PROJECT: 16-1787 PLAN, PESHASTIN IRRIGATION PUMP EXCHANGE DESIGN

Sponsor: Chelan Co Natural Resource Program: Salmon Federal Projects Status: Active
Project Start Date: 12/07/2016 Agreement End Date: 03/31/2021

Final Report Status: Accepted 05/05/2021

Description

PROJECT AGREEMENT DESCRIPTION

Chelan County will use these funds to work with the Peshastin Irrigation District (PID) to complete preliminary designs for a proposed pump exchange facility that would deliver up to 30 cubic feet per second (cfs) from the Wenatchee River to the Peshastin Irrigation District Canal during late summer critical low flow period. This would allow for a corresponding reduction in diversions from Peshastin Creek, thus increasing instream flow to the lower 2.4 miles of Peshastin Creek and a portion of the Wenatchee River. Increased instream flows in lower Peshastin Creek during the late summer critical low flow period would improve passage conditions for Chinook salmon and bull trout, improve spawning habitat for Chinook salmon, and improve rearing habitat for Chinook salmon, bull trout, and steelhead. An appraisal study was prepared in 2012 to evaluate alternatives for pumping water from the Wenatchee River to the PID Canal. A preferred alternative (Alternative 1) was selected and is the alternative being proposed here. Peshastin Creek is a Priority 2 area with a major spawning population of steelhead, a minor spawning population of Spring Chinook, and a core area for bull trout. The priority action for lower Peshastin Creek is to increase instream flows.

FINAL PROJECT DESCRIPTION

Work completed under this grant include conceptual design drawings for the Dryden pump exchange facilities and an opinion of probable costs. The conceptual design includes the following key facilities:
1) Intake Facilities including intake screen, intake structure, and intake pipeline;
2) Wet Well and Pump Station including wet well, pump station building, pumps, valves, fittings and other appurtenances;
3) Discharge Pipeline; and
4) Delivery to Canal

These conceptual design and cost estimates are included in the project memorandum uploaded.

Narrative

Chelan County Natural Resource Department worked closely with the Icicle and Peshastin Irrigation District and Anchor QEA in completing this work. Anchor QEA completed the design work which is included in the uploaded project memorandum. This memorandum summarizes the project history and specifically how the project scope evolved over time. The Bureau of Reclamation also provided valuable assistance in defining the project concept through their Value Planning Study of this project.

Conceptual design drawings for pump exchange facilities on the Wenatchee River near Dryden serving the Icicle and Peshastin Irrigation District were completed along with an opinion of probable costs. This project has evolved from the original concept of a pump station and delivery pipeline that would supply water for irrigation to the Peshastin Irrigation Canal during late summer only to a new, expanded concept. This new concept includes pump exchange facilities at one or more locations on the Wenatchee River and improvements to the IPID delivery system that will enable delivery of water to both the Peshastin Canal and portions of the Icicle Canal throughout the full irrigation season. This concept would result in the complete elimination of the Peshastin Creek Diversion to the Peshastin Canal and expanded reduction of diversions from Icicle Creek to the Icicle Canal.

The uploaded memorandum and conceptual designs summarize this pump exchange concept and provide conceptual design and cost estimates for one of the pump station locations at Dryden.

While the willingness of the landowner at the pump station location had changed throughout the duration of this project, IPID and Chelan County will be re-engaging discussions with this landowner in the coming months to discuss the expanded pump exchange concept.

An alternatives analysis for the other potential pump station locations and design are being completed under a separate grant (19-1479). This project is being designed to enable potential expansion in the future that could result in a completely closed, pressurized, piped irrigation delivery system supplied entirely through pumping facilities on the Wenatchee River.

Worksites

Worksite #1: Pump Stations on the Wenatchee River

Worksite Address (Optional)
Street Address
City
State, Zip

Worksite Details

Worksite #1: Pump Stations on the Wenatchee River

Worksite Name Pump Stations on the Wenatchee River

WORKSITE DESCRIPTION

This proposal includes developing between conceptual and preliminary designs for two of potentially three pump station locations on the Wenatchee River. One near Dryden, RM 16.5, and another at Stines Hill, RM 13.7 or Cashmere wastewater plant (downstream of Monitor).

Geographic Coordinates

From mapped point:	Latitude	47.541050	Longitude	-120.566307
For Directions:	Latitude		Longitude	

SITE ACCESS DIRECTIONS

The pump station location is on the right bank of the Wenatchee River near Dryden, WA, near RM 16.5 and is near State Highway 2/97.

