



Thursday, February 24, 2022

2022 Regional Project Pre-application

2022 Upper Columbia Regional Project Pre-Application

* Pre-applications due February 28, 2022 at 12pm

*Complete applications due April 20, 2022

*Final applications due May 19, 2022 at 12pm

***Project Title**

Upper Peshastin Stream and Road Restoration

Contact Information

***Sponsor**

Chelan County Natural Resource Department

***Primary Contact**

Bryan Maloney

***E-Mail Address**

bryan.maloney@co.chelan.wa.us

Budget Request

***Anticipated Request - SRFB (standard round)**

99021

***Anticipated Other Funding**

17475

***Anticipated TOTAL Budget**

116496

***Other Funding Source(s)**

Chelan County Natural Resource Department

Project Location

***Briefly describe the location of the project**

The project will occur in the upper Peshastin watershed, including Shaser, Scotty, and upper Peshastin Creeks. The project area will exclude Tronsen Creek and have downstream end located

on Peshastin Creek ~ RM 14.5.

***Latitude (decimal degrees)**

47.3816217

***Longitude (decimal degrees)**

-120.6530321

***Project subbasin**

Wenatchee

***Wenatchee Assessment Unit(s)**

Upper Peshastin Creek

***Reach(es) Name**

Peshastin Creek Upper 07, Peshastin Creek Upper 08, Peshastin Creek Upper 09, Middle Shaser Creek 01, North Shaser Creek 01

***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.

Unranked (not a priority or missing data)

Project Information

1. *In one or two sentences, what do you propose to do? Please include SMART objectives in your statement (Specific, Measurable, Achievable, Realistic, and Time-bound). 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].

We propose a process-based restoration project across a comprehensive geographic area in the upper Peshastin watershed, including conceptual designs for stream and road restoration treatments. Peshastin Creek is important steelhead habitat and often has the greatest wild steelhead escapement of any tributary in the Wenatchee watershed. Roughly 50% of these wild steelhead spawn in the upper watershed. This project will comprehensively evaluate all roads and stream habitat, across all land ownership, in the upper Peshastin Creek watershed (excluding Tronsen Creek). This design effort would address the severe degradation to steelhead, Chinook

salmon, and bull trout spawning and rearing habitat caused by logging, roads, and suction dredge mining (which was recently prohibited). Designs would promote streambed aggradation, substrate heterogeneity, geomorphic complexity, floodplain connectivity, increased cover, and wood retention along up to 25 miles of stream. Designs will include conducting a review of existing road and stream habitat data, field surveys, modeling, analysis, alternatives analysis, and development of conceptual designs. Recognizing inherent complexity, this project will prioritize outreach and engagement with all stakeholders. To be feasible, this project will preferentially consider stream treatments in reaches without active mining claims. Similarly, this project will incorporate public and private road uses and needs in proposed road treatments.

2. *What species will the project benefit?

Spring Chinook

Steelhead

Bull Trout

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

Design, Monitoring or Assessment

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)?

No

6. *What category is the project?

Design

Design and Restoration Proposals

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

Conceptual Design

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)?

No

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

Coarse Substrate

Cover - Wood

Off-Channel - Floodplain

Temperature - Rearing

10. *Which life stages will the proposed project address?

Natal Rearing (Bull Trout)

Spawning and Incubation

Winter Rearing

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

The upper Peshastin Creek watershed has been severely degraded through suction dredge mining, logging, and roads located in riparian areas. This project is only feasible now because suction dredge mining was recently prohibited in the project area. Salmon habitat in the watershed is impaired by degradation down to bedrock, limited cover, limited geomorphic complexity, and anthropogenic confinement. The Upper Peshastin Creek assessment unit is a tier-1 restoration priority for bull trout and a tier-2 restoration priority for steelhead and Chinook salmon. Steelhead spawning and Chinook presence have been documented in the project area, which provides intrinsic potential habitat for steelhead, Chinook, and bull trout.

This project will improve survival, capacity and distribution for steelhead, Chinook, and bull trout through designing treatments to comprehensively address factors degrading habitat. We will develop conceptual designs of appropriate stream treatments to reverse incision, aggrade alluvium, reconnect floodplain habitat, and retain mobile wood in the system. We will also identify critical roads to remove from floodplains and riparian areas. Collectively, these stream and road treatments will address the anthropogenic factors degrading salmonid habitat in the upper Peshastin Creek drainage and provide geomorphic complexity, substrate sorting, increased cover, floodplain connectivity, and reduced stream

temperatures. This project will enhance fish habitat through providing slow-water refuge, cover, and small substrate that are all currently unavailable in the drainage.

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?

