FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid

I. APPLICANT INFORMATION

A. Applicant Name: Montana Trout Unlimited

Mailing Address: PO Box 7186

City: Missoula State: MT Zip: 59807-186

Telephone: (406) 451-3035 E-mail: chris@montanatu.org

B. Contact Person (if different than applicant):

Address:

City: State: Zip:

Telephone: E-mail:

C. Landowner and/or Lessee Name (if different than applicant): Big Hole River Preserve, LLC.

Mailing Address: 117 W. Patrick St. Suite 200

City: Frederick State: MD Zip: 21701

Telephone: (301) 676-8444 E-mail: cre@atlasrealestateco.com

II. PROJECT INFORMATION

A. Project Name: Big Hole Tributary Reconnection, Phase 2 - Alder Creek

River, stream, or lake: Alder Creek

Location: Township: T01 N Range: R11 W Section: S 19

Latitude: 45.82401 Longitude: -113.0224 *Within project (decimal degrees)*

County: Beaverhead

B. Purpose of Project: *(high level, focus on why the project is important)*

Across the Upper Missouri River Basin, low stream flows and elevated water temperatures, have led to declining native and wild salmonid populations. The Upper Big Hole River, home to the last aboriginal population of fluvial Arctic grayling, is one of the most chronically dewatered rivers in Montana. Furthermore, the Big Hole has experienced one of the most well-documented and publicized declines in wild trout populations in the West. The latter has resulted in a significant decline in the region's recreation economy. Montana Trout Unlimited (MTU) has prioritized the Big Hole for investment in critical drought adaptation strategies.

MTU is working with the Big Hole River Preserve, Montana Fish, Wildlife & Parks (FWP) and the Department of Natural Resources and Conservation (DNRC) to reconnect two coldwater tributaries, Johnson (phase 1) and Alder Creeks (phase 2), in the middle reaches of the Big Hole, 2.5 miles downstream of Dickie Bridge - the current downstream boundary of the Arctic Grayling Candidate Conservation Agreement with Assurances (CCAA) recovery program. Due to the tremendous effort of the CCAA, more grayling are inhabiting the Big Hole downstream of the recovery zone.

Alder Creek flows north out of the West Pioneers. It has a 22 mi^2 drainage area with an average peak flow of 52 cfs in June and a base flow of 5.6 cfs in September. Currently, Alder Creek is entirely captured seasonally, just 50 feet short of the Big Hole River, by an active irrigation ditch (Mallon Ditch) that originates at a point of diversion on the Big Hole to flood irrigate 101 acres.

The goal of this project is to reconnect this cold-water tributary to the Big Hole River. This reconnection will supply cold water to the Big Hole River, provide thermal refugia in the stream, reduce entrainment (fish loss to irrigation ditches), and open up spawning and rearing habitat.

A water rights change to use Big Hole water as a substitute for Alder Creek water to meet the irrigation needs to maximize the potential from Alder Creek are being managed by FWP to keep more coldwater instream during critical low-flow periods.

C. Brief Project Description (attach additional information to end of application). Please include the anticipated construction schedule:

A siphon will be constructed to carry Big Hole-sourced irrigation water under Alder Creek. A trash rack, headwall, and overflow structure will accompany the siphon.

90' of channel construction will occur to reconnect Alder Creek to the Big Hole River. The channel is designed to pass 100-year flood events, as well as accommodate fish passage at base flows. The channel design is 4.2% grade to match topographical and morphological conditions. The streambanks will be sloped 3:1. TU volunteers will provide labor to collect willow stakes and spread riparian and upland seed mixtures.

Engineer's 30% design plans are provided as an attachment.

Project Schedule:
August 2024, FWP procured WET for design and engineering
November 2024, MTU assumes project management
April 2025, WET provided conceptual designs for Alder Creek
July - September 2025, Streamflow Monitoring by MTU
August 2025, 30% design completed
January 2026, 75% design will be completed
April 2026, 99% design will be completed
May 2026 - September 2026, permitting
June 2026, Advertise RFP (TBD)
July 2026, Bid tour and contractor selection,
September 2026, permits secured
October 2026, construction 4 weeks to construct
December 2026, submit final grant reports

D. What was the cause of habitat degradation and how will the project correct the cause?

The Mallon ditch's point of diversion on the Big Hole River is about a 1/3 of a mile upstream of Alder Creek. The ditch runs parallel to the Big Hole and fully captures Alder Creek during the irrigation season. This project will reconnect Alder Creek with a channel design that meets environmental conditions. A siphon capable of 10 cfs will carry the Mallon ditch water to 101 acres of productive hay pasture.

