
PROJECT: 18-1824 REST, MILL CREEK FISH PASSAGE IMPROVEMENT

Sponsor: Chelan Co Natural Resource Program: Salmon Federal Projects Status: Active
Project Start Date: 12/05/2018 Agreement End Date: 12/31/2021

Final Report Status: Accepted 12/13/2021

Description

PROJECT AGREEMENT DESCRIPTION

This project will complete design, permitting and replace a fish passage barrier culvert on Mill Creek, a tributary to Peshastin Creek, just off U.S. Highway 97. The proposed project is located at approximately RM 5.2 on Peshastin Creek and will open 2.2 miles of perennial stream providing access to spawning and rearing habitat for ESA-listed steelhead trout. The proposal is to replace the existing 4'x5' box culvert with a 21' span arch culvert.

The proposed match is from the Washington State Brian Abbott Fish Barrier Removal Board.

FINAL PROJECT DESCRIPTION

This project completed designs, permitting and implementation for replacement of a fish passage barrier culvert where Ranch Creek Road (formerly Mountain Home Ranch Road) crosses Mill Creek, a tributary to Peshastin Creek. The crossing is located just off U.S. Highway 97, approximately 200 feet upstream of the Mill Creek/Peshastin Creek confluence. Mill Creek confluences with Peshastin Creek at approximately RM 5.2.

The project replaced a 4'x5' concrete box culvert that was a barrier to both adult and juvenile passage. It constructed a 49ft long, open-bottom, structural plate arch culvert that is 24'8" wide with a 12'4" rise, and approximately 115 ft of step/pool streambed with an average width of approximately 15 ft. It also constructed approximately 250 ft of new asphalt road pavement and approximately 150ft of guardrail along both sides of the road where it crosses the new culvert. Following construction of the culvert, disturbed areas were seeded with a native grass/forb seed mix and mulched to minimize erosion potential. Subsequently, container grown native shrubs were planted to enhance species diversity and vertical structure within the disturbed areas (no trees were planted because of the presence of overhead powerlines). In addition to work at the culvert site, the project corrected a deficiency associated with a log weir system located approximately 600 ft upstream of the culvert. The log weirs were constructed several years earlier by another project sponsor, but scour below the lowest weir during the intervening period caused the lowest structure to become an impediment to fish passage. This project constructed an additional log/slash weir downstream of the original log weirs to aggrade the stream channel and raise water surface elevation downstream of the lowest previously-constructed log weir such that the original weir system would no longer impede fish passage.

As implemented, the completed project provides for unimpeded access to approximately 2.2 miles of spawning and rearing habitat for ESA-listed steelhead trout and rearing habitat for juvenile Chinook salmon.

Narrative

The culvert that conveyed Mill Creek under Ranch Creek Road was identified as a fish passage barrier during a 2016 large-scale passage barrier assessment project completed by Cascade Columbia Fisheries Enhancement Group. It occurred on a road administered by Chelan County Public Works Dept., and the project area included the County road right-of-way and a neighboring private parcel. Projects of this nature improve public health and safety and address identified natural resources needs, so it was consistent with the mission of County government. The owners of the adjacent private parcel support conservation and restoration efforts and have worked with a number of project sponsors to implement conservation and restoration actions on their property.

The project was developed over a several year period as CCNRD worked with the road owner, funders and design engineers to identify a replacement alternative that would meet transportation infrastructure safety and functionality needs while providing for unobstructed passage for aquatic wildlife. Final designs were prepared by Natural Systems Design, a Washington-based engineering and consulting firm based out of Seattle, with input and technical reviews from the project sponsor Chelan County public works, permitting agencies and funders. The preferred alternative was selected through a rigorous process that considered geomorphology, hydrology, stream hydraulics and fish use as well as transportation safety standards and maintenance needs, landowner considerations and adjacent infrastructure.

Construction was completed during summer 2020 by Olin Excavation of Entiat, WA. Construction was supervised and certified by Chelan County Natural Resources Dept. staff and the design engineers at Natural Systems Design. There were no significant change orders needed.

The project has been very successful. During multiple site visits in 2021, juvenile salmonids were observed upstream of the culvert that was replaced and upstream of the existing log weir system. No juvenile salmonids were observed in either location prior to project implementation. These observations indicate that the project successfully restored fish passage above both of the barriers that were treated. In addition, the road owner and adjacent landowners are very happy with the outcome. The new crossing structure will facilitate safe vehicle passage along Ranch Creek Road with limited maintenance for many decades, and it improves the functionality and appearance of the crossing structure for the neighboring property owner.