This project would restore natural processes in the upper Peshastin Creek drainage. Stream treatments would likely entail alluvial water storage (AWS) wood structures, designed to reverse incision, aggrade alluvium, reconnect floodplain habitat, and retain mobile wood in the system. AWS treatments would force the deposition of alluvium moving through the system and aggrade the streambed with smaller substrate than the coarse boulders and large cobble currently available. These AWS treatments would also retain mobile wood moving through the system, further restoring natural stream habitat processes. Re-establishing connectivity with the floodplain would restore natural processes of wood recruitment and channel migration. Ultimately, this project will restore the myriad natural stream processes impaired due to the anthropogenic alterations.

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

1-10 years

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 anticipate needing minimal maintenance from designed treatments, although some adaptive management may be necessary. Designs will address process-based degradation in the upper Peshastin drainage and natural wood recruitment will obviate the need for most maintenance. We would monitor the site after implementation to determine the need for adaptive management actions.

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

Designs will achieve project objectives through a comprehensive evaluation of roads and stream habitat in the drainage, regardless of location on private or public land.

A consultant would be hired to develop conceptual designs for stream treatments. This Scope of Work includes evaluating existing hydraulic, geomorphic, and topographic data, as well as conducting field surveys. The consultant would model optimal stream treatment structure spacing for the greatest benefits to stream habitat complexity, floodplain connectivity, and alluvial water storage. Deliverables from this consultant would include an access staging plan, designs for 2-3 potential structures, and cost estimates for future stages of the project.

Similarly, a consultant would be hired to develop conceptual designs for road treatments. This includes an evaluation of all roads in the project area, regardless of location on public or private land. The consultant would conduct some field surveys and model road impacts to streams. Deliverables from this consultant would include a comprehensive assessment of all project area roads and their ecological impacts, as well as suggested treatments for each road.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. *What is the landownership?

Forest Service and private

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

Yes

***Please explain**

We are coordinating with the private landowner in this project area (Chelan Resources LLC) about alluvial water storage (AWS) treatments throughout their property in Chelan County. This upper Peshastin watershed area is among the sites being discussed and AWS treatments would work nicely for this project.

We have also discussed the need for stream and

road treatments with the US Forest Service.

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

The private landowner requires that we remain conscious of their need for access to particular areas.

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

We are cognizant that this project will raise potential concerns for a few interest groups. As such, a critical component of this project is outreach to these stakeholders. First, road access is important to recreational users in this project area. Second, this area may continue to be valued by suction dredge miners, even though suction dredge mining is now prohibited. We will collaborate with appropriate stakeholders to arrive at mutually beneficial solutions to these land management concerns. For instance, an alternative forest road from Blewett Pass provides access to upper Scotty Creek, and may obviate the need for the ~2-mile long road through the Scotty Creek riparian corridor.

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

As project sponsor, Chelan County Natural Resource Department would take the responsibility for project management, including stakeholder coordination and hiring consultants. Current and future landowners would be responsible for not altering treatments for a set length of time.

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

Don't know

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

The risk of failure associated with this project is associated with a lack of dedicated outreach and coordination to appropriate stakeholders. As such, we are prioritizing outreach and engagement with stakeholders in this project area.

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

Yes, a critical component of this project is public outreach to stakeholders in this project area. For instance, we will coordinate with recreational user groups and mining groups that use the project area. Through this collaboration, we hope to identify mutually beneficial solutions and build community support for salmon recovery efforts.

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

Design work will be contracted to local consultants. Similarly, prospective future phases of design and implementation would also be contracted with local consultants and contractors. Upon implementation, this project would reverse the degradation from suction dredge mining, logging, and road networks in the area. The ecological benefits of stream and road treatments would include valuable benefits for fish habitat and water quality.

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

Chelan County Natural Resource Department (CCNRD) is currently developing a memorandum of understanding (MOU) with the US Forest Service. This MOU will facilitate the partnership and staff collaboration necessary for successfully developing this project.

CCNRD may also develop an MOU with Chelan Resources LLC, the private landowner in the project area. We have a strong working relationship with Chelan Resources LLC, and are working to solidify this relationship to develop restoration projects such as this proposal. CCNRD has an MOU in place with Blue Forest Conservation to work on developing a forest resilience bond. This partnership and bond will be critical for funding the eventual implementation work for this project.

Targeted Investment (Southern Resident orca recovery)

***Are you pursuing Targeted Investment funding?**

No (skip section)

Supporting Documents

[Upper Columbia Process Guide 2022](#)

[SRFB Manual 18 \(2022\)](#)

[RCO Application Resources \(2022\)](#)

PROJECT: 22-1501 PLAN, UPPER PESHASTIN STREAM AND ROAD RESTORATION

Sponsor: Chelan Co Natural Resource Program: Salmon State Projects Status: Application Submitted

Parties to the Agreement

PRIMARY SPONSOR

Chelan County Natural Resources Department

Address 411 Washington St Ste 201

City Wenatchee **State** WA **Zip** 98801

Org Type County-Open Space/Nat Resources

Vendor # SWV0001231-12

UBI

Date Org created

Org Notes

[link to Organization profile](#)

