Chiwaukum Creek Restoration

Cascade Fisheries
Jason Lundgren
PO Box3162
Wenatchee, WA 98807
PRISM #23-1264R

Anticipated SRFB Request: $580,000
Anticipated Trib Comm Request: $382,000
Other Match: $
Anticipated TOTAL Project Budget: $962,000

May 19
Friday, ~~March 10~~, 2023

2023 Regional Project Pre-application

2023 Upper Columbia Regional Project Pre-Application

* Pre-applications due March 10, 2023 (COB)
*Complete applications due in PRISM April 20, 2023 (COB)
*Revised proposals due in PRISM May 19, 2023 (COB)
*Final revised applications due in PRISM June 26, 2023 (noon)

Project Title

Lower Chiwaukum Creek Restoration

Contact Information

Sponsor

Cascade Fisheries

Primary Contact

Jason Lundgren

E-Mail Address

Jason@ccfeg.org

Budget Request

Anticipated Request - SRFB (standard round)

~~450,000~~ $580,000

Anticipated Request - Tributary Committee

~~450,000~~ $382,000

Anticipated TOTAL Budget

~~900,000~~ $962,000

Other Funding Source(s)

These sources paid for the 30% design: USFWS - $26,573 plus in kind, Trib Comm. - $55,098, SRFB $61,158

Project Location

Briefly describe the location of the project

This project takes place along the lower 0.5 miles of Chiwaukum Creek. To access the project area, drive 8 miles west of Leavenworth and turn into Tumwater Campground.

Latitude (decimal degrees)

47.679042

Longitude (decimal degrees)

120.729332

Project subbasin

Wenatchee

Wenatchee Assessment Unit(s)

Chiwaukum Creek

Reach(es) Name

Chiwaukum Creek - 01, Wenatchee River Beaver Creek - 01, Wenatchee River Tumwater 08

Identify the reach(es) priority/ reach ranking. Note: If the project involves work in multiple reaches, select "Multiple" and include details in the text box that will appear below. Please reference the Prioritization Web Map: https://prioritization.ucsrb.org/.

Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

Chiwaukum creek 01 – priority reach, but not ranked
Wenatchee river Tumwater 08 – not priority reach
Wenatchee river Beaver 01 – Rank 3

Project Information

1. What are the project objectives? Objectives support and refine biological goals, breaking them down into small steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). Note: This exact question is included in the PRISM application. Example format: The project seeks to address [specify limiting factor(s)] for [limiting life stage(s)] by [specific actions proposed] to create an estimated [include specific target metrics, as described below] upon implementation in [estimated year].

The objectives of restoring lower Chiwaukum Creek are as follows:

- Increase mainstem Chiwaukum roughness and structure enabling greater floodplain connection, side channel activation, sediment and debris
  accumulation, habitat diversity, and channel dynamics supporting salmonid rearing and spawning.
- Improve adult holding habitat within the mainstem Chiwaukum by creating pools with cover.
- Improve fish passage into Chiwaukum Creek by creating a pool at the confluence with the Wenatchee River.
- Improve holding habitat in the Wenatchee River by adding structure and cover within the cold-water plume extending downstream from the mouth
  of the Chiwaukum

We also hope to improve hyporheic mixing throughout lower Chiwaukum Creek and increase the residence time of a cold-water plume at the confluence with the Wenatchee River.

2. What species will the project benefit?

Spring Chinook | Steelhead | Bull Trout | Summer Chinook | Sockeye

3. Select the project's objectives and the associated tracking metrics

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)

Instream Habitat: Reporting Code

Total miles of instream habitat treated

Acres of channel/off-channel connected or added

Number of structures placed in channel

Pools created through channel structure placement

4. Does this project already exist in Salmon Recovery Portal or PRISM?

No

5. Has this project been submitted previously for funding through the SRFB and/or other process(es)?

Yes

Please explain which process(es) and how this proposal differs from the previous submission (e.g., different phase, modified scope, etc.)

We had a previous design grant funded through SRFB #19-1472P

6. What category is the project?

Restoration

Design and Restoration Proposals

7. What project phase(s) are proposed for completion?

Final Design | Construction

8. Is your project within a completed (or soon-to-be completed) Reach Assessment or other type of assessment (e.g., Rapid Site Assessment, other)?

Upper Wenatchee Reach Assessment

9. Which limiting factors does the project propose to address?

Cover - Wood | Off-Channel - Floodplain | Pool Quantity & Quality | Pools - Deep Pools

Temperature - Adult Spawning | Temperature - Rearing

10. Which life stages will the proposed project address?

Holding and Maturation | Spawning and Incubation | Summer Rearing | Winter Rearing

11. Freshwater Benefits - Describe how will your project improve survival, capacity and/or distribution for target species at the reach scale?

The project location was brought to our attention by a local videographer who filmed schools of adult salmonids holding in a cold-water plume at the confluence of Chiwaukum Creek and the Wenatchee River. The cold-water plume was providing critical refuge to migrating steelhead, Chinook, sockeye and other resident fish species during a particularly warm summer in 2015. This event highlighted the importance of cold-water refuge, and Chiwaukum Creek, for natal and non-natal ESA stocks in the Wenatchee River watershed.

Over a century of anthropogenic impacts has reduced the quantity and quality of fish habitat in Chiwaukum Creek.

Our goal is to promote natural watershed processes by installing large quantities of anchored and unanchored wood and removing infrastructure from the alluvial fan; reintroducing dynamism that creates and maintains habitat.