Lessons Learned:

This project reinforces the importance of working with road owners, permitting agencies, funders, adjacent landowners, utility stakeholders and others throughout the design and implementation process. There are numerous constraints and requirements that can affect these types of projects, and close communication during all phases is vital for a project of this nature to be implemented on time, within budget, and in compliance with applicable environmental regulations.

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Worksites

Worksite #1: Mill Creek crossing

Worksite Address (Optional)
Street Address
City
State, Zip

Worksite Details

Worksite #1: Mill Creek crossing

Worksite Name Mill Creek crossing

WORKSITE DESCRIPTION
Worksite is at a culvert crossing on Ranch Creek Road (formerly Mountain Home Ranch Road) and Mill Creek. Survey, site visits, construction, implementation monitoring.

Geographic Coordinates
From mapped point: Latitude 47.511018 Longitude -120.632282
For Directions: Latitude 47.511243 Longitude -120.632290

SITE ACCESS DIRECTIONS
Drive south on US 97 from the Big Y for about 5 miles and turn right onto Mountain Home Ranch Road. Worksite is about 500' from US 97.

Properties

Worksite #	Worksite Name	Property Name	Sponsor Verified	RCO Verified	RCO Verified Map
1	Mill Creek crossing	John Smith	✓	✓	N/A
1	Mill Creek crossing	Mill Creek crossing	✓	✓	N/A

Restoration Metrics

	Current Agreement	Final
Worksite: Mill Creek crossing (#1)		

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Targeted salmonid ESU/DPS (A.23)	<input type="checkbox"/> No Salmon ESU or Steelhead DPS <input checked="" type="checkbox"/> Chinook Salmon-Upper Columbia River Spring-run ESU <input type="checkbox"/> Chinook Salmon-Upper Columbia River summer/fall-run ESU <input type="checkbox"/> Chinook Salmon-unidentified ESU <input checked="" type="checkbox"/> Steelhead-Upper Columbia River DPS <input type="checkbox"/> Steelhead/Trout-unidentified DPS	<input type="checkbox"/> No Salmon ESU or Steelhead DPS <input checked="" type="checkbox"/> Chinook Salmon-Upper Columbia River Spring-run ESU <input type="checkbox"/> Chinook Salmon-Upper Columbia River summer/fall-run ESU <input type="checkbox"/> Chinook Salmon-unidentified ESU <input checked="" type="checkbox"/> Steelhead-Upper Columbia River DPS <input type="checkbox"/> Steelhead/Trout-unidentified DPS
Targeted species (non-ESU species)	None Unknown Brook Trout Brown Trout <input checked="" type="checkbox"/> Bull Trout Cutthroat Forage Fish Kokanee Lamprey Rainbow Searun Cutthroat	None Unknown Brook Trout Brown Trout <input checked="" type="checkbox"/> Bull Trout Cutthroat Forage Fish Kokanee Lamprey Rainbow Searun Cutthroat
Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.01	0.01
Project Identified In a Plan or Watershed Assessment (C.0.c)	Upper Columbia Salmon Recovery Plan	<i>Not Collected at Closure</i>
Priority in Recovery Plan	This passage barrier was identified as a moderate priority in the 2008 RTT barrier prioritization document	<i>Not Collected at Closure</i>
Type Of Monitoring (C.0.d.1)	<input checked="" type="checkbox"/> Implementation Monitoring None	<input checked="" type="checkbox"/> Implementation Monitoring None
Monitoring Location (C.0.d.2)	<input type="checkbox"/> No monitoring completed <input type="checkbox"/> Downstream <input checked="" type="checkbox"/> Onsite <input type="checkbox"/> Upslope <input type="checkbox"/> Upstream	<input type="checkbox"/> No monitoring completed <input type="checkbox"/> Downstream <input checked="" type="checkbox"/> Onsite <input type="checkbox"/> Upslope <input type="checkbox"/> Upstream

Fish Passage Improvement

Miles Of Stream Made Accessible (FBRB)	2.20
Miles Of Stream Made Accessible (SRFB) (C.2.b.1)	2.20
Type Of Barrier (C.2.b.3)	<input type="checkbox"/> Boulders or rock barriers <input type="checkbox"/> Bridge <input checked="" type="checkbox"/> Culvert <input type="checkbox"/> Debris <input type="checkbox"/> Diversion Dam <input type="checkbox"/> Ford <input type="checkbox"/> Landslide <input type="checkbox"/> Logs <input type="checkbox"/> Push-Up Dam <input type="checkbox"/> Weir <input type="checkbox"/> Wood Or Concrete Dam <input type="checkbox"/> None
Number of blockages / impediments / barriers impeding passage (C.2.b.4)	1

