Control & Tenure:

Instrument Type: Landowner Agreement

Timing: Proposed

Term Length: Fixed # of years **# yrs:**

Expiration Date:

Landowner Type: Private **Note:** not needed for assessment

Sponsor Clarifications:

Sponsor verified the above information is correct and complete.

Sponsor Clarifications:

SPONSOR CERTIFICATION

[X] I certify that this project has been completed in accordance with the project agreement.

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

Submitted by Mitchell Long on 07/13/2015