E. Length of stream or size of lake that will be treated (project extent): 90'
Length/size of impact, if larger than project extent (e.g., stream miles opened): Approx. 25 miles

F. Project Budget Summary:

Grant Request (Dollars):	**$ 107,425**
Matching Dollars:	**$ 146,105**
Matching In-Kind Services:*	**$ 6,600**

**salaries of government employees are not considered matching contributions*

Other Contributions (not used as match) **$** _____

Total Project Cost: $ 260,130

G. Attach itemized (line item) budget – *see budget template*

H. Attach project location map(s) that include:

- ☐ Extent of the project, including context (relation to major landmark or town)
- ☐ Indication of public and private property
- ☐ Riparian buffer locations and widths (if applicable) and grazing locations

I. Attach project plans:

- ☐ Detailed sketches or plan views with the location and proposed restoration
- ☐ Pre-project photographs (GPS location strongly recommended)
- ☐ If water leasing or water salvage is involved, attach a supplemental questionnaire (*https://myfwp.mt.gov/getRepositoryFile?objectID=36110*)

J. Attach support letters or statements of (e.g., landowner consent, community or public support). For FWP statement, attach provided template. List any other project partners:

FWP Statement, Georger Grant TU, Big Hole Watershed Committee, Department of Natural Resources and Conservation, Landowner Agreement

III. MAINTENANCE AND MONITORING (attach additional information to end of application):

A. A 20-year maintenance commitment is required*. Please confirm that you will ensure this protection and describe your approach. Attach any relevant maintenance plans. **If it is a water leasing project, describe the length of the agreement.*

Yes	No
X	☐

Maintenance plans will be developed in 2026 in conjunction with the CCAA team and the landowner.

B. Will grazing be part of or adjacent to the project? If so, describe or attach land management plans, including short term and long term grazing regimes. If the landowner is not the applicant, please describe their involvement in the project. *If you want assistance with grazing plan development, note your need.*

Grazing will continue adjacent to the project site and will exclude the riparian area.

C. Will the project be monitored to determine if goals were met? If so, what are the short-term and long-term plans to assess benefits and lessons learned? Were pre-project data collected? Will monitoring information be shared with FWP?

Yes, the CCAA team will be leading the flow monitoring with support from MTU. The CCAA team will also conduct follow-up riparian assessments. Pre-project data has been collected and a summary has been provided in the supplemental information. All of the data and monitoring information will be recorded by FWP.

Short-term success will be measured by cold water from Alder Creek connecting to the river where it currently doesn't exist.

Long-term success will be measured by the landowner's use of and compliance in the management agreements being developed by the project team. An increase in wild trout recruitment in adjacent monitoring sections may also be a measure of success. FWP has a long-term monitoring site on the Big Hole River approximately 4 miles downstream of the project site that is monitored annually. Another indicator will be a more desirable fish assemblage in Alder Creek. Currently, like many on the Big Hole tributaries, abundant and stunted brook trout make up most of the population in lower Alder Creek. A long-term monitoring site was established in Alder Creek upstream of the proposed project area in 2025. If spawning use of migratory fish from the Big Hole River increases as a result of the proposed project, we would expect to see an increase in the proportion of rainbow, brown trout and potentially grayling in Alder Creek through time.

IV. PROJECT BENEFITS (attach additional information to end of application):

A. What species of fish will benefit from this project?

Arctic grayling, westslope cutthroat trout, mountain whitefish, brown trout, rainbow trout, and sculpin species.

B. How will the project protect or enhance wild fish habitat?

"Water availability is the primary limiting factor for the fishery and its tributaries. Irrigation withdrawals and municipal use within the drainage can cause periods of low flow and elevated temperatures," "Tributary connectivity will be a priority for Big Hole River restoration over the next four years" (FWP, Statewide Fisheries Management Plan, section 2.14 pgs. 6, 13). Recent analysis of FWP's long-term data sets also suggest that river temperature (i.e., number of days over 68 degrees) is a limiting factor for both adult survival and juvenile recruitment.

The goal of this project is to: reconnect Alder Creek to add critical coldwater to the Big Hole where it currently doesn't exist; maintain flood irrigation water delivery; and restore fish passage for spawning and thermal refugia to more than 25 miles of tributary habitat. Point stream temperature data were taken four times from mid-July through September 2025. When comparing temperature point data to the Big Hole at Dickie Bridge, Alder Creek was 10-15 degrees Fahrenheit colder during the heat of the summer. The Big Hole needs more cold water, Alder Creek can provide that.

