Wednesday, March 12, 2025

Contact Information

2025 Upper Columbia Regional Project Pre-Application

* Pre-applications (SRFB & Monitoring) due March 12, 2025 (COB)

*Complete SRFB applications due in PRISM April 18, 2025 (COB)

*Complete Monitoring applications due in PRISM May 1, 2025 (COB)

*Revised SRFB proposals due in PRISM May 27, 2025 (COB)

*Final revised SRFB & Monitoring applications due in PRISM June 23, 2025 (noon)

Project Title	Fulton Ditch Irrigation Efficiency Project Phase 2
Sponsor	Trout Unlimited
Primary Contact	Brent Paul
E-Mail Address	brent.paul@tu.org

Project Summary

Please provide a description or summary of the proposed project, including 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.

Trout Unlimited is partnering with the Fulton Ditch Company to upgrade its open-air irrigation system to a more efficient piped alternative. The current diversion withdraws about 15 CFS from the Chewuch River to supply 9 CFS to shareholders, sometimes diverting up to 22 CFS. During low-flow periods, this accounts for nearly half of the river's flow, which exacerbates the already warming river and can cause a thermal fish barrier.

The recommended alternative moves the diversion four miles downstream to the Methow river, and pumping the water to the shareholders. This will move 15 CFS of water 4 miles downstream and permanently add 6 CFS of instream flow.

By implementing the proposed piping and pump station system, the Fulton Ditch will operate with minimal environmental impact, delivering the required water to shareholders while significantly enhancing streamflow in the Chewuch and Methow Rivers. This project will contribute to regional salmon recovery efforts, support sustainable irrigation practices, and create a more resilient water management system for the Methow Valley.

We are currently seeking funding to get us through 60% design and permitting.

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 project seeks to address low instream flow as a limiting factor for juvenile and adult salmonid rearing and migration by relocating the Fulton Ditch diversion from the Chewuch River to the Methow River and installing a piped irrigation system with a pump station. This action will move 15 CFS of water 4 miles downstream and permanently restore 6 CFS of flow to the Chewuch and Methow River, improving aquatic habitat for ESA-listed salmonids while maintaining reliable water delivery to shareholders.

Budget Request

Values MAY be duplicative and do not have to equal TOTAL anticipated budget in pre-application.

Anticipated Request - SRFB (standard round)	225000
Anticipated Request - SRFB Riparian Funding	0
Anticipated Request - Monitoring Grant Funding	0
Tributary Committee - Anticipated or Actual	225000
Anticipated TOTAL Budget	600000

Other Funding Source(s), please note if funding is anticipated or actual.

Actual, received $237,417 from SRFB in 2023
Actual, received $25,000 from the Colville Tribe
Anticipated $200,000 funding from the Columbia basin water transaction program

Project Location

Briefly describe the location of the project	This project will occur in the Chewuch and Methow River
Latitude (decimal degrees)	48.4836
Longitude (decimal degrees)	-120.1832
Project subbasin	Methow
Methow Assessment Unit(s)	Chewuch River-Pearrygin Creek
Does the proposed project span multiple assessment units?	Yes
List the additional assessment units directly impacted by this proposal.	Methow River-Thompson Creek

Reach(es) Name

Chewuch River Pearrygin 01, Methow River Thompson 07, Methow River Thompson 06, Methow River Thompson 05

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

Chewuch River Pearrygin 01 - Rank 3
Methow River Thompson 07 - Rank 2
Methow River Thompson 06 - Rank 1
Methow River Thompson 05 - Rank 2

Project Information

1. What species will the project benefit?

Spring Chinook | Steelhead | Bull Trout | Summer Chinook | Lamprey

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

Design, Monitoring or Assessment | Instream Flow

Instream Flow: Reporting Code

Miles of stream 'Protected' for adequate flow

Cfs (Cubic feet per second) of water conserved per year

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

Yes

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.)

This proposal is a different phase of the project. The previous submission was to get us to 30% design, which we are about to achieve in a month or two. This current submission is to get us through 60% design and permitting

6. What category is the project?

Design

If applicable, what is the secondary project category?

Restoration

Is the project eligible for Riparian Funding?

No

Design and Restoration Proposals

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

Preliminary 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)?

Within completed reach assessment

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

Flow - Summer Base Flow

Temperature - Adult Holding

Temperature - Adult Spawning

Temperature - Rearing

10. Which life stages will the proposed project address?

Adult Migration

Adult Non-Spawning (Bull Trout)

Natal Rearing (Bull Trout)

Subadult Rearing (Bull Trout)

Fry

Holding and Maturation

Smolt Outmigration

Spawning and Incubation

Summer Rearing

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

Increased flow will increase habitat quality and quantity and improve water temperatures during low flow high temperature events increasing survival of juvenile fish. This project addresses an instream structure intended to divert water into the current diversion and help proactively address thermal barriers caused by climate change and warming streams. This is a flow limited reach of the Methow, so restoring stream flows will directly address that limiting factor.

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?

affects of this project are permanent and should be achieved in less than a year. Restoring instream flow is going to result in in improved watershed processes by restoring streamflow necessary for geomorphic process.

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?

The pumphouse will eventually need to be maintained but that is the responsibility of the ditch company

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

add 15 CFS of cold water for 4 miles of stream and permanently add 6 CFS of instream flow

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership? Private

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

Please explain

The ditch board has accepted this project and would like to move forward with the design.

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

There are no requirements for this design

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

There is a possibility that there are member of the community that might be against removing the open air ditch. The ditch board however would like to move forward with the project and there has been landowner participation.

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

Once implemented the system would be the Ditch Companies responsibility to maintain and operate.

6. Are other projects being proposed immediately upstream or downstream of worksite? No

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

There is not much risk in this phase of the project. It is possible that the ditch company changes their mind and does not wish to continue moving forward with this project, however they have worked closely with us throughout this alternative assessment design phase and we have support to move forward with this project.

