PROJECT: 21-1386 MON,RCH, ASOTIN IMW MONITORING PSMFC 2021

Sponsor: Eco Logical Research Inc. Program: Pacific States Projects Status: Active
Project Start Date: 11/01/2021 Agreement End Date: 09/30/2022

Final Report Status: Accepted 08/31/2022

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. This phase will include:

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

PLEASE NOTE: A COMPLEMENTARY PROJECT SUPPORTED BY THE PSMFC TO WDFW FOR ASOTIN MONITORING /MAINTENANCE

FINAL PROJECT DESCRIPTION

We have provided planning, coordination and project management services for the Asotin IMW for the length of the project. We have also operated, maintained, downloaded data, and analyzed PIT tag arrays, discharge gauges, and temperature probes throughout the watershed. We have also conducted annual juvenile steelhead capture and tagging programs at 12 control and treatment sites in the IMW study area. We have also conducted habitat surveys at 36 habitat monitoring sites. Much of our time is also spent managing, qaqc'ing, and housing these annual data streams. Finally, we have been reviewing and updating our existing data analysis and working to compile a complete temperature an discharge time series for all the monitoring sites in the IMW.

Narrative

Asotin Creeks selected as the site for an IMW by a planning and coordination phase that evaluated multiple watersheds in southeast Washington. Asotin Creek was selected because it is a wild steelhead refuge, has limited hatchery influence, well identified limiting factors, and sufficient adult returns. Local agencies and landowners were consulted during the selection process. The Asotin IMW is part of a group IMWs across the Pacific Northwest designed to study a broad range of species, restoration methods, and stream types. Stephen Bennett of Eco Logical Research (ELR) has been the project principle investigator since the projects inception and ELR has managed the majority of monitoring, restoration, analysis, reporting and project management. WDFW provide valuable data for the IMW by running a fish in fish out monitoring system at the mouth of Asotin Creek. ELR has implemented over 700 large woody debris structures. We have used an approach called Low-tech Process-based Restoration and to install over 700 post-assisted log structures in three study streams. To date we have documented large increases in LWD in the treatment sections which has led to improvements in stream and floodplain habitat. Further analysis has shown that juvenile steelhead abundance, production, and productivity have increased 20-50%. We have learned that maintenance and enhancement is a crucial part of LWD restoration, and that simple low-tech restoration can be very effective, cost-effective, and less destructive to implement than traditional restoration. We have also been able to use wood from forest thinning projects to help reduce the costs of LWD additions and written a manual on low-tech methods to help expand the restoration community and allow a wider group of people to participate in restoration.

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	46.324827	Longitude	-117.213728
For Directions:	Latitude	46.324820	Longitude	-117.213677

SITE ACCESS DIRECTIONS
xxx

Monitoring/Research Metrics

Worksite: Asotin (#1)

	Current Agreement	Final
Targeted salmonid ESU/DPS (A.23)	☐ No Salmon ESU or Steelhead DPS ☑ Chinook Salmon-Snake River Spring/Summer-run ESU ☐ Chinook Salmon-unidentified ESU ☑ Steelhead-Snake River DPS ☐ Steelhead/Trout-unidentified DPS	☐ No Salmon ESU or Steelhead DPS ☑ Chinook Salmon-Snake River Spring/Summer-run ESU ☐ Chinook Salmon-unidentified ESU ☑ Steelhead-Snake River DPS ☐ Steelhead/Trout-unidentified DPS
Targeted species (non-ESU species)	None ☑ Unknown Brook Trout Brown Trout Bull Trout Cutthroat Forage Fish Kokanee Lamprey Rainbow Searun Cutthroat	None Unknown Brook Trout Brown Trout ☑ Bull Trout Cutthroat Forage Fish Kokanee ☑ Lamprey ☑ Rainbow Searun Cutthroat
Priority in Recovery Plan	yes	*Not Collected at Closure*
Number of Reports Prepared (E.0.e.1)	1	1

Name Of Report (E.0.e.2)	Asotin Creek Revised IMW Study Plan, Bennett et.al. 2015 and subsequent annual reports to RCO **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	Asotin Creek Intensively Monitored Watershed Bi-Annual Report: RCO Grant # 21-1386
Project Identified in a Plan or Watershed Assessment (E.0.c)	Snake River Recovery Plan	Snake River Salmon Recovery Plan, 2011. Regional Technical Committee
Number of Cooperating Organizations (E.0.d.1)	6	6
Name Of Cooperating Organizations (E.0.d.2)	RTT, WDFW, SRSRB, USFS, Nez Perce, Asotin county Conservation District	RTT, WDFW, SRSRB, USFW, Nez Perce Tribe, Asotin County Conservation District
Complement Habitat Restoration Project (E.0.b)	Asotin IMW complex	Asotin Creek Restoration adding LWD 11-1573, 12-1637, 15-1321, 17-1304, 19-1499 Asotin Creek Riparian Planting 16-2092

Monitoring

Acres of watershed area monitored (E.1.b.2)	1,000.0	1,000.0
Record Name Of Strategy/Program (E.1.d)	Asotin Creek Intensively Monitored Watershed	Asotin Creek Intensively Monitored Watershed
Stream Miles Monitored (E.1.b.1)	22.00	22.00
Intensively monitored watershed (E.1.c.15)		
Total cost for Intensively monitored watershed	$241,898	*Not Collected at Closure*
# acres (to nearest 0.1 acre) Intensively monitored watershed (E.1.c.15.c)	1,000.0	1,000.0
# miles (to nearest 0.01 mile) Intensively monitored watershed (E.1.c.15.a)	22.00	22.00

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Overall Metrics

	Current Agreement	Final
Completion Date		
Projected date of completion	06/30/2022	06/30/2022
Project Goals		
Goals, purpose, and expected benefits (A.17)	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.	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, ultimately provide information to better evaluate the efficacy of habitat restoration, and provide recommendations to more cost-effectively add LWD to streams and recover populations

Monitoring/Research Costs

Date of Last Released Billing 08/24/2022

	Proposed	Final
Worksite: Asotin (#1)		
SPLIT OUT FINAL TOTAL BELOW	$241,898	$198,203
Monitoring Costs (E.1.a)	$241,898	$198,203
Difference		$0

Billed Summary

Date of Last Released Billing 08/24/2022

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			198,202.74		198,202.74
Non-Capital Total	**241,898.00**	**241,898.00**	**198,202.74**		**198,202.74**
Total	241,898.00	241,898.00	198,202.74		198,202.74

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Sponsor Match

	Proposed	Final
Project Funding		
Federal Funds	$241,898.00	$198,202.74
State Funds (A.11)		

Match Details

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	08/31/2022	Keith Dublanica	thanks for submitting this final report. Please note there is a modified version for PSMFC
Submitted	08/29/2022	Stephen Bennett	
Draft	05/31/2022	Keith Dublanica	