C. What is the expected improvement to fish populations, both short term and long term? How might the project translate to angler success?

This project could benefit both native Arctic grayling and rainbow and brown trout. Not only will this project help to cool the Big Hole River and make conditions more suitable for cold water fish species, Arctic grayling are known to use nearby tributary streams as thermal refuge in times of thermal stress. That is currently not possible in Alder Creek because fish passage is completely blocked by the irrigation ditch and diversion. The project could improve the fishery in the river through increased potential spawning by both spring and fall spawning species. Alder Creek is a moderate gradient stream and does not contain abundant spawning habitat, however, trout and grayling from the Big Hole River use similar streams in the area with similar habitats for spawning and rearing (i.e., Fishtrap and Lamarche Creek). Increased spawning potential in tributary stream could lead to increase recruitment of fish to the Big Hole River. Juvenile fish production is one of the main limiting factors for fish in the Big Hole River. Tributaries may serve as an important source of recruitment particularly during dry times.

D. Will the project increase public fishing opportunity for wild fish and, if so, how? Is public fishing allowed onsite? Is it allowed by permission? If not, describe how the public would benefit.

The public would primarily see increased fishing opportunities through consistent recruitment of juvenile fish to the Big Hole River and improved thermal conditions in the river. Hoot owl (temperature related) and full river closer (flow related) are common in this reach of the Big Hole River during dry years. While it is not likely that the project on Alder Creek alone will stay off future hoot-owl closures, it is a step in the right direction.

Alder Creek flows through private property for roughly 1.5 miles before reaching the BLM and National Forest. There is no public access below public land to the creek but access can be gained by seeking permission from the private landowners.

Alder Creek fish assemblage is currently abundant, and stunted brook trout. We anticipate an assemblage shift and more bigger river fish using Alder Creek once fish passage is reestablished.

E. Aside from angling, what local or large-scale public benefits will be realized from this project?

This project will leave cleaner, coldwater instream, benefiting aquatic, riparian, and wildlife species. Leaving cleaner water instream will also benefit Butte-Silver Bow's water supply from the Big Hole River.

F. Will the project interfere with water or property rights of adjacent landowners? (explain):

No, this project is relatively small in scale and takes place entirely on the landowner's property. Tributary water used for irrigation will be changed to Big Hole water well within the landowner's water rights. The next downstream water right is held by this landowner.

If anything, restoring fish passage will improve fish numbers on upstream land owned by private and federal landowners.

G. Will the project result in the development of commercial recreational use on the site (including paid access)? Explain:

No commercial recreational access is planned for this project.

H. Is this project associated with the reclamation of past mining activity?

No

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

V. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: _____ Date: November 14, 2025

Submittal: **Applications must be signed and received on or before November 15 and May 15 to be considered for the subsequent funding period**. Late or incomplete applications will be rejected.

Mail to:	FWP Future Fisheries Fish Habitat Bureau PO Box 200701 Helena, MT 59620-0701	Email:	Future Fisheries Coordinator FWPFFIP@mt.gov (electronic submissions must be signed) For files over 10MB, use https://transfer.mt.gov and send to mmcgree@mt.gov

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for clarification.