Org data updated

SECONDARY SPONSORS

No records to display

LEAD ENTITY

Upper Columbia Salmon Rcy Bd L

QUESTIONS

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

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

EXTERNAL SYSTEM REFERENCE

Source	Project Number	Submitter
HWS	22-1501	DHecker

Project Application Report - 22-1501

Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
<u>Amee Bahr</u> Rec. and Conserv. Office	Project Manager	(360) 867-8585	Amee.Bahr@rco.wa.gov
<u>Bryan Maloney</u> Chelan Co Natural Resource	Project Contact	(509) 670-1772	bryan.maloney@co.chelan.wa.us
<u>Michael Kaputa</u> Chelan Co Natural Resource	Alt Project Contact	(509) 670-6935	mike.kaputa@co.chelan.wa.us
<u>David Hecker</u> Upper Columbia Salmon Rcy Bd L	Lead Entity Contact	(208) 869-9446	dave.hecker@ucsr.org

Worksites & Properties

- # **Worksite Name**
- #1 Upper Peshastin Watershed

Planning

Property Name

Project Application Report - 22-1501

Worksite Map & Description

Worksite #1: Upper Peshastin Watershed

WORKSITE ADDRESS

Street Address
City, State, Zip

Worksite Details

Worksite #1: Upper Peshastin Watershed

SITE ACCESS DIRECTIONS

From Highway 2, turn South on Highway 97. After 12.5 miles, turn right onto USFS road 7320 (Old Blewett Highway). The project area extends through the entire upper Peshastin, Shaser, and Scotty Creek drainages. Major roads are Old Blewett Highway, Shaser Creek Road (USFS road 7322), and Scotty Creek Road (USFS road 7324).

TARGETED ESU SPECIES

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

Reference or source used

The UCSRB "Spawning Redds by Year" map displays steelhead redds surveyed in the project area in 2005, 2010, and 2012. The UCSRB "Upper Columbia Spring Chinook, Steelhead, and Bull Trout Distribution" map displays steelhead distribution, steelhead intrinsic potential habitat, and Chinook intrinsic potential habitat in the project area.

TARGETED NON-ESU SPECIES

Species by Non-ESU

Notes

Bull Trout

The UCSRB "Upper Columbia Spring Chinook, Steelhead, and Bull Trout Distribution" map displays intrinsic potential habitat for bull trout in the project area.

Questions

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

The project area extends through the entire upper Peshastin, Shaser, and Scotty Creek drainages. Major roads are Old Blewett Highway (USFS road 7320), Shaser Creek Road (USFS road 7322), and Scotty Creek Road (USFS road 7324).

Project Application Report - 22-1501

Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Current Status	Relationship Type	Notes
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No related project selected

Related Project Notes

Questions

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

The project area includes the entire upper Peshastin Creek watershed, including Peshastin, Scotty, and Shaser Creeks. However, the project area will exclude Tronsen Creek and have downstream end located on Peshastin Creek ~ RM 14.5. The project area includes all streams, tributaries, riparian areas, floodplains, hillsides, roads, etc, within this project area watershed.

#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.

This project follows recommended actions for the Peshastin Creek Assessment Unit from the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan (Appendix G, pages 6-7). These recommended actions include Riparian Restoration, Large Woody Debris Restoration, Instream Structures, Floodplain Reconnection, Road Maintenance, Water Quantity Restoration, and Water Quality Restoration.

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

No

#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](#)

No

Property Details

Properties for this program and project type are optional.

Project Application Report - 22-1501

Project Proposal

Project Description

We propose a process-based restoration project across a comprehensive geographic area in the upper Peshastin watershed, including conceptual designs for stream and road restoration treatments. Peshastin Creek is important steelhead habitat and often has the greatest wild steelhead escapement of any tributary in the Wenatchee watershed. Roughly 50% of these wild steelhead spawn in the upper watershed. This project will comprehensively evaluate all roads and stream habitat, across all land ownership, in the upper Peshastin Creek watershed (excluding Tronsen Creek). This design effort would address the severe degradation to steelhead, Chinook salmon, and bull trout spawning and rearing habitat caused by logging, roads, and suction dredge mining (which was recently prohibited). Designs would promote streambed aggradation, substrate heterogeneity, geomorphic complexity, floodplain connectivity, increased cover, and wood retention along up to 25 miles of stream. Designs will include conducting a review of existing road and stream habitat data, field surveys, modeling, analysis, alternatives analysis, and development of conceptual designs. Recognizing inherent complexity, this project will prioritize outreach and engagement with all stakeholders. To be feasible, this project will preferentially consider stream treatments in reaches without active mining claims. Similarly, this project will incorporate public and private road uses and needs in proposed road treatments.