Once our project objectives are implemented, we expect to increase survival and capacity for listed fish species by greatly increasing the quantity and quality of adult holding, spawning, and year-round rearing.

12. Temporal Effect - Briefly describe how and to what extent the project would promote natural stream/watershed process consistent with the geomorphology of the stream?

Our proposal promotes process-based restoration by removing infrastructure from the floodplain of Chiwaukum Creek. Our goal is to mimic episodic disturbance and dynamism of an unaltered and properly functioning alluvial fan.

13. Temporal Effect - How long will it take for the project to achieve its intended response?

Less than or equal to 1 year

14. Temporal Effect - How long will the restoration action and its benefits persist?

50+ years

15. Temporal Effect - What level and/or interval of maintenance is anticipated? What is the plan for any anticipated maintenance?

We are not anticipating maintenance of the installed wood unless it presents an unacceptable public safety hazard. We will monitor and maintain riparian plantings for a minimum of three years.

16. Methods - Briefly describe the potential (for design) or proposed restoration methods and how they will achieve project objectives.

By utilizing an experienced interdisciplinary design team and best practices, we'll develop engineering designs that meet the needs of our partners and regulatory agencies. Hydraulic modeling, and an iterative design process, should minimize or eliminate design flaws.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership?

Federal - USFS

2. Have you secured landowner participation in or acceptance for this project?

Yes

Please explain

We've been collaborating with the USFS for four years and have their support.

3. Describe any land owner requirements (e.g., design elements, right-of-ways, access agreements, liability waivers, etc.) and if/how they could affect the project

Aside from permitting (NEPA) we're not aware of any landowner requirements that will delay the project.

4. Will the project raise potential concerns for interest groups (e.g., recreational users) or the community at large (including upstream/ downstream/ adjacent landowners)?

The stream restoration project is being coupled with the redevelopment of Tumwater Campground. USFS is providing Cascade Fisheries funding to hire a Landscape Architect to redesign the campground which will involve significant involvement of local outdoor clubs. We're excited about the many benefits this project will provide the community beyond ecological restoration as Tumwater Campground has been closed for the past eight years due to the 2014 Chiwaukum fire.

5. Who will have the responsibility to manage and maintain the project? What is the responsibility of current or future landowners?

Cascade Fisheries will be soley responsible for the implementation and maintenance of the project. USFS will obviously manage the campground, but we'll need to collaborate on managing access to the restored sections of stream and floodplain.

6. Are other projects being proposed immediately upstream or downstream of worksite?

No

7. Please describe the risk of failure associated with this project.

We believe the risk of failure is low as the project will be designed to withstand the 100-year floods. Furthermore, we're reducing risks to infrastructure by removing flood-prone roads and campsites.

8. Is there any public outreach planned during and/or after implementation? Does the project build community support for salmon recovery efforts?

Yes. Through the campground redesign, and NEPA scoping, Cascade Fisheries will be conducting a lot of outreach to the community and outdoor clubs.

9. Does the project represent an opportunity for economic benefit? How much benefit does the project create for the dollars invested?

Yes. Like all of our projects the construction will be publicly bid so local contractors will have the opportunity to build this project, keeping those dollars in Chelan County.

10. Describe any partnerships, their experience, and types of contributions supporting the project.

To date we've partnered with USFS, USFWS (Kate, Robes, Katy), and representatives from the SRFB and Tributary Committee. We've also reached out to biologists and regulators with WDFW, NOAA and USFWS. As mentioned above, new partnerships will be formed during the campground redesign.

Optional Section - Preparation for PRISM

Do you want to review and/or pre-populate PRISM questions?

No

Supporting Documents

Upper Columbia Process Guide 2022 (updates anticipated January 2023)
SRFB Manual 18 (2023)
RCO Application Resources (2023)

Does the proposed project span multiple assessment units?

Yes

List the additional assessment units directly impacted by this proposal.

Wenatchee River Beaver Creek and Tumwater Canyon

PROJECT: 23-1264 REST, LOWER CHIWAUKUM CREEK RESTORATION

Sponsor: Cascade Col Fish Enhance Group Program: Salmon Federal IIJA Projects Status: Active

Parties to the Agreement

PRIMARY SPONSOR

Cascade Columbia Fisheries Enhancement Group

Address PO Box 3162

City Wenatchee **State** WA **Zip** 98807

Org Type Non-Gov-Reg Fisheries Enhance Group

Vendor # SWV0010742-00

UBI

Date Org created

Org Notes

link to Organization profile

☐ Org data updated

SECONDARY SPONSORS

No records to display

MANAGING AGENCY

Recreation and Conservation Office

LEAD ENTITY

Upper Columbia Salmon Rcy Bd L

QUESTIONS

#1: List project partners and their role and contribution to the project.

USFS - landowner, technical and regulatory assistance, funder of campground redesign
USFWS - funding and technical assistance
HCP Tributary Committee - funding and technical assistance
RCO/SRFB - funding

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

EXTERNAL SYSTEM REFERENCE

Source	Project Number	Submitter
HWS	23-1264	DHecker

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Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
Amee Bahr Rec. and Conserv. Office	Project Manager	(360) 867-8585	Amee.Bahr@rco.wa.gov
Doran Lower Rec. and Conserv. Office	MAgy Fiscal Contact	(360) 902-3007	doran.lower@rco.wa.gov
Jason Lundgren Cascade Col Fish Enhance Group	Project Contact	(509) 476-3444	jason@ccfeg.org
David Hecker	Lead Entity Contact	(208) 869-9446	dave.hecker@ucsrb.org
Shelly Swanson Cascade Col Fish Enhance Group	Billing	(509) 670-0805	Accounting@ccfeg.org