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

The Ditch company, shareholders, and landowners have been engaged throughout this process and will continue to be engaged throughout the process. The stakeholders of this project has had support with this project not only upgrading and improving their irrigation system but also improving fish habitat and quality.

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

This project bring money into the community through construction, contracting, and jobs. This project presents the opportunity to restore 15 CFS of flow for four miles of river in perpetuity, making this a significant and permanent benefit for the dollars invested.

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

The Ditch company has been an engaged partner and forthcoming with sharing information and helping us gather the information we need to help with our assessments and design and we expect this continued support.

Optional Section - Preparation for PRISM (SRFB applications only)

The following questions are identical to the questions RCO requires in the PRISM application for SRFB projects. If desired, sponsors can complete associated questions early and copy responses into PRISM during the "Complete Application" phase due on April 18, 2025.
*please note, this section is not applicable for Monitoring proposals

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

Supporting Documents

Upper Columbia Process Guide 2025

SRFB Manual 18 (2025)

RCO Application Resources (2025)

PROJECT: 25-1214 PLAN, FULTON DITCH IRRIGATION EFFICIENCY PROJECT PHASE 2

Sponsor: Trout Unlimited Inc. Program: Salmon State Projects Status: Application Submitted

Parties to the Agreement

PRIMARY SPONSOR

Trout Unlimited Inc.
Address 1700 N Moore Street, Suite 2005
City Arlington **State** VA **Zip** 22209
Org Type Non-Gov-Nonprofit
Vendor # SWV0050369-00
UBI 601215617
Date Org created
Org Notes

link to Organization profile
☐ Org data updated

QUESTIONS - PRIMARY SPONSOR

#1: What date was your organization created?

1959

#2: Is your organization registered as a non-profit with the Washington Secretary of State?

Yes

#2a: Please confirm the Unified Business Identifier (UBI) shown above is correct or provide if blank.

602 988 374

#3: How long has your organization been involved in salmon and habitat conservation?

>30 years

#4: Do your organizational documents (charter, bylaws, or articles of incorporation) include the authority for the protection or enhancement of natural resources or related activities?

Yes

Yes, Trout Unlimited's mission to bring together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon

#5: Do your organizational documents (charter, bylaws, or articles of incorporation) provide for an equivalent successor organization in case the nonprofit dissolves?

Yes

Yes, Trout Unlimited's Bylaws state: Upon the dissolution of the Corporation or the winding up of its affairs, the assets of the Corporation remaining after payment, or provision for payment, of all debts and liabilities shall be distributed exclusively to one or more charitable, religious, scientific, testing for public safety, literary, or educational organizations

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.

Trout Unlimited is working in partnership with the Fulton Ditch Company to complete this project. The ditch company has been a great partner--they have been invested an involved throughout project development and are eager to move the project forward. The Fulton Ditch company has shared records, provided site tours, insight in system management details, and helped develop alternatives to be assessed.

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

LINK AN EXISTING SRP PROJECT

Unlink

25-1214, Fulton Ditch Irrigation Efficiency Project Phase 2

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
Brent Paul Trout Unlimited Inc.	Project Contact	(509) 429-5347	brent.paul@TU.org
Ariel Edwards Upper Columbia Salmon Rcy Bd L	Lead Entity Contact	(208) 540-2691	ariel.edwards@ucsrb.org

Worksites & Properties

#	Worksite Name
#1	Fulton Ditch

Planning	Property Name
✓	Diversion, siphon, and fish screen

Worksite Map & Description

Worksite #1: Fulton Ditch

WORKSITE ADDRESS

Street Address Sateekh Park
City, State, Zip Winthrop WA 98856

Worksite Details

Worksite #1: Fulton Ditch

SITE ACCESS DIRECTIONS

The diversion, fish screen, Siphon, and start of the ditch is located along the Sateekh Park in Winthrop WA. the roads to access the park are in a private development, so the best way to access the park in to park in Winthrop street parking and walk across the suspension bridge to the start of the Sateekh trail.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Upper Columbia River Spring, Methow River, Endangered	✓	✓	✓	Declining
Steelhead-Upper Columbia River, Methow River, Threatened	✓	✓	✓	Declining
Chinook-Upper Columbia River Summer/Fall, Not Warranted	✓	✓	✓	Stable

Reference or source used

United States National Marine Fisheries Service, West Coast Region (2022). 5-Year Review: Summary & Evaluation of Upper Columbia River Spring-run Chinook Salmon and Upper Columbia River Steelhead: https://doi.org/10.25923/p4w5-dp31

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	Adult bull trout migrate through this reach of the Chewuch. The Chewuch has intrinsic potential for bull trout and is designated as critical habitat for feeding, migration, and overwintering (FMO).
Lamprey	There are efforts to reintroduce lamprey in the Chewuch.

Questions

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

Uplands Road, Winthrop WA, Approx. 0.6 miles from the junction of W Chewuch Rd and Uplands Rd.

Project Location

RELATED PROJECTS

Project Application Report - 25-1214

Projects in PRISM

PRISM Number	Project Name	Program Name	Current Status	Relationship Type	Notes
23-1277 P	Fulton Ditch Irrigation Efficiency Project Phase 1	Salmon Federal Projects	Active	Earlier Phase	Phase 1 of this project was to investigate potential alternatives, review with the ditch board, select an alternative and design the project to 30% design.
99-1345 R	Fulton Ditch Lining Project	Salmon State Projects	Closed Completed	Related	Sections of the Fulton ditch were lined with a 30-millimeter ultraviolet resistant geomembrane. This increase in efficiency reduced the diversion of 5-10 CFS of water. However, this project was completed in 2002, over 20 years ago, and the tarp has become

Related Project Notes

Back in 2002 when the Fulton ditch was partially lined, it reduce the amount of water diverted from 22 CFS to 15 cfs. However this tarp is at the end of its life, and has already started to fail in the majority of sections it was installed. This new project will pipe the ditch and move to a on demand system to only pump the amount of water being used at any given time, which will lower the amount of water diverted from 15 cfs to a max of 9 cfs, and probably more after we review the water usage of the ditch. As the tarp continues to disintegrate, the amount of water needed for the ditch will continue to increase to its historic highs of 22 CFS, as well as release microplastics into the river and soil.

