PROJECT: 15-1443 MON,RCH, ASOTIN IMW MONITORING PSMFC 2015

Sponsor: Eco Logical Research Inc. Program: Pacific States Projects Status: Active

Project Start Date: 10/01/2015 Agreement End Date: 10/15/2019

Final Report Status: Accepted 12/10/2019

Description

PROJECT AGREEMENT DESCRIPTION

This project is a continuation of the Asotin Creek multi-year IMW project. The project is an Intensively Monitored Watershed monitoring project. The project focuses on three tributaries to the Asotin Creek in Southeast Washington. The tributaries are: Charley Creek, North Fork Asotin Creek, and South Fork Asotin Creek. The purpose of the project is to link salmon and steelhead responses to specific mechanisms related to habitat restoration. The fundamental approach is to treat restoration as an experiment and concentrate a large restoration effort in order to increase the likelihood of detecting a population increase. This type of project will increase our understanding of what restoration activities are most effective, demonstrate how changes in habitat influence survival of various life stages of salmon and steelhead, determine what magnitude of restoration is required to cause a significant population response, and ultimately provide information to better evaluate the efficacy of habitat restoration.

The restoration effort is focused on summer run steelhead habitat. The funds for this grant award will focus on continuing the IMW effort in the Asotin. Funds are needed because the current IMW monitoring budget being provided by Pacific State Marine Funding Commission (PSMFC) has been reduced in 2016 to < $100,000 from an average of ~$250,000. It is critical at this stage in the Asotin IMW to maintain the basic monitoring level to ensure its goals can be completed: namely to determine the effectiveness of LWD restoration methods, determine the causal mechanisms of habitat and fish responses, and to provide recommendations for implementing LWD restoration in other watersheds. Fish monitoring occurs in 12 sites, each 300-500m long, 4 in each tributary. Habitat monitoring occurs in 12 CHaMP sites in Charley and North Fork Asotin Cr, each 160-200m long. This project will support ESA listed steelhead recovery. All data will be made publicly available. Data analyses will be conducted with other funds.

Intensively Monitored Watersheds

1) Continue baseline monitoring of 12 permanent sites for fish abundance and habitat condition,

2) Implement restoration treatment plan based on approval of the plan by the Regional Technical Team

3) Monitoring a wide variety of response variables

Data Modeling and Analysis

1) Determine if certain aspects of habitat enhancements and restoration respond with correlating abundance and productivity of salmonids.

FINAL PROJECT DESCRIPTION

This project was a continuation of the Asotin Creek multi-year IMW project. The project is an Intensively Monitored Watershed monitoring project. The project focused on three tributaries to the Asotin Creek in Southeast Washington. The tributaries are: Charley Creek, North Fork Asotin Creek, and South Fork Asotin Creek. The purpose of the project was to link salmon and steelhead responses to specific mechanisms related to habitat restoration. The fundamental approach was to treat restoration as an experiment and concentrate a large restoration effort in order to increase the likelihood of detecting a population increase. This type of project has increased our understanding of what restoration activities are most effective, demonstrated how changes in habitat influence survival of various life stages of salmon and steelhead, and has determine what magnitude of restoration is required to cause a significant population response, and ultimately provide information to better evaluate the efficacy of habitat restoration.

The restoration effort has been focused on summer run steelhead habitat. The funds for this grant award focused on continuing the IMW effort in the Asotin. Fish monitoring occurred in 12 sites, each 300-500m long, 4 in each tributary, with a cooperative effort with WDFW and continues in a subsequent project agreement funded by the PSMFC. Habitat monitoring occurs in 12 CHaMP sites in Charley and North Fork Asotin Cr, each 160-200m long. This project supports ESA listed steelhead recovery. All data will be made publicly available. Data analyses will be conducted with other funds.