Worksites & Properties

#	Worksite Name
#1	Lower Chiwaukum Creek / Tumwater Campground

Restoration	Property Name
✓	Tumwater Campground

Worksite Map & Description

Worksite #1: Lower Chiwaukum Creek / Tumwater Campground

WORKSITE ADDRESS

Street Address 600 Sherbourne
City, State, Zip Leavenworth WA 98826

Worksite Details

Worksite #1: Lower Chiwaukum Creek / Tumwater Campground

SITE ACCESS DIRECTIONS

drive about 9 miles west from Leavenworth and park at the entrance of Tumwater Campground

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Upper Columbia River Spring, Wenatchee River, Endangered	✓	✓	✓	Declining
Steelhead-Upper Columbia River, Wenatchee River, Threatened	✓	✓	✓	Declining

Reference or source used

UCSRB

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	
Cutthroat	
Unknown	sockeye

Questions

#1: Give street address or road name and mile post for this worksite if available.

drive about 9 miles west from Leavenworth and park at the entrance of Tumwater Campground

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Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Program Name	Current Status	Relationship Type	Notes
19-1472 P	Lower Chiwaukum Crk Preliminary Design - Phase 1	Salmon State Projects	Closed Completed	Earlier Phase	we completed a preliminary design in 2021

Related Project Notes

Questions

#1: Project location. Describe the geographic location, water bodies or habitat types, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

The lower Chiwaukum project is located about 9 miles west of Leavenworth at the confluence of the Wenatchee River and Chiwaukum Creek. The project will focus on the lower 0.75 miles of Chiwaukum Creek and adjacent floodplain as well as ~300 meters of the mainstem Wenatchee River.

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

Chiwaukum Creek is not specifically listed in the UC Spring Chinook and Steelhead Recovery Plan. The creek/site is located at the junction of three Assessment Units - Wenatchee River-Tumwater Canyon, Wenatchee River-Beaver Creek and Chiwaukum Creek.

#3: Is this project part of a larger overall project?

Yes

#3a: How does this project fit into the sequencing of the larger project?

The first phase of the project was completing a preliminary design in 2021. This proposal is for the second phase which includes final design, permitting and implementation. A concurrent phase will be redesigning the campground and related facilities (water, sewer, etc.) using USFS funding.

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. **Aquatic Districts and Managers**

Yes

Landowner acknowledgement is included from DNR.

Property Details

Property: Tumwater Campground (Worksite #1: Lower Chiwaukum Creek / Tumwater Campground)

✓ **Restoration**

LANDOWNER

Name	USFS
Address	215 Melody Lane
City	Wenatchee
State	WA Zip 98801
Type	Federal

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	12/31/2033
Note	

Project Proposal

Project Description

Chiwaukum Creek is an important perennial stream that provides cold water refuge and spawning and rearing habitat for ESA listed bull trout, Chinook salmon and steelhead trout in the Upper Wenatchee River. Other non-listed species also utilize Chiwaukum Creek and it's confluence with the Wenatchee river such as sockeye, rainbow trout, mountain whitefish, and others. Lower Chiwaukum Creek and its floodplain have been severely impacted by logging and the construction of Highway 2 and the Tumwater Campground. These actions and features have greatly constrained habitat and habitat forming processes. Our project seeks to remove campground infrastructure and install wood to improve floodplain connectivity, instream complexity, and cold-water refuge in the lower 0.75 miles of Chiwaukum Creek and the confluence with the Wenatchee River.

Project Questions

#1: Problem statement. What are the problems your project seeks to address? Include the source and scale of each problem. Describe the site, reach, and watershed conditions. Describe how those conditions impact salmon populations. Include current and historic factors important to understand the problems.

The lower 0.75 miles of Chiwaukum Creek has been severely impacted by past logging practices and the construction and operation of Highway 2 and the Tumwater Campground. While limited scientific information exists for this tributary, general habitat observations include; 1) much of the alluvial fan is occupied by the campground, resulting in a constrained stream channel and disconnected side channels, 2) sparse instream woody debris, pools, gravel sorting and habitat complexity exists in this reach, 3) the bed of Chiwaukum is armored plane bed morphology. Chiwaukum Creek is a perennial cold-water tributary of the upper Wenatchee that is utilized by all ESA fish species in the Wenatchee basin. Natal and non-natal fish benefit from this cold water source, especially during summer when water temperatures in the Upper Wenatchee are often at the upper threshold for threatened and endangered species. Summer water temperatures are rising in many river systems in North America, and this warming trend is projected to intensify in the coming decades. Cold-water fish may alleviate thermal stress in summer by aggregating in discrete cold-water plumes that provide thermal refuge from high ambient river temperatures. (RESERVING, AUGMENTING, AND CREATING COLD-WATER THERMALREFUGIA IN RIVERS, B. L. KURYLYK et al., ECOHYDROLOGY, 2014)

#2: Describe the limiting factors, and/or ecological concerns, and limiting life stages (by fish species) that your project expects to address.

Although very little data exists for Chiwaukum Creek, habitat restoration potential is high along the lower 0.75 miles of the creek. Actions such as wood supplementation will create instream habitat and hydraulic complexity which will promote substrate retention and sorting, improve hyporheic exchange and potentially increase spawning opportunities. Removing campsites and associated roads will promote dynamic natural processes across the alluvial fan and provide access to a network of off channel rearing areas.
Wood will also be utilized to promote localized bank scour and force water into lowlying floodplain channels. These actions are consistent with natural process and should improve conditions for spawning and juvenile rearing throughout lower Chiwaukum and the conflunce with the Wenatchee River. Since Chiwaukum Creek tends to be cooler than the Wenatchee mainstem these actions should increase cold water refuge for natal and non-natal fish (Chinook, steelhead and bull trout) during the summer migration and spawning period in the Upper Wenatchee.