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.

This project will increase flow in the lower Chewuch and the middle Methow mainstem rivers. This is done by moving the ditch diversion from the Chewuch to the Methow river 4 river miles downstream, and increasing the efficiency of the ditch as well as switching to a on demand system to only use the amount of water needed at any given moment.

#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 strategy to restore salmonid habitat is to enhance instream flow which would help address two limiting factors in the lower Chewuch and middle Methow: summer base flow and temperature. These factors are ranked as unacceptable or at risk in these reaches. By moving the diversion of the ditch 4 river miles downstream and improving efficiency of the Fulton Ditch, the 15 cfs of water that are currently being diverted will stay instream for 4 more miles, and instead of 15 cfs being diverted only a maximum of 9 cfs will be diverted with the new on demand system. This saved water would be permanently dedicated to instream flow. The Upper Columbia Spring Chinook Salmon and Steelhead Recovery plan identifies increasing streamflow as a short term recovery action in both the Lower Chewuch Assessment unit and Middle Methow Assessment Unit (2007, Recovery Actions Section, pg. 214 & 215). Additionally, permanently dedicating water savings to instream flow protects, maintains and enhances stream conditions, identified as a long term action in the Upper Columbia Recovery Plan (pg. 217). More specifically, the Upper Columbia Recovery Plan identifies increasing flow (pg. 235 - 238) and irrigation efficiencies (pg. 238) as potential habitat actions to address side-channel reconnection, obstruction restoration, water quality restoration, and water quantity restoration action classes towards salmonid habitat restoration. This project applies these habitat actions by developing a more efficient irrigation system for the Fulton Ditch, allow continued agricultural practice and a more reliable water delivery system, while also eliminating diverted water from the Chewuch River, increasing streamflow in the lower Chewuch and middle Methow which addresses several limiting factors that affect productivity and abundance of salmonids.

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

Yes

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

This is Phase 2 of a larger overall project that will include subsequent phases to move the project to implementation and construction. Phase I included an assessment of ecologically beneficial alternatives and development of a preliminary design of a preferred alternative. Phase 2 will advance the design of this project from 30% to 60% and permitting will be completed.

#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

Property: Diversion, siphon, and fish screen (Worksite #1: Fulton Ditch)

✓ **Planning**

LANDOWNER

Name	Fulton Ditch Company
Address	58B Lower Bear Creek Rd
City	Winthrop
State	WA Zip 98862
Type	Private

CONTROL & TENURE

Instrument Type	
Timing	Proposed
Term Length	Fixed # of years
# Yrs	
Expiration Date	
Note	

Project Proposal

Project Description

Trout Unlimited is partnering with the Fulton Ditch Company to upgrade its open-air irrigation system to a more efficient piped alternative. The current diversion withdraws about 15 CFS from the Chewuch River to supply 9 CFS to shareholders, with the potential of diverting up to 22 CFS if the tarped sections of the ditch continue to degrade. During low-flow periods, this accounts for nearly half of the river's flow. The roughened channel diversion also creates a slow moving section of the river above the diversion, this paired with half of the water being removed for over a mile exacerbates the already warming river and can cause a thermal fish barrier. This project moves the diversion four miles downstream to the Methow river, and pumping the water to the shareholders with an on demand system. This will move 15 CFS of water 4 miles downstream and permanently add 6+ CFS of instream flow. By implementing the proposed piping and pump station system, the Fulton Ditch will operate with minimal environmental impact, delivering the required water to shareholders while significantly enhancing streamflow in the Chewuch and Methow Rivers. This project will contribute to regional salmon recovery efforts, support sustainable irrigation practices, and create a more resilient water management system for the Methow Valley. We are currently seeking funding to get us through 60% design and permitting.

Project Questions

Project Application Report - 25-1214

#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.

Low streamflow and high summer water temperatures are limiting factors for salmon and steelhead populations throughout the Methow basin. This project seeks to address those issues by improving the aging and inefficient Fulton Ditch irrigation system and dedicating conserved water to instream flow. In the Methow watershed, streamflows are often lowest when fish and farms both need water the most. Over appropriation and irrigation withdrawals have severely reduced summer baseflows, at times completely dewatering stream reaches. Flows in the Chewuch River have dropped as low as 35 CFS, far below the ESA target baseflow of 80 CFS, triggering regular curtailment of irrigators.

These reduced flows create significant biological challenges. Low flow barriers and disconnected channels can delay or block migration, strand juvenile salmonids in shallow or isolated pools, increase exposure to predators, and limit access to thermal refugia. As water levels drop, habitat area for rearing decreases, macroinvertebrate production declines, and competition for scarce resources increases—reducing overall abundance and productivity. The reach influenced by the Fulton Ditch system represents roughly 4 river miles of direct benefit. All reaches in this corridor are classified as “unacceptable” or “at risk” for streamflow conditions.

The Fulton Ditch is an open-channel system that must divert more water than is needed to account for seepage and delivery losses. Once diverted, the ditch passes through residential areas, the town of Winthrop, and agricultural lands before returning tailwater to the Methow River. Along this route, it collects non-point source pollutants, including nutrients and waste, which are discharged back into the river system. This not only reduces water quality but also threatens sensitive aquatic ecosystems. Converting the ditch to a closed or on-demand system will reduce or eliminate these sources of pollution while improving delivery efficiency.