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 upper Peshastin Creek watershed has been severely degraded through land use. Salmonid habitat in the watershed is impaired by incision down to bedrock, limited cover, limited geomorphic complexity, and anthropogenic confinement. Project area reach-specific limiting factors from RTT prioritization include Coarse Substrate, Cover- Wood, Floodplain Connectivity, and Temperature- Rearing. The area is under checkerboard ownership, split between a private timber company and the U.S. Forest Service. The history of land use includes motorized mineral prospecting, logging, and roads and dispersed recreation located in floodplains and riparian areas. Motorized mineral prospecting (which includes suction dredging and high banking) was recently prohibited in this project area in spring of 2020. Suction dredging is physically destructive to stream geomorphology and involves sucking alluvium from the streambed to reach bedrock, where heavier minerals may be located. This type of mineral prospecting has incised many project area streams down to bedrock and leaves only very coarse substrate available to salmonids. Logging in the project area has left the hillsides depauperate of large trees, resulting in the lack of instream cover from wood. Further, the lack of instream wood recruitment has reduced floodplain connectivity and exacerbated the incision from suction dredge mining. The reduced cover, floodplain connectivity, and incision from logging have degraded salmonid habitat in the project area. Many roads exist in the project area and impact stream habitat through confinement. Arterial roads alongside streams and floodplains access recreation and logging. Additionally, road networks extend up hillsides, with many associated stream crossings, to access logging. These roads confine streams in the project area, reducing floodplain connectivity and degrading salmonid habitat. The Upper Peshastin Creek assessment unit is a tier-1 restoration priority for bull trout and a tier-2 restoration priority for steelhead and Chinook salmon. Steelhead spawning and Chinook presence have been documented in the project area, which provides intrinsic potential habitat for steelhead, Chinook, and bull trout.

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

This project is tailored to comprehensively address the limiting factors, their ultimate causes, and the limiting life stages of salmonids in the project area. Project area reach-specific limiting factors from RTT prioritization include Coarse Substrate, Cover-Wood, Floodplain Connectivity, and Temperature- Rearing. These limiting factors are due to the past and current land use in the area, which includes motorized mineral prospecting, logging, recreation, and roads. These land uses have degraded habitat available to salmonids in the project area through reduced substrate heterogeneity, geomorphic complexity, cover, woody material, and floodplain connectivity.

This project will benefit wild steelhead, Chinook, and bull trout. RTT prioritization lists bull trout as the priority species, with natal rearing, spawning and incubation as limiting life stages. While we believe this project will benefit bull trout and Chinook, this project will have greater benefits for wild steelhead. Peshastin Creek is an important stream for wild steelhead, with the highest wild steelhead escapement of any Wenatchee watershed tributary from 2016-2019. Approximately half of all wild steelhead in the Peshastin watershed spawn above the Ruby Creek slide, which includes this proposed project area. Indeed, wild steelhead redds have been documented in the project area. Therefore, this project will address degraded spawning and rearing habitat available to steelhead. Additionally, chinook and bull trout have known distribution ending immediately downstream of the project area. This project will also improve spawning and rearing habitat available to Chinook and bull trout.

#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 goal of this project is to design process-based stream and road restoration across a large geographic area in the upper Peshastin watershed, restoring degraded spawning and rearing habitat available to steelhead, bull trout, and Chinook salmon. We intend to restore the processes to sustain floodplain connectivity, geomorphic complexity, and instream cover to benefit juvenile and adult salmonids through all seasons of the year.

#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](#)

To develop effective process-based conceptual designs for stream and road restoration treatments in the upper Peshastin Creek watershed, we have three specific project objectives:

- One project objective is to evaluate and characterize stream habitat, identify restoration opportunities, and develop conceptual designs for treatments, which will foster increased streambed aggradation, geomorphic complexity, sediment heterogeneity, floodplain connectivity, instream cover, and mobile wood retention along up to 25 miles of stream. These stream treatments may be a mixture of engineered and "low-tech" structures.
- Another project objective will include evaluation of all roads in the project area, quantification of their impacts to stream habitat, and prescription of restoration treatments in a conceptual design report, in order to reduce impacts to salmonid habitat.
- The final project objective is to conduct effective outreach with landowners and all stakeholders to incorporate their concerns, feasibility considerations, and priorities into conceptual design reports for both streams and roads project elements.

All project objectives will collectively address the severe degradation to steelhead, Chinook salmon, and bull trout spawning and rearing habitat caused by logging, roads, and motorized mineral prospecting. We aim to complete all project objectives by the end of 2023, allowing further stages of design in 2024 and implementation in 2025.

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#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.

CCNRD staff will manage this project, including grant administration, consultant coordination, and stakeholder outreach.