#3: What are the project goals? The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized. **Example Goals and Objectives**

The project is centered on two interconnected goals:
1) To restore and enhance spawning and rearing habitat for all species of salmonids in Lower Chiwaukum Creek and the adjacent Wenatchee River, and
2) To improve the Tumwater Campground layout to accommodate habitat restoration and mitigate flood risk.

#4: What are the project objectives? Objectives support and refine biological goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). **Example Goals and Objectives**

The project has five main objectives:
1) Increase roughness and structure in Chiwaukum Creek, enabling greater floodplain connection, side channel activation, sediment sorting and debris accumulation, habitat diversity, and channel dynamics supporting salmonid rearing and isolated spawning.
2) Improve adult holding habitat within Chiwaukum Creek by creating pools with cover.
3) Improve fish passage into Chiwaukum Creek by concentrating flow at strategic locations to promote scour pool formation at the confluence with the Wenatchee River where a steep and coarse alluvial bar/fan exists which is speculated to inhibit passage at low flows due to shallow water depth.
4) Improve holding habitat in the Wenatchee River by adding structure and cover within a known cold-water plume originating from the mouth of Chiwaukum Creek and extending downstream within the Wenatchee River.
5) Identify and decommission areas within the Tumwater Campground that have high flood risk and allow existing side channels in these areas to activate more frequently.

Project objectives will be achieved by three key proposed actions:
1) Install large woody debris structures within Chiwaukum Creek to achieve Objectives 1, 2, and 3.
2) Install large woody debris structures within the Wenatchee River to achieve Objective 4.
3) Remove campground amenities including asphalt roads, campsites, and utilities in the low-lying floodplain areas

#5: Scope of work and deliverables. Provide a detailed description of each project task/element. With each task/element, identify who will be responsible for each, what the deliverables will be, and the schedule for completion.

Task 1. Reconvene design team.
Task 2. (With funding from USFS) Issue RFQ and hire landscape architecture firm.
Task 3. (USFS Funding) Convene recreation work group and redesign campground.
Task 3. Complete 80% design (mesh aquatic and campground restoration).
Task 4. Permitting - NEPA
Task 5. Complete final design and construction specifications.
Task 5. Conduct competitive bid process.
Task 6. Implementation (2025/26)
Task 7. Monitoring

#6: What are the assumptions and physical constraints that could impact whether you achieve your objectives? Assumptions and constrains are external conditions that are not under the direct control of the project, but directly impact the outcome of the project. These may include ecological and geomorphic factors, land use constraints, public acceptance of the project, delays, or other factors. How will you address these issues if they arise?

Assumptions
1. We're successful with our SRFB and Tributary requests.
2. We receive funding from USFS to design campground and convene an engaged work group.
3. We're included on the 2024 USFS program of work.

Constraints
1. Permitting dictates major changes to design.
2. Cultural resources prevent proposed project and scope.
3. Boater safety prevents mainstem Wenatchee logjams.
4. Wildfire impacts site or schedule.

#7: How have lessons learned from completed projects or monitoring studies informed this project?

One of the major lessons that CF learned during the Merritt Oxbow project (and others) is that without thorough and concise feedback from the design team during early design phases, we run the risk of redesigning major project elements which causes delays and increases costs. We've done our best to have an inclusive design process so that our 30% is generally supported by WDFW, USFWS, NOAA and several of our local technical personnel. We've also learned to balance being persistent yet patient with the USFS as they're juggling many projects and priorities.

#8: Describe the alternatives considered and why the preferred was chosen.

Through the alternatives analysis process, two significant elements were removed from the current preliminary design:
1) We reduced the number of log jams in the "upper" reach of the project due to USFS feedback and because this reach has more pools, wood, and braiding i.e., better habitat.
2) We removed the pilot channels on the left bank due to stranding concerns and because of the impacts and cost.

#9: How were stakeholders consulted in the development of this project? Identify the stakeholders, their concerns or feedback, and how those concerns were addressed.

Our design team convened the landowner (USFS), funders, local fish biologists and some regulatory staff. This group informed the design and ultimately supported the preliminary design. During subsequent phases, Cascade Fisheries will convene an entirely new design team made up of local outdoor recreation clubs (hiking, climbing, kayaking, etc.) to help redesign the campground. This will be a wonderful opportunity to benefit many other user groups not commonly involved in aquatic restoration. We will do more early engagement with regulatory agencies as well, although we expect permitting to largely be funneled through the NEPA process.

#10: Does your project address or accommodate the anticipated effects of climate change?

Yes

#10a: How will your project be climate resilient given future conditions?

The greatest attribute of Chiwaukum Creek is the cold water refuge provided for natal and non-natal native fish species in the Upper Wenatchee watershed. As Russ Rickets documented in 2015, Chiwaukum Creek and its confluence with the Wenatchee River serves as a lifeline for fish during a vulnerable life stage prior to spawning. By reconnecting Chiwaukum Creek with its floodplain and enhancing the vertical connection to its hyporheic zone, we're likely to see greater cold water benefits both temporarily and spatially.

#10b: How will your project increase habitat and species adaptability?