Intensively Monitored Watersheds

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Narrative

to provide annual report as base narrative

HI STEVE BENNET PLEASE FILL THIS NARRATIVE WHCIH COUL DBE PART OF AN EXECUTIVE SUMMARY OF YOUR 2019 ANNUAL REPORT THE SRFB MONTIORING PANEL WILL BE REVIEWING AFTER 12/31/19 THANKS -KD THIS WAS TAKEN FROM YOUR FINAL REPORT IF YOU HAVE ANY NEED TO EDIT PLEASE DO TEHN AT TEH ENBD OF THE DOCUMENT CERTIFY AND SUBMIT

The Asotin Creek Intensively Monitored Watershed project was implemented in 2008. The focal species are naturally reproducing summer steelhead. Based on previous habitat assessments and preliminary IMW monitoring, it was decided that riparian function and instream habitat complexity were impaired. The long-term restoration goals are to implement fencing, native plant revegetation, and weed control to enhance riparian function. The short-term restoration goals are to add large woody debris (LWD) to increase habitat diversity and promote a more dynamic channel (e.g., increase sediment sorting, pool frequency, and floodplain connection). The IMW is testing the effectiveness of the short-term goals at increasing steelhead production and productivity in Charley, North Fork, and South Fork Asotin Creeks. We implemented the IMW using a staircase experimental design where
a different study creek was restored in different years starting in 2012 and ending in 2016. Each stream is divided into three 4 km long sections and one or more sections has been restored in each stream with the remaining sections acting as controls. We have built 654 large woody debris structures at an average density of 4.7 structures per 100 m in the treatment sections. A total of 14 km has been restored (~39% of the study area) and 22 km remains as controls (61% of the study area). We have continued to add LWD to treatment sections as needed based on our adaptive management plan informed by annual habitat survey results. The purpose of adding more wood is to keep the density of wood high in treatment sections compared to control areas to mimic, promote and eventually sustain processes of wood accumulation, creation of habitat complexity and floodplain connection. We
are using extensive habitat sampling and fish PIT tagging and resighting to estimate changes in habitat and juvenile steelhead abundance, growth, survival, movement, production, and productivity in each experimental section. There are five passive transponder tag (PIT) interrogation sites within Asotin Creek that are used to monitor adult and juvenile PIT tag steelhead movement in Asotin Creek watershed – three of these sites (ACM, ACB, AFC) were upgraded with new equipment in 2018. The primary purpose of this progress report is to 1) summarize the work performed as part of the Asotin Creek Intensively Monitored Watershed (IMW), RCO 15-1443 for the period October 1, 2018 to September 30, 2019, 2) update the status of the IMW, 3) describe the intended “path to completion” and future needs of the IMW (including challenges and opportunities), and 4) update the list of outreach and publications generated from the IMW

Worksites

Worksite #1: Asotin

Worksite Address (Optional)
Street Address
City
State, Zip

Worksite Details

Worksite #1: Asotin

Worksite Name Asotin

WORKSITE DESCRIPTION
Asotin creek basin

Geographic Coordinates

From mapped point:	Latitude	46.326216	Longitude	-117.106216
For Directions:	Latitude		Longitude	

SITE ACCESS DIRECTIONS
xxx

Properties

The selected project has no properties

Monitoring/Research Metrics

Current Agreement **Final**

Worksite: Asotin (#1)