A consultant would be hired to develop conceptual designs for stream treatments. This Scope of Work includes evaluating existing hydraulic, geomorphic, and topographic data, as well as conducting field surveys. The consultant would characterize habitat throughout the project area, identify restoration opportunities, and develop conceptual designs for structures typicals. Deliverables from this consultant would include a conceptual design report detailing stream reaches, restoration opportunities in planview maps, and structure typical detail sheets in CAD for up to 4 structure types (e.g., PALS, BDAs, ELJs, floodplain roughness elements). Stream treatment conceptual design will incorporate locations of existing mineral rights claims. Another deliverable will be cost estimates for all future phases of this project, including design and construction. We anticipate this scope of work to be complete by the end of the 2023 calendar year.

Similarly, a consultant would be hired to develop conceptual designs for road treatments. This includes an evaluation of all roads in the project area, regardless of location on public or private land. The consultant will incorporate all available U.S. Forest Service data on roads, as well as their recommended status. The consultant would conduct some field surveys and model road impacts to streams. Deliverables from this consultant would include a comprehensive assessment of all project area roads and their ecological impacts, as well as suggested treatments for each road in a conceptual design report. We anticipate this scope of work to be completed by the end of the 2023 calendar year.

#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?

The major constraints that could impact successful completion of this project include stakeholder engagement and consideration of valued access to recreation and mineral rights. With varied landowners and user groups, it will of paramount importance to engage all stakeholders throughout this project. These stakeholders include (but are not limited to) the Okanogan-Wenatchee National Forest, Chelan Forest Partners (private timber company), recreation interest groups, and mining interest groups. We intend to coordinate outreach to these groups to discuss project goals and their concerns. We recognize that access to recreation and mineral rights is highly valued on the Forest Service land included in this project area. As such, this project will preferentially consider stream treatments in reaches without active mining claims. Similarly, this project will incorporate public and private road uses and needs in proposed road treatments.

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

This project is informed by the extensive scientific literature that justifies the need for process-based and geographically comprehensive stream restoration. Further, this restoration potential in this project is informed by the alluvial water storage model developed by CCNRD and Natural Systems Design, which identified ~25 miles of restorable stream miles in upper Peshastin Creek. The lessons learned from other alluvial water storage projects will be incorporated into this project. For instance, the types of alluvial water storage structures that have worked in different stream sizes will inform feasible structures to design for the upper Peshastin watershed. A mixture of engineered and more "low-tech" structures are likely.

Additionally, CCNRD has completed many projects to enhance in-stream conditions throughout Chelan County. To assure that our projects are state of the art and meet objectives, CCNRD draws from internal and external knowledge sources when designing and implementing such projects, and we partner with design firms that specialize in river restoration and have substantial experience. Our experience with past restoration projects also informs how we select sites for projects and propose actions. We are increasingly looking for opportunities to complete reach-scale projects where we can employ a variety of restoration actions to treat identified stream habitat degradation.

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

We considered a less comprehensive alternative that includes evaluation of streams and roads only on the private timber land in the project area. However, we rejected this alternative because it would not address all root causes of degradation to salmonid habitat in the project area.

Similarly, we considered alternatives where we pursue separate projects for the roads and streams portions of this proposal. However, we rejected these separate alternatives because they would be less effective by dividing all relevant impacts to salmonid habitat in the project area.

We selected the preferred alternative because inclusion of all stream habitat, roads, and landownership in the project area will be necessary to address all root causes of degradation to stream habitat in the project area.

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

We have discussed this project with Chinook Forest Partners, the private timber company. CCNRD has a good working relationship with Chinook Forest Partners, which is restoration-oriented. We have a letter agreement to work with them on aquatic restoration on their lands and are currently developing an MOU to further define this working relationship.

We have also discussed this project with U.S. Forest Service staff, who recognize the stream habitat benefits of this type of restoration work in the upper Peshastin watershed. While recognizing the complexity of retaining access for recreation and mineral rights, the U.S. Forest Service is willing to consider an evaluation of stream habitat and roads across the basin. CCNRD and the Okanogan-Wenatchee National Forest are working on developing an MOU to define our working relationship and facilitate efficient project development.

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

Yes

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

This project will be climate resilient by comprehensively evaluating aquatic and terrestrial components of stream habitat in the project area. Simultaneously considering road confinement and stream incision will allow us to restore the processes needed to maintain floodplain connectivity, cover, geomorphic complexity, and substrate heterogeneity. These restored processes will increase resilience to climate change through proper functioning stream and floodplain processes. Further, these processes will reduce stream temperatures through increased cover and floodplain connectivity.

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

This project will increase habitat and species adaptability by focusing on important habitat in the headwaters of Peshastin Creek. The upper Peshastin watershed will be increasingly important following climate change predictions, through providing habitat for steelhead, Chinook, and bull trout in the relatively cool temperature headwaters. The upper Peshastin watershed is already one of the most important areas for wild steelhead in the entire Wenatchee watershed. Restoration will only increase the areas' utility to wild steelhead.