By removing roads and campsites and adding large quantities of wood, we will replicate and promote natural and dynamic processes found in undisturbed stream corridors. Reintroducing this dynamism to the lower 0.75 miles of Chiwaukum Creek will provide a variety of habitats that will be available through a range of flows and life cycle needs.

#11: Describe the sponsor's experience managing this type of project. Describe other projects where the sponsor has successfully used a similar approach.

Cascade Fisheries staff have 30 years of combined restoration experience. Our organization has a solid track record of building trusting and collaborative relationships and building good projects throughout the Upper Columbia region.

#12: Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.

No

Restoration Supplemental

#1: What level of design (per Appendix D) have you completed? Please attach.
Preliminary

#1a: What level of design will be produced prior to construction?
Final

#2: Will (or did) a licensed professional engineer design the project?
Yes

#3: Does the project include measures to stabilize an eroding stream bank?
No

#4: Is the primary activity of the project invasive species removal?
No

#5: Is the primary activity of the project riparian planting?
No

#6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

Our design is following BPA's HIP III best management practices that outline necessary steps to minimize the risk of spreading invasive species.

#7: Describe the long-term stewardship and maintenance obligations for the project.

Cascade Fisheries can commit to annual implementation monitoring to ensure the project is functioning as designed. While we welcome dynamism, but if any project elements threaten public safety we will work with our funders and partners to rectify any situations that arise.

Restoration Metrics

Worksite: Lower Chiwaukum Creek / Tumwater Campground (#1)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.75
Project Identified In a Plan or Watershed Assessment (C.0.c)	Upper Columbia Salmon and Steelhead Recovery Plan
Priority in Recovery Plan	Addresses priority rearing and spawning habitat.
Type Of Monitoring (C.0.d.1)	Implementation Monitoring
Monitoring Location (C.0.d.2)	Onsite

INSTREAM HABITAT PROJECT

Total Miles Of Instream Habitat Treated (C.4.b)	0.75

Channel reconfiguration and connectivity (C.4.c.1)

Total cost for Channel reconfiguration and connectivity	$166,000
Type of change to channel configuration and connectivity (C.4.c.2)	Creation of Instream Pools Creation/Connection to Off-Channel Habitat Levee removal/Alteration
Miles of Stream Treated for channel reconfiguration and connectivity (C.4.c.3)	0.75
Miles of Off-Channel Stream Created or Connected (C.4.c.4)	0.25

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Acres Of Channel/Off-Channel Connected Or Added (C.4.c.5)	1.5
Instream Pools Created/Added (C.4.c.6)	16
Channel structure placement (C.4.d.1)	
Total cost for Channel structure placement	$380,000
Material Used For Channel Structure (C.4.d.2)	Individual Logs (Anchored) Individual Logs (Unanchored) Logs Fastened Together (Logjam)
Miles of Stream Treated for channel structure placement (C.4.d.3)	0.50
Pools Created through channel structure placement (C.4.d.5)	16
Number of structures placed in channel (C.4.d.7)	50
CULTURAL RESOURCES	
Cultural resources	
Total cost for Cultural resources	$10,000
Acres surveyed for cultural resources	10.00
PERMITS	
Obtain permits	
Total cost to Obtain permits	$52,000
Number of permits required for implementation of project	2
ARCHITECTURAL & ENGINEERING	
Architectural & Engineering (A&E)	
Total cost for Architectural & Engineering (A&E)	$90,000
AGENCY INDIRECT COSTS	
Agency Indirect	
Total cost for Agency Indirect	$4,000

Overall Project Metrics

COMPLETION DATE	
Projected date of completion	12/31/2027

Restoration Cost Estimates

Worksite #1: Lower Chiwaukum Creek / Tumwater Campground

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$4,000	
Cultural Resources	Cultural resources	$10,000	
Instream Habitat Project	Channel reconfiguration and connectivity (C.4.c.1)	$166,000	
	Channel structure placement (C.4.d.1)	$380,000	
Permits	Obtain permits	$52,000	
	Subtotal:	$612,000	
Admin, Architecture, and Engineering		$90,000	
	Total Estimate For Worksite:	$702,000	

Summary

Total Estimated Costs Without AA&E:	$612,000
Total Estimated AA&E:	$90,000
Total Estimated Restoration Costs:	$702,000

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
Restoration Costs			
Restoration	$612,000		
Admin, Architecture, and Engineering	$90,000		14.80 %
SUBTOTAL	$702,000	100.00 %	
Total Cost Estimate	$702,000	100.00 %	

Funding Request and Match

FUNDING PROGRAM

Salmon State Projects	$580,000	82.621083 '

SPONSOR MATCH

OTHER MONETARY FUNDING	GRANT - OTHER		
Amount			$122,000.00
Funding Organization			Chelan PUD
Grant Program			HCP Tributary Committee
		Match Total:	$122,00017.378917 '
		Total Funding Request (Funding + Match):	$702,000100.00000(

Questions

#1: Explain how you determined the cost estimates

cost estimate we're based off the 30% design. we added additional costs for inflation (10%), interpretive signs, project management, and administration.

Cultural Resources

Cultural Resource Areas

Worksite #1: Lower Chiwaukum Creek / Tumwater Campground

Area: APE Lower Chiwaukum/Tumwater Campground

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

the project involves excavation, decommission of roads and campsites, installation of logjams, native plants and interpretive signs.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

The disturbance area is roughly 10 acres within the APE

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

preconstruction activities include had dug pits with a shovel during wetland delineation and cultural resource assessment.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

the existing area is a federal campground with large conifer and deciduous trees. Land uses likely included indigenous use, followed by logging and early settlement.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Yes

#5a: List the agency that will be issuing the permit and the date you anticipate applying for and receiving the permit. Will the federal permit cover ALL proposed ground disturbing activities included in the project?