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Bridge installed or improved (C.2.g.1)

Miles of stream made accessible by bridge installation/repair (C.2.g.3)	2.20	2.20
Number of bridges (C.2.g.2)	1	1
Total cost for Bridge installed or improved	\$539,365	<i>Not Collected at Closure</i>

Cultural Resources

Cultural resources

<i>Cultural resource work completed</i>	<i>Collected at Closure</i>	Number
	Acres excavated	0
	Hours of monitoring required	0
	Number of structures documented	0
Total cost for Cultural resources	\$1,920	<i>Not Collected at Closure</i>
Acres surveyed for cultural resources	1.00	0.80

Permits

Obtain permits

Total cost to Obtain permits	\$10,000	<i>Not Collected at Closure</i>
Number of permits required for implementation of project	4	2

Architectural & Engineering

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	\$73,790	<i>Not Collected at Closure</i>
Did A&E costs exceed billed amount (Yes/No)	<i>Collected at Closure</i>	No

Agency Indirect Costs

Agency Indirect

Total cost for Agency Indirect	\$1,000	<i>Not Collected at Closure</i>
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Overall Metrics

	Current Agreement	Final
Completion Date		
Projected date of completion	12/31/2020	10/31/2021
Planned Operation & Maintenance Costs		
Estimated FTE's	Collected on Application	Not Collected at Closure
Estimated O&M Costs	Collected on Application	Not Collected at Closure
O&M Funding Source(s)	Collected on Application	Not Collected at Closure
O&M Activities	Collected on Application	Not Collected at Closure
Project Goals		
Goals, purpose, and expected benefits (A.17)	To improve fish passage thus allowing ESA-listed salmon and steelhead access to more spawning and rearing habitat.	To improve fish passage, allowing ESA-listed anadromous fishes access to approximately 2.2 miles of spawning and rearing habitats that had been blocked by anthropogenic barriers.

Restoration Costs

		Final amounts include a pending billing Date of Last Released Billing 11/04/2021
	Proposed	Final
Worksite: Mill Creek crossing (#1)		
	SPLIT OUT FINAL TOTAL BELOW	
	\$626,075	\$614,980
Fish Passage Costs (C.2.a)	\$539,365	\$505,136
Cultural Resource Costs	\$1,920	\$0
Permits Costs	\$10,000	\$703
Architectural & Engineering Costs	\$73,790	\$103,277
Agency Indirect Costs	\$1,000	\$5,864
	Difference	\$0

Billed Summary

Final amounts include a pending billing
Date of Last Released Billing 11/04/2021

Category	Project Agreement		Totals To Date		
	RCO	Total	Expended	Non Reimbursable	Total Billed
Restoration					
Construction	481,596.15	481,826.92	511,703.26		511,703.26
AA&E	144,478.85	144,248.08	103,276.53		103,276.53
Restoration Total	626,075.00	626,075.00	614,979.79		614,979.79
Total	626,075.00	626,075.00	614,979.79		614,979.79

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Sponsor Match

	Proposed	Final
Project Funding		
Federal Funds	\$131,476.00	\$131,476.00
State Funds (A.11)	\$494,599.00	\$482,453.71
Pending Billing - RCO Share Approved	<i>Collected at Closure</i>	\$1,050.08

Match Details

Match Category	Match Type	Proposed	Final
Other Monetary Funding	Grant - State		
Amount		\$494,599.00	\$0.00
Funding Organization			
Grant Program			

Project Funding Total	\$626,075.00	55.87 %	\$614,979.79	100.00 %
Sponsor Match Total	\$494,599.00	44.13 %	\$0.00	
Project Total	\$1,120,674.00	100.00 %	\$614,979.79	100.00 %
Total Billed			\$614,979.79	
Difference			\$0.00	

Attachments

PHOTOS (JPG, GIF)

Photos (JPG, GIF)



490000 Primary

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	11/01/2021	Photo	Project Photo.jpg	ScottB	Project Photo.jpg, 490000 Final Report, 12/13/2021, Accepted	