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

Chelan County Natural Resource Department (CCNRD) has extensive experience managing similar stream habitat restoration projects to this proposal. CCNRD has developed conceptual designs for alluvial water storage treatments in sites throughout the Wenatchee River basin, in a range from large streams (e.g., Icicle Creek) to small tributaries (e.g., Kahler Creek, Poison Creek, Eagle Creek). This project area falls within this range of experience due to intermediate stream size and stream power. CCNRD also has experience managing projects with a similar roads component as this proposal. For instance, CCNRD managed a project in Nason Creek that included a comprehensive roads assessment and road decommissioning treatments.

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

No

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Planning Supplemental

#1: Is the project an assessment / inventory?

No

#2: Is your project a Barrier / Screening Diversion Inventory Project?

No

#3: Is this a fish passage design / screening design project?

No

#4: Will the project develop a design?

Yes

#4a: Will a licensed professional engineer design of the project?

Yes

#4b: Will you apply for permits as part of the project scope?

No. This proposal is for conceptual design only. Permit applications will occur after the preliminary design phase of this project.

Planning Metrics

Worksite: Upper Peshastin Watershed (#1)

Area Encompassed (acres) (B.0.b.1)	12,525.8
Miles of Stream and/or Shoreline Affected (B.0.b.2)	24.60

Note: This stream mileage represents all stream segments included in the Alluvial Water Storage model with restoration potential. However, we anticipate ~8 miles of stream to be highly feasible for restoration treatments.

DESIGN FOR SALMON RESTORATION

Conceptual Design (B.1.b.11.a RCO)

Total cost for Conceptual design	\$116,496
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Project Identified in a Plan or Watershed Assessment. (2457) (B.1.b.11.a)	Upper Columbia Salmon Recovery Board, 2007, Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. https://www.ucsrb.org/mdocs-posts/00_upper-columbia-spring-chinook-salmon-and-steelhead-recovery-plan/
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Priority in Recovery Plan (2458) (B.1.b.11.b)	This project is justified by priority actions in the the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. This project addresses priority actions for the Peshastin Creek Assessment Unit in Appendix G, pages 6-7. The plan recommends actions of Riparian Restoration, Large Woody Debris Restoration, Instream Structures, Floodplain Reconnection, Road Maintenance, Water Quantity Restoration, and Water Quality Restoration. The stream and road treatments included in this proposal would address each of the recommended actions from the UCSR B Chinook and Steelhead Recovery Plan.
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Overall Project Metrics

COMPLETION DATE

Projected date of completion

12/31/2023

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Planning Cost Estimates

Worksite #1: Upper Peshastin Watershed

Category	Work Type	Estimated Cost	Note
Design for Salmon restoration	Conceptual Design (B.1.b.11.a RCO)	\$116,496	
	Subtotal:	\$116,496	
	Total Estimate For Worksite:	\$116,496	

Summary

Total Estimated Costs:	\$116,496
Total Estimated Planning Costs:	\$116,496

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
<u>Planning Costs</u>			
Planning	\$116,496		
SUBTOTAL	\$116,496	100.00 %	
Total Cost Estimate	\$116,496	100.00 %	

Funding Request and Match

FUNDING PROGRAM

Salmon State Projects	\$99,021	84.999485 %
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SPONSOR MATCH

Other Monetary Funding	Appropriation - Local
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Amount	\$17,475.00
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Funding Organization	Chelan County Natural Resources Department
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Match Total: \$17,475.00

Total Funding Request (Funding + Match): \$116,496.00

Questions

#1: Explain how you determined the cost estimates

The project cost was determined through cost estimates for similar projects. Washington Conservation Science provided a cost estimate of \$25,000 for the roads portion of the project. Cramer Fish Sciences provided a cost estimate of \$62,554 for the streams portion of the project. CCNRD staff time was estimated at \$28,942 for project development, administration, and engagement with interest groups. The consultant and CCNRD estimates are based on previous successful projects.

Cultural Resources

Worksite #1: Upper Peshastin Watershed

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

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This phase of the project will not include any ground disturbance. However, future phases of the project will likely include geotechnical investigation and road decommissioning.

#2: 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 project area includes streams, riparian areas, roads, and hillsides. Historic and current land uses include recreation, logging, and motorized mineral prospecting.

#3: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?
No

A federal permit will not be required to complete the scope of work for this proposal. However, a federal permit will likely be required to complete the scope of work for future phases of this project.

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

No

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

Unknown

#6: 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.

Unknown

Project Permits

Permits and Reviews	Issuing Organization	Applied Date	Received Date	Expiration Date	Permit #
None - No permits Required					

Note: This proposal is for the conceptual design phase of the project. As such, no permits will be required. However, permits will be required for future phases of this project.