USFS, USFWS, Army Corps, NEPA. We will apply for permits in 2025

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

potentially USFWS, USFS, and BPA

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

No

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

Yes

#8a: Please name the area and specify when the site was established.

USFS Tumwater Campground

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

Yes

Project Application Report - 23-1264

#9a: List the structure(s) and the properties that are located within the project area. Identify which structures will be removed or altered as part of this proposal. Attach at least one photo of each structure. The photo must be labeled so that the structure may be geographically located within your project area.

We will be redesigning the campground in the coming year so we're not sure which structures will be removed and replaced. I believe the campground structures are older than 45 years.

Project Permits

Permits and Reviews	Issuing Organization	Applied Date	Received Date	Expiration Date	Permit #
Aquatic Lands Use Authorization	Dept of Nat. Res.	10/01/2025			
NEPA	Federal Agencies	06/30/2025			

Permit Questions

#1: Are you planning on using the federal permit streamlining process? **Limit 8**

Yes

Attachments

Required Attachments	6 out of 6 done
Applicant Resolution/Authorizations	✓
Cost Estimate	✓
Landowner acknowledgement form	✓
Map: Restoration Worksite	✓
Photo	✓
RCO Fiscal Data Collection Sheet	✓

PHOTOS (JPG, GIF)

Photos (JPG, GIF)


557937


563350


563352


563353


563354

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	10/31/2023	Agreement - State	23-1264 Agreement - Lower Chiwaukum Creek Restoration - sign	DeenaR	23-1264 Agreement - Lower Chiwaukum Creek Restoration - signed.pdf, 583682	✓
	10/18/2023	Land Ownership Certification Form	SAL-AppE-LandownerCert Lower Chiwaukum Cr signed	AmeeB	SAL-AppE-LandownerCert Lower Chiwaukum Cr signed.pdf, 582443	
	10/06/2023	Map: Area of Potential Effect (APE)	Project APE Report (10/06/23 16:33:36)	MarkJ	Project APE Report - 23-1264 (10-06-2023_16-33-36).pdf, 581429	✓
	10/06/2023	Cultural Resource Screening Report	Project Cultural Resource Screening Report (10/06/23 16:33:3	MarkJ	Project Cultural Resource Screening Report - 23-1264 (10-06-2023_16-33-36).pdf, 581428	✓
	10/06/2023	Project Application Report	Project Application Report, 23-1264R (sub 10/06/23 16:33:35)	MarkJ	Project Application Report - 23-1264 (submitted 10-06-2023_16-33-35).pdf, 581427	✓
	10/06/2023	Project Review Comments	Proj Review Comments Final, 23-1264R(compl 10/06/23 16:33)	MarkJ	Project Review Comments Report - 23-1264 (compl 10-06-2023_16-33-18).pdf, 581426	✓
	10/06/2023	Project Review Comments	Proj Review Comments LE, 23-1264R(compl 10/06/23 16:33)	MarkJ	Project Review Comments Report - 23-1264 (compl 10-06-2023_16-33-14).pdf, 581425	✓
	10/06/2023	Project Review Comments	Proj Review Comments Initial, 23-1264R(compl 10/06/23 16:33)	MarkJ	Project Review Comments Report - 23-1264 (compl 10-06-2023_16-33-09).pdf, 581424	✓
	07/17/2023	Application Review Report	Grant Manager Comments, 23-1264R(compl 07/17/23 10:42)	AmeeB	Grant Manager Comments Report - 23-1264 (compl 07-17-2023_10-42-09).pdf, 571301	✓
	06/26/2023	Project Application Report	Project Application Report, 23-1264R (sub 06/26/23 11:41:30)	JasonL	Project Application Report - 23-1264 (submitted 06-26-2023_11-41-30).pdf, 567834	✓
	06/26/2023	Cost Estimate	Chiwaukum Cost Estimate 2023.xlsx	JasonL	Chiwaukum Cost Estimate 2023.xlsx, 567829	✓
	05/24/2023	Application Review Report	Grant Manager Comments, 23-1264R(rtnd 05/24/23 10:12)	AmeeB	Grant Manager Comments Report - 23-1264 (rtnd 05-24-2023_10-12-44).pdf, 563720	✓
	05/23/2023	Project Application Report	Project Application Report - 23-1264 (1).pdf	DavidH	Project Application Report - 23-1264 (1).pdf, 563574	✓
	05/18/2023	Preliminary design report	Lower_Chiwaukum_30pct_Design_Report	JasonL	Lower_Chiwaukum_30pct_Design_Re… 563380	✓