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Certify & Submit

Status History

Report Status	Date	User	Note
Accepted	12/13/2021	Marc Duboiski	Great job Scott. Thank you. Merry Christmas!
Submitted	12/06/2021	Scott Bailey	Hi Ameer and Marc, We have completed all aspects of this project, submitted the final billing, and prepared the final report. Thank you for your support. Scott
Returned	11/04/2021	Marc Duboiski	Scott & Sofia, There is not a way to capture indirect costs by bill. So, I am returning the final report. Once you have a grand total of indirect, including the amount for your final bill, then just enter that number into the final report and resubmit. I will remove the cultural resources item today. Thank you!
Submitted	11/01/2021	Scott Bailey	Hi Ameer, We finished construction on this last year, but just wrapped up the revegetation work this fall when we planted some native shrubs within the footprint of disturbance. Please let me know if you need anything else. Thanks Scott
Draft	10/04/2021	Scott Bailey	

PROJECT: 18-1824 REST, MILL CREEK FISH PASSAGE IMPROVEMENTSponsor: [Chelan Co Natural Resource](#) Program: Salmon Federal Projects Status: Active

Project Start Date: 12/05/2018 Agreement End Date: 12/31/2021

PROPERTY: John Smith (1: Mill Creek crossing)

Property BasicsAcquisition ☐ Restoration ☒**Property Location**

Property Name John Smith

Property Address
(optional)

City

State

Zip

Property Description Adjacent upstream landowner, contiguous to Mill Creek culvert, and owns the log weirs for irrigation diversion.

Associated Worksite Mill Creek crossing (#1)

Landowner

Landowner Name John Smith

Address
(optional) 36 Ranch Creek Road

City Peshastin

State WA Zip 98847

Landowner Type Private

Control and Tenure

Instrument Type Landowner Agreement

Timing Proposed

Term Type Fixed # of years

Yrs 10

Expiration Date 12/31/2021

Note

Parcel Numbers

County Name

Chelan

Parcel Number

231806430100

Mapped

Not applicable

Notes (optional)

Recording Numbers

Instrument Type

Recording Number

Notes

Sponsor Clarification☒ The above information is correct and complete**RCO Notes**☒ Property data verified by RCO Staff

Property Report: John Smith (Worksite #1: Mill Creek crossing)


Attachments

PHOTOS (JPG, GIF)
Photos (JPG, GIF)



417627 Secondary

PROJECT DOCUMENTS AND PHOTOS
Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	02/28/2020	Photo	Smith - Mill Creek Parcel	MarcD	Smith - Mill Creek Parcel.jpg, 417627 Property: John Smith	✓

PROJECT: 18-1824 REST, MILL CREEK FISH PASSAGE IMPROVEMENT

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Project Start Date: 12/05/2018 Agreement End Date: 12/31/2021

PROPERTY: Mill Creek crossing (1: Mill Creek crossing)

Property Basics

Acquisition ☒ Restoration

Property Location

Property Name Mill Creek crossing

Property Address
(optional)

City

State

Zip

Property Description Property is mostly on Chelan County Public Works ROW. We will complete survey, site visits and a culvert replacement on this site. A small portion of Smith property will be accessed for the temporary bypass.

Associated Worksite Mill Creek crossing (#1)

Landowner

Landowner Name Chelan County Public Works

Address 316 Washington St., Suite 402
(optional)

City Wenatchee

State WA Zip 98801

Landowner Type Local

Control and Tenure

Instrument Type Temp. Construction Permit

Timing Proposed

Term Type Fixed # of years

Yrs 3

Expiration Date 12/31/2021

Note

Parcel Numbers

County Name	Parcel Number	Mapped	Notes (optional)
No parcels			

Recording Numbers

Instrument Type	Recording Number	Notes
No recordings		

Sponsor Clarification

☒ The above information is correct and complete

RCO Notes

☒ Property data verified by RCO Staff

Property Report: Mill Creek crossing (Worksite #1: Mill Creek crossing)

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
	09/08/2020	Amendment request	Final Mill Creek 18-1824 Cost Increase Approved TPJ.pdf	MarcD	Final Mill Creek 18-1824 Cost Increase Approved TPJ.pdf, 445960 Property: Mill Creek crossing	✓
	10/22/2018	SRFB Review Panel Comment Form	Response to NMI_RP Comment Form 10-11-18 MK (1)	MarcD	18-1824 Mill Creek Fish Passage Barrier 10-11-18 Response to NMI_MK (1).docx, 365262 Property: Mill Creek crossing	✓
	10/22/2018	Salmon Project Proposal	MillCreekFinal_Proposal_NMI_withTrack 10-11-18	MarcD	MillCreekFinal_Proposal_NMI_withTrack 10-11-18.pdf, 365261 Property: Mill Creek crossing	✓