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Attachments

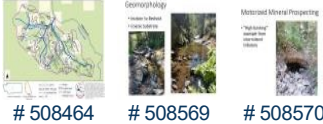
Required Attachments

6 out of 6 done

- Applicant Resolution/Authorizations ✓
- Cost Estimate ✓
- Landowner acknowledgement form ✓
- Map: Planning Area ✓
- Photo ✓
- RCO Fiscal Data Collection Sheet ✓

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
	04/19/2022	Cost Estimate	UpperPeshastin_AWS_Concepts_CFS.do	BryanM	CFS_UpperPeshastinConcepts_Cost... 508899	✓
	04/19/2022	Landowner acknowledgement form	ChinookForestPartners_CCNRD_letter.pdf	BryanM	ChinookForestPartners_CCNRD_lette... 508898	
	04/18/2022	Photo	mining_example_upper_peshastin.jpg	BryanM	mining_example_upper_peshastin.jpg, 508570	✓
	04/18/2022	Photo	geomorph_alteration_upper_peshastin.jpg	BryanM	geomorph_alteration_upper_peshastin... 508569	✓
	04/18/2022	Map: Planning Area	Upper Peshastin Overview Map.jpg	BryanM	upper_peshastin_overview2.jpg, 508464	✓
	04/13/2022	Cost Estimate	Upper_Peshastin_Stream_Roads_cost_est	BryanM	Upper_Peshastin_Stream_Roads_cos... 507923	✓
	04/13/2022	Cost Estimate	Upper_Peshastin_Roads_concept_cost_e	BryanM	Upper_Peshastin_Roads_concept_co... 507916	✓
	04/13/2022	Cost Estimate	Upper_Peshastin_AWS_concept_cost_est	BryanM	Upper_Peshastin_AWS_concept_cos... 507915	✓
	04/13/2022	RCO Fiscal Data Collection Sheet	2022 SRFB FiscalDataCollectionSheet.pdf	BryanM	2022 SRFB FiscalDataCollectionSheet.pdf, 507912	
	04/13/2022	Applicant Resolution/Authorizations	2022 SRFB ApplicantAuthorizationResolution.pdf	BryanM	2022 SRFB ApplicantAuthorizationResolution.pdf, 507911	✓

Application Status

Application Due Date: 06/27/2022


Status Name	Status Date	Submitted By	Submission Notes
Application Submitted	04/20/2022	Bryan Maloney	
Preapplication	03/22/2022		

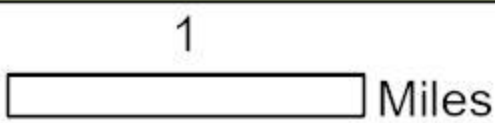
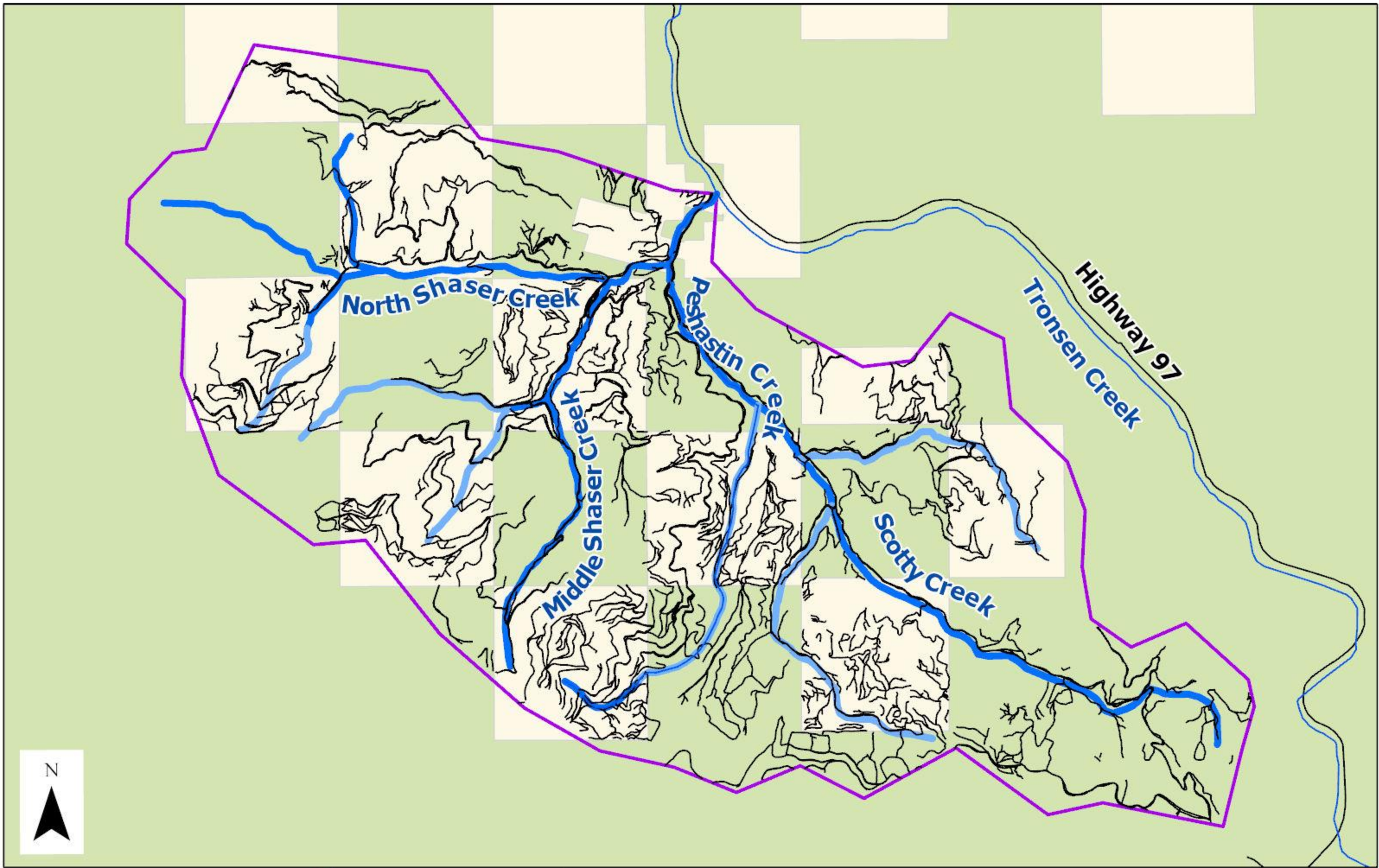
I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected 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. (Bryan Maloney, 04/20/2022)