Project Application Report - 23-1264

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	05/18/2023	Photo	Derby Creek ford.jpg	JasonL	Derby Creek ford.jpg, 563354	✓
	05/18/2023	Photo	site 1.JPG	JasonL	site 1.jpg, 563353	✓
	05/18/2023	Photo	IMG_1850.JPG	JasonL	IMG_1850.jpg, 563352	✓
	05/18/2023	Photo	IMG_1845.JPG	JasonL	IMG_1845.jpg, 563350	✓
	05/18/2023	Application Document	Lower Chiwaukum Creek Cover Page.docx	JasonL	Lower Chiwaukum Creek Cover Page.docx, 563347	✓
	05/18/2023	Visuals	Lower Chiwaukum Cr RTT SRFB 2023.pdf (1)	AmeeB	Lower Chiwaukum Cr RTT SRFB 2023.pdf (1).pdf, 563211	✓
	05/09/2023	Cost Estimate	App_D_Chiwaukum_30pct_Design_CostE:	JasonL	App_D_Chiwaukum_30pct_Design_C… 562458	✓
	04/20/2023	Project Application Report	Project Application Report, 23-1264R (sub 04/20/23 20:05:24)	JasonL	Project Application Report - 23-1264 (submitted 04-20-2023_20-05-24).pdf, 558918	✓
	04/20/2023	RCO Fiscal Data Collection Sheet	FiscalDataCollectionSheet CF 2023 Chiwaukum.pdf	JasonL	FiscalDataCollectionSheet CF 2023 Chiwaukum.pdf, 558909	
	04/20/2023	Applicant Resolution/Authorizations	RCO-AppAuthorization_2023 Cascade Fisheries.pdf	JasonL	RCO-AppAuthorization_2023 Cascade Fisheries.pdf, 558908	✓
	04/12/2023	Photo	spawning clip.JPG	JasonL	spawning clip.jpg, 557937	✓
	04/12/2023	Map: Restoration Worksite	Lower Chiwaukum Cr RTT SRFB 2023.pdf	JasonL	Lower Chiwaukum Cr RTT SRFB 2023.pdf, 557936	✓
	04/12/2023	Preliminary design report	App_B_Chiwaukum_30pct_Design_Modelf	JasonL	App_B_Chiwaukum_30pct_Design_M… 557934	✓
	04/12/2023	Preliminary design report	App_A_Chiwaukum_30pct_Design_Drawir	JasonL	App_A_Chiwaukum_30pct_Design_D… 557933	✓
	04/12/2023	Landowner acknowledgement form	CascadeFisheries_LandownerAckForm_L DNR.pd	JasonL	CascadeFisheries_LandownerAckFor… DNR.pdf, 557931	
	04/12/2023	Landowner acknowledgement form	Landowner_Ack_Form- Lower Chiwaukum Cr_1_sign.pdf	JasonL	Landowner_Ack_Form- Lower Chiwaukum Cr_1_sign.pdf, 557930	

Application Status

Application Due Date: null

Status Name	Status Date	Submitted By	Submission Notes
Application Complete	07/17/2023	Amee Bahr	Thank you for addressing the comments. Your project is clear for funding once approved in September. Please let me know if you have any questions.
Application Resubmitted	06/26/2023	Jason Lundgren	fixed the match issues. thanks!
Application Returned	05/24/2023	Amee Bahr	Thanks for submitting your application. It looks like we need a little more information. Please respond to the Review Panel and Grant Manager Comments and resubmit the application by June 26th. Let me know if you have any questions.
Application Submitted	04/20/2023	Jason Lundgren	
Preapplication	04/04/2023		

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them. (Jason Lundgren, 06/26/2023)

Date of last change: 03/18/2024

RESTORATION

				OVERALL PROJECT	GRANT REQUEST	MATCH			
				Budget must account for all costs to complete the project	*Enter only the amount of the grant request*	*The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.*			
				Amount	Grant Amount	Match in PRISM	Funding not reported in PRISM	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Match Type (federal, state, local)
Construction									
Category (choose one)	**Task Description**	**Qty**	**Rate**						
Construction	*Total const. estimate*	1.00	$ 760,000.00	$ 760,000	$ 380,000	$ 100,000	$ 280,000		
Permitting	*CF and Rio (wetland, NEPA)*	1.00	$ 30,000.00	$ 30,000	$ 30,000	$ -	$ -		
Construction supervision	*survey and construction oversight (Rio ASE)*	1.00	$ 32,000.00	$ 32,000	$ 16,000	$ -	$ -		
Cultural resources	*sub contractor*	1.00	$ 10,000.00	$ 10,000	$ 10,000	$ -	$ -		
Interpretive signs		6.00	$ 6,000.00	$ 36,000	$ 18,000	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 868,000**	**$ 454,000**	**$ 100,000**	**$ 280,000**		

Administrative, Architechtural & Engineering				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
Category	**Task Description**	**Qty**	**Rate**						
Final design	*Final design, final BDR, bid doc*	1.00	$ 50,000.00	$ 50,000.00	$ 50,000	$ -	$ -		
Project management		1.00	$ 28,000.00	$ 28,000.00	$ 28,000	$ -	$ -		
Administration and billing		1.00	$ 12,000.00	$ 12,000.00	$ 12,000	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 90,000**	**$ 90,000**	**$ -**	**$ -**		

Indirect Costs				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
	Description	**Approved Rate**	**Total Project Base**						
	Indirect	10.000%	$ 40,000.00	$ 4,000	$ 2,000	$ 2,000	$ -		
	Indirect	0.000%	$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 4,000**	**$ 2,000**	**$ 2,000**	**$ -**		

AA&E Budget Check		Totals	**$ 962,000**	**$ 546,000**	**$ 102,000**	**$ 280,000**
A&E maximum allowed in PRISM $	*166,200.00*			**PRISM Project Total**	$ 648,000	
A&E validation	76,200			**RCO Percentage**	**Match Percentage**	
				84.259259%	**15.740741%**	