Climate change is further compounding these stressors. The Chewuch River is considered a high-risk system due to its vulnerability to warming temperatures and shifting hydrographs. As snowmelt timing changes and summer temperatures rise, instream flows will continue to decline, and water quality will degrade. Improving irrigation efficiency and restoring streamflow through this project will help mitigate these effects, promote climate resiliency, and improve access to cooler, higher-elevation habitats that are essential for salmon and steelhead survival.

This project primarily seeks to address low streamflow—an urgent limiting factor for salmonid abundance and productivity—by partnering with the Fulton Ditch Company to develop a more efficient irrigation system. By reducing diversions, preventing tailwater discharges, and increasing instream flows, the project supports both fish and water users while contributing to broader watershed recovery goals.

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

This project addresses low summer baseflow and elevated water temperatures—major limiting factors for salmonids in the lower Chewuch and middle Methow Rivers. Low flows impair upstream migration and juvenile outmigration for spring Chinook and steelhead. Reduced flow also limits habitat for juvenile rearing and adult holding, increasing competition, predation, and physiological stress. For summer Chinook, insufficient flow reduces available spawning habitat in the middle Methow. A recent study in British Columbia found that Chinook spawning in 50% below-average August flows had 29% lower productivity (Warkentin et al., 2022). These issues affect all salmonid species and Pacific lamprey at various life stages and disrupt riverine processes essential for recovery.

Water temperature is also a critical concern. High summer temperatures can prevent or delay migration and holding for adult Chinook and steelhead, and can be fatal for juveniles. The Chewuch River has a baseflow target of 80 CFS to support fish populations, yet the August and September mean monthly flows have been below that target in 11 and 18 of the past 32 years, respectively. Flows have reached lows of 25 CFS. These conditions stress fish, reduce rearing opportunities, and limit access to cold-water refuge. Ecology's Methow River Basin Fish Habitat Analysis (1992) found that optimal flows for habitat are significantly higher: 400 CFS for juvenile steelhead rearing, 150 CFS for juvenile Chinook, and 175 CFS for bull trout spawning.

The Fulton Ditch is an open-channel system that must divert more water than needed due to seepage and delivery losses. The ditch travels through residential neighborhoods, Winthrop, and agricultural lands, accumulating nutrients and other pollutants. Tailwater from the ditch is returned to the Chewuch and Methow Rivers, negatively impacting water quality and aquatic habitat. This project will convert the Fulton Ditch to a closed, pressurized, on demand system to eliminate seepage losses and tailwater return.

The chosen alternative will reduce the Fulton Ditch diversion from 15 CFS to a maximum of 9 CFS and move the diversion 4 river miles downstream. This will restore 15 CFS of flow to the Chewuch and Methow Rivers, including 6 CFS that will be permanently protected as instream flow. This additional flow represents 19% of the September mean monthly discharge in the lower Chewuch and 6% in the middle Methow. Flow restoration through this project will improve migration, holding, and rearing habitat for spring Chinook, steelhead, and bull trout—especially during late summer when irrigation demand peaks and streamflow is lowest. Increased flows will also reduce thermal stress, improve water quality, and strengthen habitat resilience under a changing climate. This chosen alternative also eliminates the need for the roughened channel which is a partial fish barrier, and will fix the partial fish barrier and entrapment concern at bear creek.

#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**

This project promotes Chinook, steelhead, and other cold-water fish productivity and abundance by improving habitat through instream flow restoration. Upon completion, streamflow in the lower Chewuch River will increase by 15 CFS during the irrigation season. These flows will help the Chewuch meet target flow goals in normal years and reduce low flow impacts during drought.

The restored water represents 19% and 6% of the September mean monthly discharge in the lower Chewuch and middle Methow, respectively. Water temperature and streamflow are inversely related—enhancing summer flows reduces thermal stress, improves rearing and holding habitat for juvenile and adult fish, and improves migration and spawning conditions.

This project addresses root causes of degraded summer habitat conditions by improving irrigation efficiency and permanently dedicating water to fish. It is part of a coordinated basin-wide effort to restore streamflow and increase climate resiliency. While not always measurable, 15 CFS may be the difference between a side channel flowing or going dry—or a cold-water refuge remaining accessible.

#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 achieve instream flow restoration goals, this project will modernize 4 miles of an open, gravity flow ditch system. Open ditches are inefficient, requiring more water to be diverted than is needed to convey water for the intended use. In this phase, the project will advance the selected alternative to 60% design completion and secure the necessary permits for construction. The selected alternative moves the Fulton Ditch diversion four river miles downstream to the Methow River, where an on-demand pumping system will deliver water to shareholders, ensuring efficiency and water conservation. This change will leave an estimated 15 CFS of water in the lower Chewuch and middle Methow rivers, with at least 6 CFS permanently dedicated to instream flow.

Upon Implementation, this project will support biological goals by enhancing streamflow, reducing thermal stress, and improving water quality for both adult and juvenile salmonids, as well as by removing the need for the roughened channel which is a partial fish barrier. Increased instream flow will improve migration, spawning, and rearing habitats, contributing to the recovery of chinook and steelhead populations. This project is a key step toward restoring instream flow, supporting broader efforts to enhance salmonid abundance, and strengthening ecosystem health in the Chewuch and Methow rivers.

#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: Design Development to 60% Milestone
Trout Unlimited (TU) will hire a third-party consultant, a professionally qualified engineer, to advance the selected design to the 60% milestone. This task will involve a more detailed design of the pumphouse, fish screen, pressurized pipe system, and shareholder interfaces. The consultant will ensure the design incorporates a lamprey-safe fish screen. Deliverables for this task include detailed design drawings and technical reports outlining all system components, including fish passage considerations. The target completion date for this task is June 2026
Task 2: Permit Applications (In Parallel)
In parallel with the design development, TU will submit the necessary permit applications to relevant agencies, including the Department of Ecology and U.S. Fish and Wildlife Service. These permits are critical for ensuring compliance with local, state, and federal regulations. Deliverables for this task include the submission of all required permit applications. The targeted completion date for permit submissions is June 2026.