Date of last change: 04/20/2022

Project Application Report - 22-1501

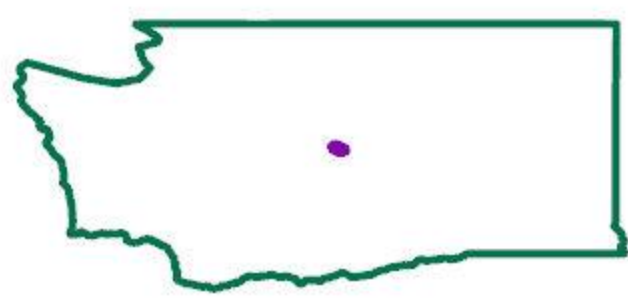
Cost Estimate

	Projected Hours				Labor Subtotal	Expenses		
	Principal Scientist (P. Roni)	Sr. Geomorph. (R. Camp)	Restoration Engineer (T. Rockhill)	GIS Technician (M. Briggs)		Equipment	Travel	Totals
	\$247	\$162	\$145	\$67				
Objectives and Tasks								
Objective 1 Project Management and Meetings					\$0			\$0
Task 1.1 Project management		10			\$1,617			\$1,617
Task 1.2 Stakeholder meetings	6	10	6		\$3,967			\$3,967
Objective 1 Subtotal	6	20	6	0	\$5,584	\$0	\$0	\$5,584
Objective 2 Reach Classification					\$0			\$0
Task 2.1 Compile and review existing data		4	10	20	\$3,440			\$3,440
Task 2.2 Reach characterization via remote sensing		10	10	50	\$6,426			\$6,426
Task 2.3 Validation via field surveys		50		50	\$11,445	\$200	\$1,500	\$13,145
Task 2.4 Reporting		10	10	30	\$5,082			\$5,082
Objective 2 Subtotal	0	74	30	150	\$26,393	\$200	\$1,500	\$28,093
Objective 3 Conceptual Design Development					\$0			\$0
Task 3.1 Identify restoration opportunities	4	10	10		\$4,053			\$4,053
Task 3.2 Develop planview concept maps		20		40	\$5,922			\$5,922
Task 3.3 Develop typical structure detail sheets		8	40		\$7,090			\$7,090
Task 3.4 Cost estimates and quantities for concepts		10	10		\$3,066			\$3,066
Task 3.5 Reporting	2	20	30	10	\$8,747			\$8,747
Objective 3 Subtotal	6	68	90	50	\$28,877	\$0	\$0	\$28,877
Total Project Hours	12	162	126	200				
Total Project Costs	\$2,961	\$26,195	\$18,257	\$13,440	\$60,854	\$200	\$1,500	\$62,554



Alluvial Water Storage
 < 5 acrefeet/mile
 5 - 10

 Roads
 Project Area
 USFS land
 PRIVATE land



Location in Washington



Location in Wenatchee Watershed



The County makes no warranty, expressed or implied, concerning the data's content, accuracy, currency or completeness, or concerning the results to be obtained from queries or use of the data. ALL DATA ARE EXPRESSLY PROVIDED "AS IS" AND "WITH ALL FAULTS". The County makes no warranty of fitness for a particular purpose, and no representation as to the quality of any data. The Requester shall have no remedy at law or equity against the County in case the data provided are inaccurate, incomplete or otherwise defective in any way.

Geomorphology

- Incision to Bedrock
- Coarse Substrate