PROJECT COSTS					GRANT REQUEST AND FUNDING			
Work Items (Itemize by Category)	**Number of Units**	**Unit Description***	**Cost/Unit**	**Total Cost**	**FUTURE FISHERIES REQUEST**	**Matching Contributions (Cash or In-Kind)*** **	**Other Contributions (Funds not used as match)**	**Total Funding**
Units = feet, hours, cubic yards, etc. Do not use lump sum unless necessary.								
Personnel								
Survey	1	ea	$5,000.00	$ 5,000.00		5,000.00		$ 5,000.00
Eng. Project Mgmt & Bid Docs	1	ea	$5,100.00	$ 5,100.00		5,100.00		$ 5,100.00
Engineering	1	ea	$25,850.00	$ 25,850.00		25,850.00		$ 25,850.00
Permitting	1	ea	$14,000.00	$ 14,000.00		14,000.00		$ 14,000.00
MTU Project Mgmt/Outreach	100	hours	$50.00	$ 5,000.00		5,000.00		$ 5,000.00
Construction Oversight & Admin	100	hours	$163.00	$ 16,300.00		16,300.00		$ 16,300.00
			Sub-Total	$ 71,250.00	$ -	$ 71,250.00	$ -	$ 71,250.00
Travel								
Mileage	20	round trip (114mi	$80.00	$ 1,600.00		1,600.00		$ 1,600.00
Per diem				$ -				$ -
			Sub-Total	$ 1,600.00		$ 1,600.00	$ -	$ 1,600.00
Construction Materials								
Top Soil Salvage and Place	25	Cubic Yard	$75.00	$ 1,875.00		1,875.00		$ 1,875.00
Riprap	5	Cubic Yard	$75.00	$ 375.00		375.00		$ 375.00
Geotextile Seperation Fabric	25	Square Yard	$25.00	$ 625.00		625.00		$ 625.00
21" DR17 HDPE	71	Linear Foot	$300.00	$ 21,300.00	21,300.00			$ 21,300.00
CIP Concrete Headwall-Siphon Inlet	17	Cubic Yard	$2,200.00	$ 37,400.00		37,400.00		$ 37,400.00
CIP Concrete Headwall-Siphon Outlet	11	Cubic Yard	$2,200.00	$ 24,200.00		24,200.00		$ 24,200.00
Trash Rack	1	ea	$6,000.00	$ 6,000.00		6,000.00		$ 6,000.00
Guard Ral	1	ea	$4,800.00	$ 4,800.00		4,800.00		$ 4,800.00
Upland Soil Seeding Planting	0.2	Acre	$5,000.00	$ 1,000.00		1,000.00		$ 1,000.00
Riparian Soil Seeding Planting	0.1	Acre	$5,000.00	$ 500.00		500.00		$ 500.00
Erosion Control Blanket	180	Square Yard	$6.00	$ 1,080.00		1,080.00		$ 1,080.00
Willow Stake	1000	ea	$2.00	$ 2,000.00		2,000.00		$ 2,000.00
			Sub-Total	$ 101,155.00	$ 21,300.00	$ 79,855.00	$ -	$ 101,155.00
Equipment, Labor, and Mobilization								
Mobilization	1	ea	$20,000.00	$ 20,000.00	20,000.00			$ 20,000.00
Taxes, Bonds, & Insurance	1	ea	$10,000.00	$ 10,000.00	10,000.00			$ 10,000.00
Erosion Control	1	ea	$11,000.00	$ 11,000.00	11,000.00			$ 11,000.00
Clearing and Grubbing	1	ea	$10,000.00	$ 10,000.00	10,000.00			$ 10,000.00
Dewatering	1	ea	$25,000.00	$ 25,000.00	25,000.00			$ 25,000.00
Excavation and Grading	105	Cubic Yard	$25.00	$ 2,625.00	2,625.00			$ 2,625.00
Fill and Grading	250	Cubic Yard	$30.00	$ 7,500.00	7,500.00			$ 7,500.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 86,125.00	$ 86,125.00	$ -	$ -	$ 86,125.00
			OVERALL TOTALS	$ 260,130.00	$ 107,425.00	$ 152,705.00	$ -	$ 260,130.00

OTHER REQUIREMENTS:

**For projects that include a maintenance request, it cannot exceed 10% of the total project cost.

***Match can include in-kind materials or labor. Justification for in-kind labor (e.g. hourly rates used) can be noted below. Do not use government salaries as match.

Additional budget detail:

APPLICATION MATCHING CONTRIBUTIONS

Total should equal match listed above; do not include requested funds

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
State Wildlife Grant	$ -	$ 49,950.00	$ 49,950.00	Yes
George Grant TU	$ -	$ 21,250.00	$ 21,250.00	Apply in January
Montana Trout Unlimited	$ 6,600.00	$ 5,000.00	$ 11,600.00	Yes
Water User/Landowner	$ -	$ 10,000.00	$ 10,000.00	Yes
Trout and Salmon Foundation	$ -	$ 10,000.00	$ 10,000.00	No
Montana Trout Foundation	$ -	$ 5,000.00	$ 5,000.00	Applied
FWS Partners Program	$ -	$ 5,000.00	$ 5,000.00	Contingent on full funding
FWS National Fish Passage Program	$ -	$ 25,000.00	$ 25,000.00	No
American Rives	$ -	$ 8,500.00	$ 8,500.00	Applied
Other		$ 6,405.00	$ 6,405.00	No
TOTALS	$ 6,600.00	$ 146,105.00	$ 152,705.00	

OTHER CONTRIBUTIONS

Total should equal other contributions listed above; these are funds not specically matched to the Future Fisheries application