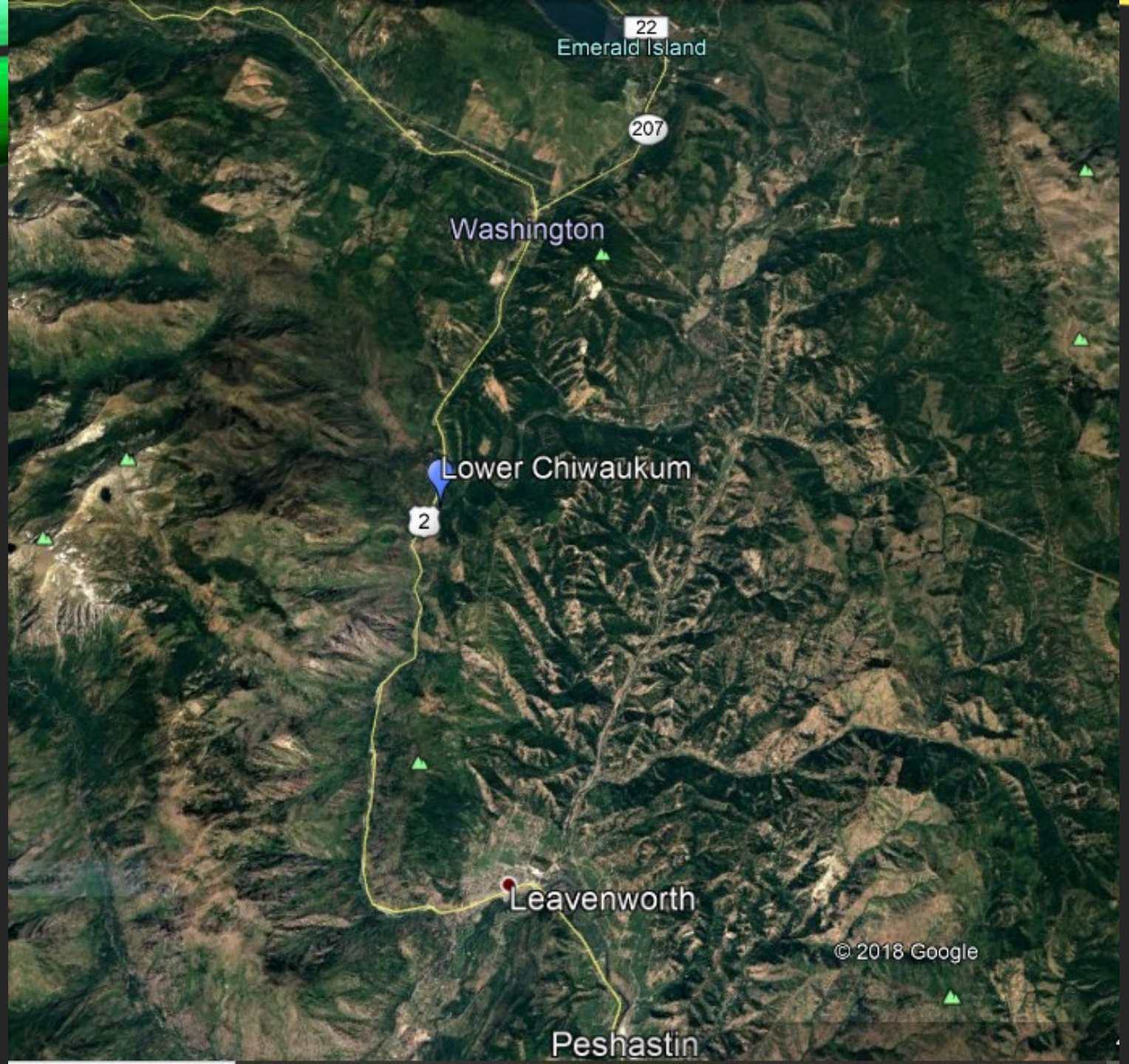
CUMULATIVE TOTALS

This sheet contains automatic calculations

Project Name	Restore Lower Chiwaukum Creek
SRFB #	enter
Sponsor	Cascade Fisheries

	OVERALL PROJECT Cost	GRANT REQUEST Amount	PRISM MATCH Amount	MATCH NOT IN PRISM Amount	*Budget Check*
Sheet #1 Acquisition					
Property Costs	$ -	$ -	$ -	$ -	0
Incidental Costs	$ -	$ -	$ -	$ -	0
Administrative Costs	$ -	$ -	$ -	$ -	0
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #2 Design					
Design Costs	$ -	$ -	$ -	$ -	
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #3 Restoration					
Construction Costs	$ 868,000	$ 454,000	$ 100,000	$ 280,000	34,000
AA&E	$ 90,000	$ 90,000	$ -	$ -	0
Indirect Costs	$ 4,000	$ 2,000	$ 2,000	$ -	
STotal	$ 962,000	$ 546,000	$ 102,000	$ 280,000	34,000
Totals	$ 962,000	$ 546,000	$ 102,000	$ 280,000	34,000

CASCADE FISHERIES



FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Habitat Conservation Plan
Wells, Rocky Reach, Rock Island Tributary Committees

BUREAU OF RECLAMATION

Salmon Recovery Funding Board

Cascade Col Fish Enhance Group; Lower Chiwaukum Creek Restoration (#23-1264)

Attachment #563354, Derby Creek ford.jpg

Cascade Col Fish Enhance Group; Lower Chiwaukum Creek Restoration (#23-1264)

Attachment #563353, site 1.JPG

Cascade Col Fish Enhance Group: Lower Chiwaukum Creek Restoration (#23-1264)

Attachment #563350, IMG_1845.JPG

Cascade Col Fish Enhance Group; Lower Chiwaukum Creek Restoration (#23-1264)

Attachment #563352, IMG_1850.JPG