Properties

The selected project has no properties

Planning Metrics

Worksite: Pump Stations on the Wenatchee River (#1)

	Current Agreement	Final
Targeted salmonid ESU/DPS (A.23)	☐ No Salmon ESU or Steelhead DPS ☑ Chinook Salmon-Upper Columbia River Spring-run ESU ☐ Chinook Salmon-Upper Columbia River summer/fall-run ESU ☐ Chinook Salmon-unidentified ESU ☑ Steelhead-Upper Columbia River DPS ☐ Steelhead/Trout-unidentified DPS	☐ No Salmon ESU or Steelhead DPS ☑ Chinook Salmon-Upper Columbia River Spring-run ESU ☐ Chinook Salmon-Upper Columbia River summer/fall-run ESU ☐ Chinook Salmon-unidentified ESU ☑ Steelhead-Upper Columbia 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
Area Encompassed (acres) (B.0.b.1)	0.5	0.5
Miles of Stream and/or Shoreline Affected (B.0.b.2)	2.40	2.40

Design for Salmon restoration

Preliminary design (B.1.b.11.a RCO)

Total cost for Preliminary design	$169,000	*Not Collected at Closure*
Project Identified in a Plan or Watershed Assessment. (1220) (B.1.b.11.a)	Upper Columbia Salmon Recovery Board 2007. Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. www.ucsrb.org.	Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, August 2007. www.ucsrb.org.
Priority in Recovery Plan (1222) (B.1.b.11.b)	UCSCSSRP, August 2007, Short term restoration actions, Peshastin Creek Assessment Unit, lines 13-14, page 207. Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in Peshastin Creek.	UCSCSSRP, August 2007, Short term restoration actions, Peshastin Creek Assessment Unit, lines 13-14, page 207. Use practical and feasible means to increase stream flows (within the natural hydrologic regime and existing water rights) in Peshastin Creek.
Name and Description of Plan (2297)	*Collected at Closure*	Peshastin Irrigation Pump Exchange Design.

Agency Indirect Costs

Agency Indirect

Total cost for Agency Indirect	$484	*Not Collected at Closure*

Final Report, Project 16-1787

Overall Metrics

	Current Agreement	Final
Completion Date		
Projected date of completion	4/30/2018	03/31/202
Project Goals		
Goals, purpose, and expected benefits (A.17)	To design a project to improve irrigation efficiencies, thus leading to a potential future water savings project, which would provide more instream flow for ESA-listed Chinook and Steelhead.	To design a project to improve irrigation efficiencies, thus leading to a potential future water savings project, which would provide more instream flow for ESA-listed Chinook and Steelhead.

Planning Costs

Final amounts include a pending billing
Date of Last Released Billing 02/12/2021

Worksite: Pump Stations on the Wenatchee River (#1)

	Proposed	Final
SPLIT OUT FINAL TOTAL BELOW	$199,393.00	$199,384.84
Design for Salmon restoration Costs	$169,000	$197,473
Agency Indirect Costs	$484	$1,912
Difference		$0

Billed Summary

Final amounts include a pending billing
Date of Last Released Billing 02/12/2021

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			169,475.84	29,909.00	199,384.84
Equipment					
Non-Capital Total	**169,484.00**	**199,393.00**	**169,475.84**	**29,909.00**	**199,384.84**
Total	169,484.00	199,393.00	169,475.84	29,909.00	199,384.84

Sponsor Match

	Proposed	Final
Project Funding		
PCSRF Federal Funds (A.10)	$169,484.00	$123,218.54
State Funds (A.11)		
Pending Billing - RCO Share Approved		$44,570.62
Retainage - RCO amount retained		$1,686.68
Sponsor Match: Monetary Funding		
Amount of other monetary funding (A.12)	$0	$29,909
Source of other monetary funding (A.12.a)	N/A	Bureau of Reclamation
Timing of other monetary funding		*Not Collected at Closure*
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	$169,484	$199,385
Total Billed		$199,385
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
	04/22/2021	Final project report	Final Conceptual Design Memo & Drawings 03-31-21	MaryJoS	IPID Pump Exchange - Summary of Work Under Original Grant - Memorandum.pdf, 470425 Final Report, 05/05/2021, Accepted	

Certify & Submit

Status History

Report Status	Date	User	Note
Accepted	05/05/2021	Marc Duboiski	Nice salvage! I hope the 2019 grant is able to advance a preferred alternative. Thank you.
Submitted	04/22/2021	MaryJo Sanborn	
Draft	04/22/2021	MaryJo Sanborn	