Task 3: Project Coordination and Stakeholder Engagement
TU will work closely with the Fulton Ditch board and shareholders to ensure the project moves forward smoothly. This will involve updating an analysis of water needs for the ditch and individual shareholders, as well as coordinating with landowners to evaluate access points for construction. The goal is to ensure that all necessary resources and agreements are in place to support project implementation. The deliverables for this task include a report on water needs. This task is expected to be completed by June 2026.

#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?

There are few physical constraints that could impact the achievement of our objectives in this phase of the project. Historically, there has been skepticism from the Fulton Ditch board regarding pursuing an efficiency project. However, after working closely with the board and presenting a range of alternatives, we have garnered their support. The board now recognizes the potential benefits of modernizing the system and is eager to pursue alternatives that will benefit both water users and instream flow objectives. The board acknowledges that funding improvements to the system directly benefits them, and that reduced water diversion and water savings will be legally dedicated to instream flow through the state's Trust Water Right Program.

Landowner cooperation is another critical factor. We are working closely with shareholders to address any concerns. While the opinion of the shareholders is generally positive, there may be concerns from a minority of shareholders and landowners. To manage this, TU will maintain regular communication with stakeholders to keep them informed and address any issues that arise.

In the event of delays or unforeseen issues, TU will work closely with all parties to resolve them and keep the project on track.

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

Trout Unlimited has completed several irrigation efficiency projects in the region and has learned that early and consistent engagement with stakeholders and water entities is critical to success. In this phase, we've worked closely with the Fulton Ditch Board to ensure they are informed and supportive of the goals and that those objectives align with the needs of the ditch and its shareholders. A previous project on the Fulton Ditch taught us that implementing low-cost solutions can result in higher long-term costs due to increased maintenance, frequent repairs, and the need for early replacement or redesign. Additionally, we've learned from past efficiency projects that designing a pressurized system capable of meeting individual water user needs without requiring additional on-farm pumps reduces helps cover the cost of the addition of a pumphouse and improves landowner satisfaction. These experiences are directly informing this effort—from technical design to stakeholder coordination—to ensure long-term functionality and meaningful ecological outcomes.

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

We presented five alternatives to the Fulton Ditch board and shareholders. After thorough evaluation and stakeholder input, the board selected the alternative described in this application: an on-demand pump station delivering water through a pressurized system directly to shareholders. This alternative was the cheapest to implement and maximizes instream flow benefits.

Other options included: (1) a piped gravity-fed system; (2) replacing the instream diversion with a well field; (3) a hybrid of wells and a pumphouse; and (4) doing nothing. The well field was deemed unfeasible due to limited groundwater availability in the southern reach of the ditch. This would have required concentrating all wells in a small central area, with high costs and similar pipeline requirements to the selected option—plus potential river connectivity impacts due to proximity.

The gravity-fed option was also too expensive and offered the least biological benefit. It required continued use of the fish-barrier roughened channel and costly siphon repairs. Large-diameter pipe through downtown Winthrop further increased financial and logistical risk.

The hybrid system initially seemed promising but proved more expensive to install and operate than the selected alternative, with similar drawbacks to the full well system.

Doing nothing was not a viable path. The ditch is over 100 years old, with aging infrastructure that poses a liability risk to shareholders and the Town of Winthrop. Without action, maintenance costs will continue to grow, and future regulatory constraints could jeopardize water delivery.

The selected alternative is the least expensive to implement, most cost-effective to maintain, delivers the greatest instream flow benefit, and eliminates the need for the roughened channel, the aging siphon, and individual pumps—making it the most sustainable and beneficial solution. Completion of this project will legally and physically protect instream flow via the Trust Water Rights Program.

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

Stakeholder engagement has been central to the development of this project. Trout Unlimited has worked closely with the Fulton Ditch board and shareholders, meeting regularly to discuss concepts, address concerns, and refine alternatives. Initially, the board was cautious about losing their open-air ditch and expressed concern over the vegetation and trees that have grown along it. However, they acknowledged that much of this vegetation presents maintenance and safety issues and determined that its removal was a worthwhile tradeoff for increased efficiency and reduced liability.

Shareholders raised concerns about changes in water delivery, system reliability, and increased operational costs. In response, the selected alternative was designed to simplify water access by eliminating the need for individual pumps and providing a reliable, pressurized delivery system. The on-demand design ensures water is only pumped when needed, improving energy efficiency and reducing costs.

The chosen alternative reflects collective input and is the result of collaborative problem solving that balances instream flow restoration with the agricultural needs of the community.

#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?

This project promotes resilience in a changing climate by buffering and improving habitat conditions by increasing streamflow at times where we anticipate lower stream flows as a result of climate change this will alleviate temperature stressors, which we also expect to increase and provide critical access to refuge habitat. Irrigation efficiency projects are inherently drought resilient because they develop a more reliable system for water users as they will require less water to meet their needs.

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

Rivers are dynamic systems and functioning riverine processes allow for adaptability under changing conditions, including climate change. Restoring a portion of streamflow back to the Chewuch and Methow rivers will allow some restored function of riverine processes and increased ability to adapt. Increasing streamflow in these migratory corridors will allow fish species to access colder and less degraded habitat that is less susceptible to the effects of climate change.

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

Trout Unlimited (TU) has completed many irrigation efficiency projects and has developed experience and expertise in water right changes associated with these types of projects. Staff at TU is well versed in collaborating with diverse stakeholders to develop ecologically- and multi- beneficial projects. In the Methow Valley, TU worked with the Methow Valley Irrigation District and Barkley ditch to explore several alternative that would increase the systems efficiency and dedicate saved water to instream flow. The project has resulted in permanent protection of saved water to instream flow in the Methow River and the on-demand system that was developed through alternative and design development reduces diverted water by more than just the saved water through efficiency by only delivering water when users need it.