Targeted salmonid ESU/DPS (A.23) The salmon ESU (Evolutionarily Significant Unit) or steelhead DPS (Distinct Population Segment) name that the project is targeting. For species where ESU/DPS name is not known or determined, use the species name with unidentified ESU (e.g., Chinook salmon - unidentified ESU).	No Salmon ESU or Steelhead DPS Chinook Salmon-Snake River Fall-run ESU Chinook Salmon-Snake River Spring/Summer-run ESU Chinook Salmon-unidentified ESU ✓ Steelhead-Snake River Basin DPS Steelhead/Trout-unidentified DPS	No Salmon ESU or Steelhead DPS Chinook Salmon-Snake River Fall-run ESU Chinook Salmon-Snake River Spring/Summer-run ESU Chinook Salmon-unidentified ESU ✓ Steelhead-Snake River Basin DPS Steelhead/Trout-unidentified DPS
Targeted species (non-ESU species) Select one or more of the fish species that this project will benefit.	✓ None Unknown Brook Trout Brown Trout Bull Trout Cutthroat Kokanee Rainbow Searun Cutthroat	✓ None Unknown Brook Trout Brown Trout Bull Trout Cutthroat Kokanee Rainbow Searun Cutthroat
Number of Reports Prepared (E.0.e.1) Number of reports prepared by the project on management or restoration data collected and RM&E outcomes. These reports could be progress reports, monitoring reports, or final reports associated with research. Reports should be uploaded into the PCSRF database (see A.19.a and A.19.b). If none, enter zero.	1	1
Name Of Report (E.0.e.2) Name of report(s) (Author, date, title, source, source address. Endnote citation format). If no reports prepared, enter 'none'.	Asotin Creek Revised IMW Study Plan, Bennett et.al. 2015 **Note:** This document is the most recent and comprehensive of compilations to date for this project (7/13/15). It has served as foundation for the SRFB Monitoring Panel and their review process as well for reporting progress to the PSMFC, and addressing specific needs for the regional monitoring and IMW treatment programs supported by the SRFB for the 2015 grant round	There is an update annual report every calendar year to the SRFB monitoring panel which is entitled 2019 summary report
Project Identified in a Plan or Watershed Assessment (E.0.c) Name of the Plan, Watershed Assessment or Recovery Plan that identifies the need or justification for conducting this project. (Author, date, title, source, source address. Endnote citation format). If project was not identified in a Plan, enter 'none'.	Snake River Recovery Plan	Snake River Recovery Plan
Number of Cooperating Organizations (E.0.d.1) Number of organizations cooperating with this project by concurrently conducting field work on other components of a Comprehensive Strategy or Program. If none, enter zero.	3	3
Name Of Cooperating Organizations (E.0.d.2) Name(s) of cooperating organizations. If none, enter 'none'.	RTT, WDFW, SRSRB	RTT, WDFW, SRSRB
Complement Habitat Restoration Project (E.0.b) Name of the habitat restoration project that is complemented by this project. Record name of the habitat project complemented, project ID number and project sponsor. If project does not complement a habitat project, enter 'none'.	no	no

Monitoring

Field projects that monitor effectiveness of restoration projects; salmonid abundance; biological or physical indices; salmonid harvests; or, water quality/quantity (flow). Monitoring projects collect fish abundance or habitat condition data usually over multiple years to assess trends or to assess effectiveness of restoration actions.

Acres of watershed area monitored (E.1.b.2) Number of acres of watershed area monitored by this project worksite (to nearest 0.1 acre). If there is more than one type of monitoring and the monitoring types overlap area, report total area for all types (i.e., do not double-count areas of overlap).	1.0	1.0

Record Name Of Strategy/Program (E.1.d) Record name of strategy/program (Author, date, title, source, source address. Endnote citation format).	Asotin	Asotin (tbd)
Square miles of water monitored (E.1.b.3) # square miles (to nearest 0.01 mile) of water area monitored.		
Stream Miles Monitored (E.1.b.1) Number of miles of stream monitored for habitat condition, water quality, or salmonid abundance and productivity at this project worksite(to nearest 0.01 mile).	1.00	1.00
Intensively monitored watershed (E.1.c.15) Intensively monitored watershed.		
Total cost for Intensively monitored watershed Enter the cost (to the nearest dollar) of this work type, as close as you can reasonably get it.	$73,643	*Not Collected at Closure*
# acres (to nearest 0.1 acre) Intensively monitored watershed (E.1.c.15.c) # acres (to nearest 0.1 acre) of Intensively monitored watershed.	1.0	1.0
# miles (to nearest 0.01 mile) Intensively monitored watershed (E.1.c.15.a) # miles (to nearest 0.01 mile) of stream in the intensively monitored watershed.	1.00	1.00

Research

Projects that conduct field or laboratory work and/or modeling/analysis of field data to answer salmonid life history or management questions (including salmonid habitat) regarding salmonid restoration or sustainability.

Modeling and data analysis (E.2.b.1) Modeling and data analysis.		
Total cost for Modeling and data analysis Enter the cost (to the nearest dollar) of this work type, as close as you can reasonably get it.		*Not Collected at Closure*
Key issues addressed by modeling and data analysis research (E.2.b.1.a) What key salmonid recovery questions/issues does this modeling and data analysis research address?	Do certain aspects of habitat enhancements and restoration respond with correlating abundance and productivity of salmonids?	Do certain aspects of habitat enhancements and restoration respond with correlating abundance and productivity of salmonids?

Overall Metrics

	Current Agreement	Final
Completion Date		
Projected date of completion Estimated date the scope of work will be completed.	9/30/2016	10/15/201
Project Goals		
Goals, purpose, and expected benefits (A.17) Short description of the goals and purpose of the project and how it is expected to benefit salmonids or salmonid habitat.	The purpose of the project is to link salmon and steelhead responses to specific mechanisms related to habitat restoration	The purpose of the project was to link salmon and steelhead responses to specific mechanisms related to habitat restoration

Monitoring/Research Costs

Date of Last Released Billing 10/07/2019

		Proposed	Final
Worksite: Asotin (#1)			
	SPLIT OUT FINAL TOTAL BELOW	$91,843.00	$791,594.37
Monitoring Costs (E.1.a)		$73,643	$395,797
Research Costs (E.2.a)			$395,797
	Difference		$0

Billed Summary

Date of Last Released Billing 10/07/2019

Category	Project Agreement RCO	Project Agreement Total	Totals To Date Expended	Totals To Date Non Reimbursable	Totals To Date Total Billed
Non-Capital					
Non-Capital Costs			791,594.37		791,594.37
Equipment					
Non-Capital Total	**791,596.00**	**791,596.00**	**791,594.37**		**791,594.37**
Total	791,596.00	791,596.00	791,594.37		791,594.37

Sponsor Match

		Proposed		Final
Project Funding				
PCSRF Federal Funds (A.10)		$158,162.00		$158,162.00
State Funds (A.11)				
Other Federal Funding		$633,434.00		$633,432.37
Sponsor Match: Monetary Funding				
Amount of other monetary funding (A.12)		$0		$0
Source of other monetary funding (A.12.a)	n/a		n/a	
Sponsor Match: Donated Un-paid Labor (volunteers)				
Value of Donated Unpaid Labor (Volunteers) (A.13.a.2)		$0		$0
Source of Donated Un-paid labor contributions (A.13.a.4)	n/a		n/a	
Number of hours volunteers contributed to the project (A.13.a.1)		*Collected at Closure*		0
Describe how the value of the volunteers was determined (A.13.a.3)		*Collected at Closure*	n/a	
Sponsor Match: Donated Paid Labor				
Value of Donated Paid Labor (A.13.b.1)		$0		$0
Source of Donated Paid Contributions (A.13.b.2)	n/a		n/a	
Sponsor Match: Other In-kind Contributions				
Value of Other In-Kind Contributions (A.13.c.1)		$0		$0
Source of Other In-Kind Contributions (A.13.c.3)	n/a		n/a	
Description of other In-Kind contributions (A.13.c.2)	n/a		n/a	
	Amount Total	$791,596		$791,594
	Total Billed			$791,594
	Difference			$0

Attachments

PHOTOS (JPG, GIF)

Photos (JPG, GIF)

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
No attachments match filter criteria						

Certify & Submit

Status History

Report Status	Date	User	Note
Accepted	12/10/2019	Keith Dublanica	Thanks for the Final Report submitted for this project. Please note the product submitted will also be used for the PSMFC project close-out, and for the SRFB monitoring panel review for 2019. A subsequent PSMFC-funded project continues this Asotin IMW and is 19-1545 -kd
Submitted	12/09/2019	Stephen Bennett	
Draft	10/23/2019	Keith Dublanica	