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

No

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?

Yes, Trout Unlimited will apply for necessary permits in parallel with advancing the project to 60% design.

Planning Metrics

Worksite: Fulton Ditch (#1)

Area Encompassed (acres) (B.0.b.1)	440.0
Miles of Stream and/or Shoreline Affected (B.0.b.2)	4.10

DESIGN FOR SALMON RESTORATION

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

Total cost for Preliminary design	$387,931 **Note:** 60% design (starting from 30%) and Permitting
Project Identified in a Plan or Watershed Assessment. (1220) (B.1.b.11.a)	The Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan identifies implementing irrigation efficiency to reduce surface water withdrawal as a potential habitat action for several habitat action classes (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/).
Priority in Recovery Plan (1222) (B.1.b.11.b)	This project seeks to increase streamflow in the Lower Chewuch and Middle Methow assessment units. Enhancing instream flow is identified as a restoration action in both assessment units (pg 215). The project targets priority species (spring chinook, steelhead, and bull trout) that use both of these reaches identified in the USCRB prioritization strategy (prioritization.ucsrb.org/)

AGENCY INDIRECT COSTS

Agency Indirect

Total cost for Agency Indirect	$62,069 **Note:** 16% indirect

Overall Project Metrics

COMPLETION DATE

Projected date of completion	06/30/2026

Planning Cost Estimates

Worksite #1: Fulton Ditch

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$62,069	16% indirect
Design for Salmon restoration	Preliminary design (B.1.b.11.a RCO)	$387,931	60% design (starting from 30%) and Permitting
	Subtotal:	$450,000	
	Total Estimate For Worksite:	$450,000	

Summary

Total Estimated Costs:	$450,000
Total Estimated Planning Costs:	$450,000

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
Planning Costs			
Planning	$450,000		
SUBTOTAL	$450,000	100.00 %	
Total Cost Estimate	$450,000	100.00 %	

Funding Request and Match

FUNDING PROGRAM

Salmon State Projects	$450,000	100.000000

SPONSOR MATCH

Questions

#1: Explain how you determined the cost estimates

Cost estimates were determined based on recent costs for each deliverable item of similar projects in the region like the Icicle-Peshastin Creek assessment study and Tjossem Ditch project. We are asking for 225,000 from SRFB, and 225,000 from the tributary committee.

Other Funding

OTHER FUNDING DETAILS

Cultural Resources

Cultural Resource Areas

Worksite #1: Fulton Ditch

Area: Bear Creek Crossing

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

There will be no ground disturbance associated with this project.

#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).

This structure is a concrete weir constructed to convey Fulton ditch water over Bear Creek. Bear Creek is passed under the weir through a corrugated culvert. Surrounding land is primarily agricultural. The only known excavation in the area is from ditch construction.

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

No

#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?

No

As part of the Phase 1 of this project a cultural survey is being performed.

#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.

Yes

#6a: 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.

The concrete weir is over 45 years old. It will not be altered or removed as part of this proposal.

Area: Fulton Ditch Siphon

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

There will be no ground disturbance associated with this project.

#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 siphon has been buried below the Chewuch for over 50 years, it is still used in ditch operation to convey ditch flows below the river. Landuse around the siphon is primarily residential. Excavation and fill would have been required to bury the siphon when it was installed by depth and extent is not known.

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

No

#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?

No

As part of the Phase 1 of this project a cultural survey is being performed.

#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.

Yes

#6a: 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.

The siphon is over 45 years old. The siphon is buried and not visible so a photo is not possible of the structure.

Project Permits

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

Project Application Report - 25-1214

Attachments

Required Attachments	7 out of 7 done
Applicant Resolution/Authorizations	✓
CCA Tribal Notification	✓
Cost Estimate	✓
Landowner acknowledgement form	✓
Map: Planning Area	✓
Photo	✓
RCO Fiscal Data Collection Sheet	✓

PHOTOS (JPG, GIF)

Photos (JPG, GIF)


666334


666335


666336


666337


666338

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	04/18/2025	Letters of Support	Ditch Board LOS placeholder.pdf	BrentP	Ditch Board LOS placeholder.pdf, 666772	✓
	04/18/2025	Cost Estimate	SAL-CostEstimate_Fulton25.xlsx	BrentP	SAL-CostEstimate_Fulton25.xlsx, 666771	✓
	04/18/2025	Photo	Culvert_bridge.jpg	BrentP	Culvert_bridge.jpg, 666770	✓
	04/18/2025	Photo	Culvert 2.jpg	BrentP	Culvert 2.jpg, 666769	✓
	04/18/2025	Applicant Resolution/Authorizations	2025_ApplicantAuthorizationResolution_Fi	BrentP	2025_ApplicantAuthorizationResolutio… 666765	✓
	04/18/2025	RCO Fiscal Data Collection Sheet	WARCO FiscalDataCollectionSheet TU.pdf	BrentP	WARCO FiscalDataCollectionSheet TU.pdf, 666764	
	04/17/2025	Photo	Roughened Channel.jpg	BrentP	Roughened Channel.jpg, 666599	✓
	04/17/2025	Photo	diversion slow water.jpg	BrentP	diversion slow water.jpg, 666598	✓
	04/16/2025	Application Document	Fulton Ditch SRFB Jotform.pdf	BrentP	Fulton Ditch SRFB Jotform.pdf, 666452	✓
	04/16/2025	CCA Tribal Notification	Tribal Notification Placeholder.docx	BrentP	Tribal Notification Placeholder.docx, 666449	✓
	04/16/2025	Landowner acknowledgement form	Landowner Acknowledgement form placeholder.pdf	BrentP	LandownerAgreement .pdf, 666404	
	04/15/2025	Map: Planning Area	FultonParcelsServed.pdf.PDF	BrentP	FultonParcelsServed.pdf.pdf, 666342	✓
	04/15/2025	Map: Planning Area	FultonGenMap.pdf.PDF	BrentP	FultonGenMap.pdf.pdf, 666341	✓
	04/15/2025	Photo	Unlined ditch 2.jpg	BrentP	Unlined ditch 2.jpg, 666340	✓
	04/15/2025	Photo	Lining_empty.jpg	BrentP	Lining_empty.jpg, 666339	✓
	04/15/2025	Photo	Lining 2.jpg	BrentP	Lining 2.jpg, 666338	✓
	04/15/2025	Photo	Heatgate.jpg	BrentP	Heatgate.jpg, 666337	✓
	04/15/2025	Photo	FultonFishScreen.jpg.JPG	BrentP	FultonFishScreen.jpg.jpg, 666336	✓
	04/15/2025	Photo	FultonEastsideRd.jpg (1).JPG	BrentP	FultonEastsideRd.jpg (1).jpg, 666335	✓
	04/15/2025	Photo	FultonBearCreek.jpg.JPG	BrentP	FultonBearCreek.jpg.jpg, 666334	✓

Project Application Report - 25-1214

Application Status

Application Due Date: 06/23/2025

Status Name	Status Date	Submitted By	Submission Notes
Application Submitted	04/18/2025	Brent Paul	Thank you for reviewing my application for the Fulton Ditch Efficiency Project – Phase 2. I believe this project offers meaningful value to our rivers, fish, landowners, and the Methow community. I appreciate your time and consideration in supporting this important work.
Preapplication	04/02/2025		

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. (Brent Paul, 04/18/2025)

Date of last change: 04/18/2025

DESIGN PROJECTS

The costs on this page are for design projects, not for the design phase of a restoration grant.

				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)
Design Costs									
Category	Task Description	Qty	Rate						
Preliminary design	*Completing 60% desgin*	**1.00**	$ 272,000.00	$ 272,000	$ 272,000	$ -	$ -		
Permits	*Aquire Permits*	1.00	$ 80,000.00	$ 80,000	$ 80,000	$ -	$ -		
Administrative	*Project management / outreach*	1.00	$ 35,931.00	$ 35,931	$ 35,931	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
	387931		$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 387,931**	**$ 387,931**	**$ -**	**$ -**		
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	16.000%	$ 387,931.00	$ 62,069	$ 62,069	$ -	$ -		
	Indirect	0.000%	$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 62,069**	**$ 62,069**	**$ -**	**$ -**		
			Totals	**$ 450,000**	**$ 450,000**	**$ -**	**$ -**		

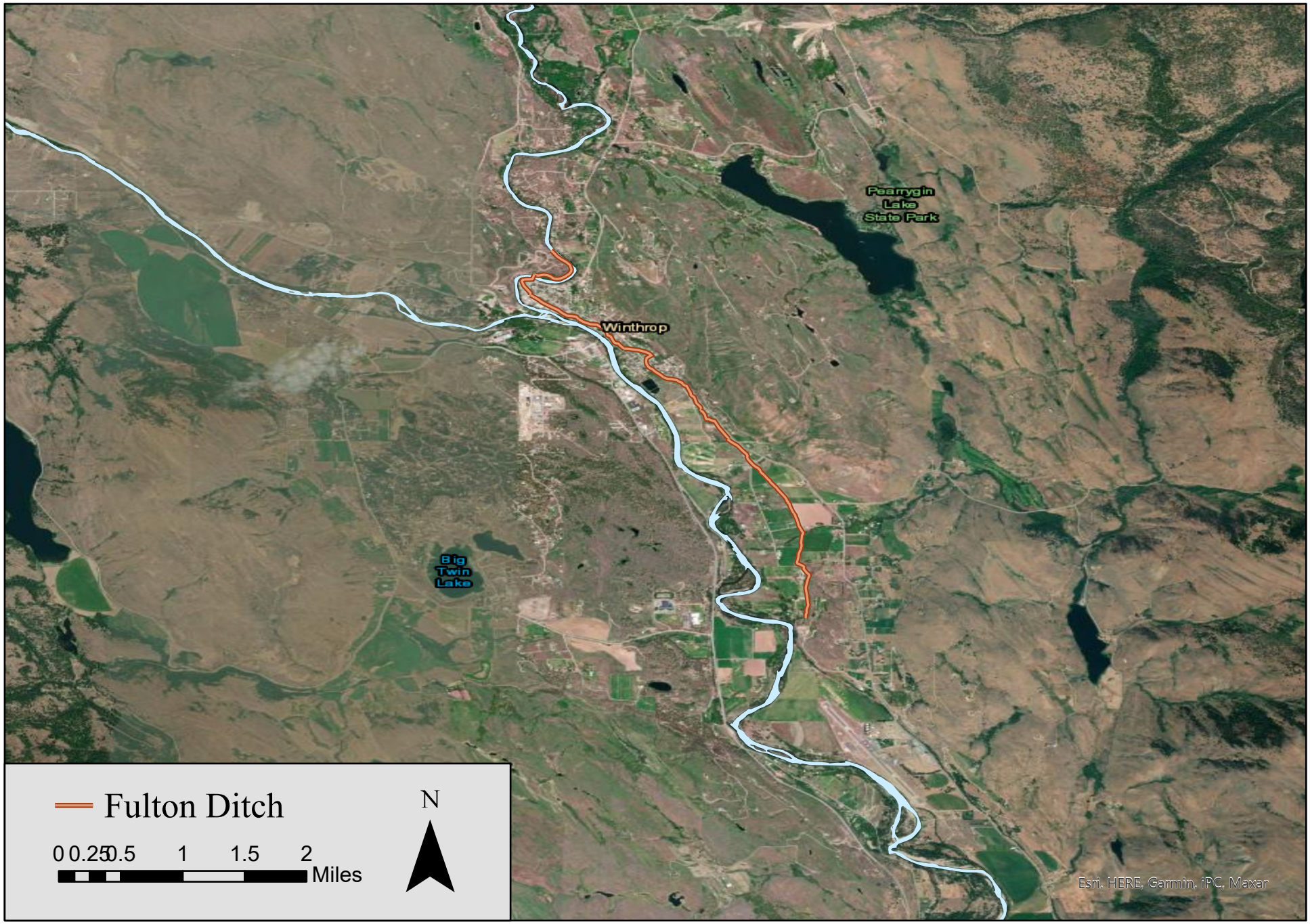
CUMULATIVE TOTALS

This sheet contains automatic calculations

Project Name	Fulton Ditch Irrigation Efficiency Project Phase 2
SRFB #	25-1214
Sponsor	Trout Unlimited

	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	$ 387,931	$ 387,931	$ -	$ -	
Indirect Costs	$ 62,069	$ 62,069	$ -	$ -	
STotal	$ 450,000	$ 450,000	$ -	$ -	0
Sheet #3 Restoration					
Construction Costs	$ -	$ -	$ -	$ -	0
AA&E	$ -	$ -	$ -	$ -	0
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Totals	$ 450,000	$ 450,000	$ -	$ -	0

Fulton Ditch Irrigation Efficiency Project




Chewuch River
Methow River
0
1.88
3.75
7.5
11.25
15
Miles
N
Fulton Ditch
Fulton Shareholders

Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)

Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)

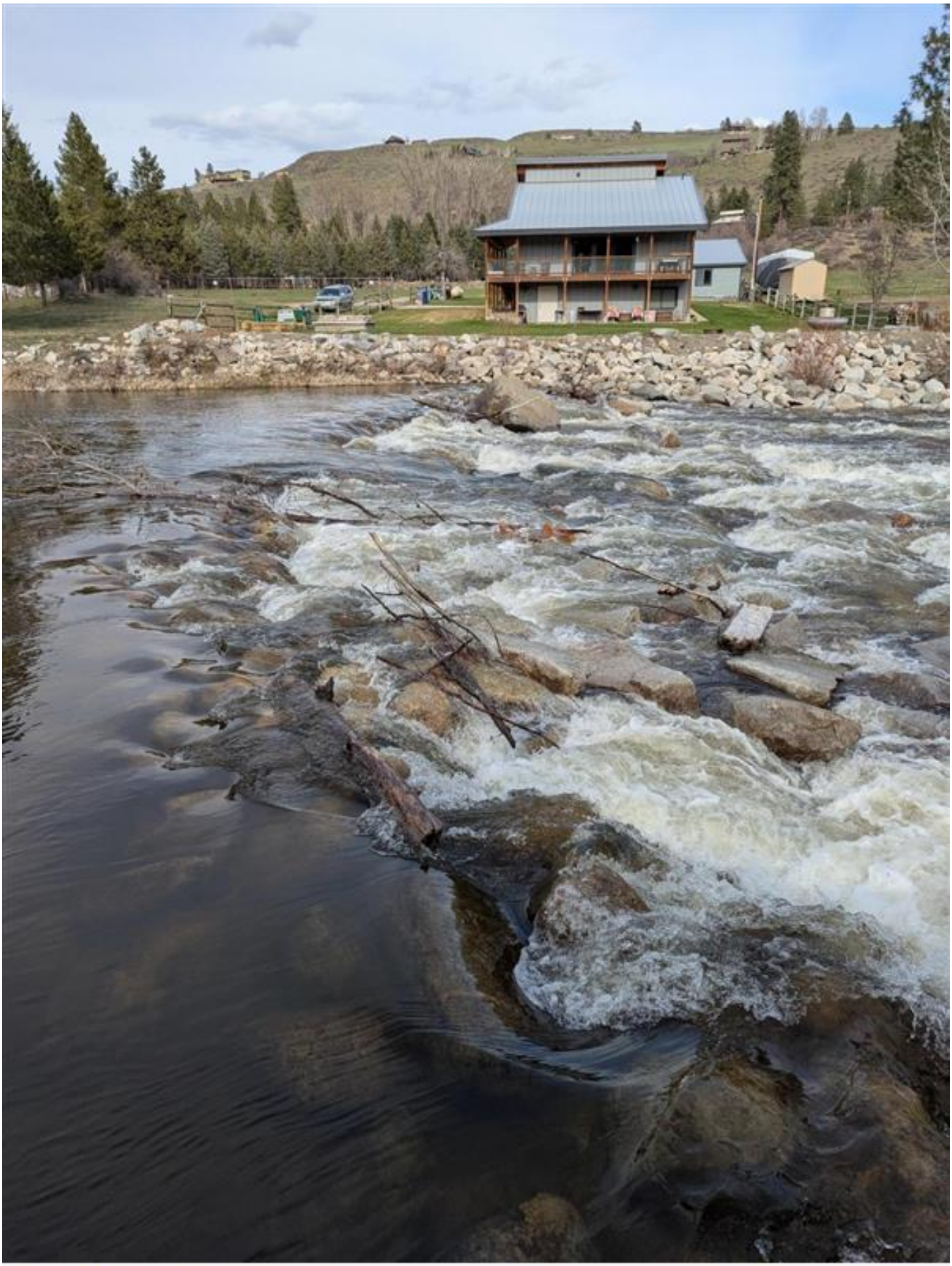
Attachment #666336, FultonFishScreen.jpg.JPG

Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)

Attachment #666336, FultonFishScreen.jpg.JPG

Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)

Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)



Trout Unlimited Inc.; Fulton Ditch Irrigation Efficiency Project Phase 2 (#25-1214)