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ -	$ -	$ -	

Big Hole Tributary Reconnection, Phase 2 - Alder Creek 001-2026

FIELD REQUISITION

☒ NEW PROCUREMENT REQUEST	STATE FISCAL YEAR CONTRACT NEEDS TO START:	2024	☐ CHANGES TO AN ACTIVE CONTRACT/PO (Skip to SECTION B)	ACTIVE CONTRACT # PO #

SECTION A. COMPLETE THIS SECTION FOR NEW PROCUREMENT REQUESTS

Short Project Title (Be Concise):	**Alder Creek Passage Project**
Requested Start Date of Service Contract or Requested Delivery Date of Goods/Equipment *Actual Start Date for service contracts will be determined by the date of last signatures or a future start date if requested	**1/30/2024**
Will this contract be issued an initial term with options to renew?	☐ Yes ☒ No
If yes, what is the END date of the initial term?	
Is the contractor/vendor providing match?	☐ Yes ☒ No

Is this a D&C or Print & Mail Services Project? Please check if applicable.	☒ D&C Project	☐ D&C Signs	☐ Print & Mail

Invoices sent to:		**Shipping Address for Goods/Equipment:**		**Field Requisition Contact:**	
Name/Division:	**Michelle McGree**	Name/Division:	**Jim Olsen**	Name:	**Michelle McGree**
Mailing Address:	**1420 E Sixth Ave PO**	Physical Address:	**1820 Meadowlark Lane,**	Division	**1420 E Sixth Ave PO**
City, State ZIP:	**200701 Helena 59620**	City, State ZIP:	**Butte MT 59701**	Phone :	**200701 Helena 59620**
Phone:	**406-444-2432**	Phone:	**406-533-8451**	E-mail:	**406-444-2432**
E-mail:	**mmcgree@mt.gov**	E-mail:	**jimolsen@mt.gov**		**mmcgree@mt.gov**

BRIEF DESCRIPTION of PRODUCT/SERVICES (Attach detailed SOW)	Qty	Define Unit (e.g. each, years)	Cost Per Unit	Est. Total
Project Management	**1**	**ea**		**$1,300**
Site survey	**1**	**ea**		**$5,000**
Permitting	**1**	**ea**		**$14,000**
Engineering Design	**1**	**ea**		**$25,850**
Construction/Big Documents	**1**	**ea**		**$3,800**
TOTAL CONTRACTED VALUE OF ALL YEARS (Includes all anticipated renewals)				**$49,950.00**

FUNDING BREAKDOWN (Include all anticipated renewals)

Includes Federal Funding (Y/N)	Grant # (Req. for Federal & Private Funding Agreements)	Funding Source / Name of Grant	For State Fiscal Year	Project Number	Expense Code	Amount
No		**State Wildlife Grants**	**2024**		**62102**	**$49,950.00**
No						
No						
TOTAL CONTRACTED VALUE OF ALL YEARS (Includes all anticipated renewals)						**$49,950.00**

SECTION B. COMPLETE THIS SECTION FOR CHANGES TO CURRENT CONTRACTS

REQUESTED CHANGES (Check all that Apply):

☐ **Changes to Start/End Date of Contract**	☐ **Changes to Total Contracted Value**	☐ **Close Out Contract Early (Contract Close Out Form Attached)**
☐ **Changes to Services/Statement of Work**	☐ **Changes to Funding Sources (Complete funding breakdown above)**	☐ **Other (e.g. change of liaisons)**

DESCRIBE CHANGES:	

REQUIRED BEFORE SUBMISSION TO FACB (Checklist on Page 1)

TSD Division Signature/Date (If Applicable): **ITPR#:**	**Division Administrator Signature/Date:**

FACB WILL OBTAIN APPROVALS BELOW AND SUBMIT TO PROCUREMENT

Budget Bureau Approval/Date	**FACB Bureau Approval/Date** ☐ **Contractor** ☐ **Subrecipient**

Big Hole Tributary Reconnection, Phase 2 - Alder Creek

Project area:
Alder Creek flows north out of the West Pioneer Mountains. It has a 22 mi^2 drainage area with an average peak discharge of 52 cfs in June and a base flow of 5.6 cfs in September. Currently, Alder Creek is entirely captured seasonally by an active irrigation ditch, the Mallon Ditch, just 50 feet upstream from the Big Hole River. The ditch distributes water to a flood-irrigated hay meadow (**Figure 1**).

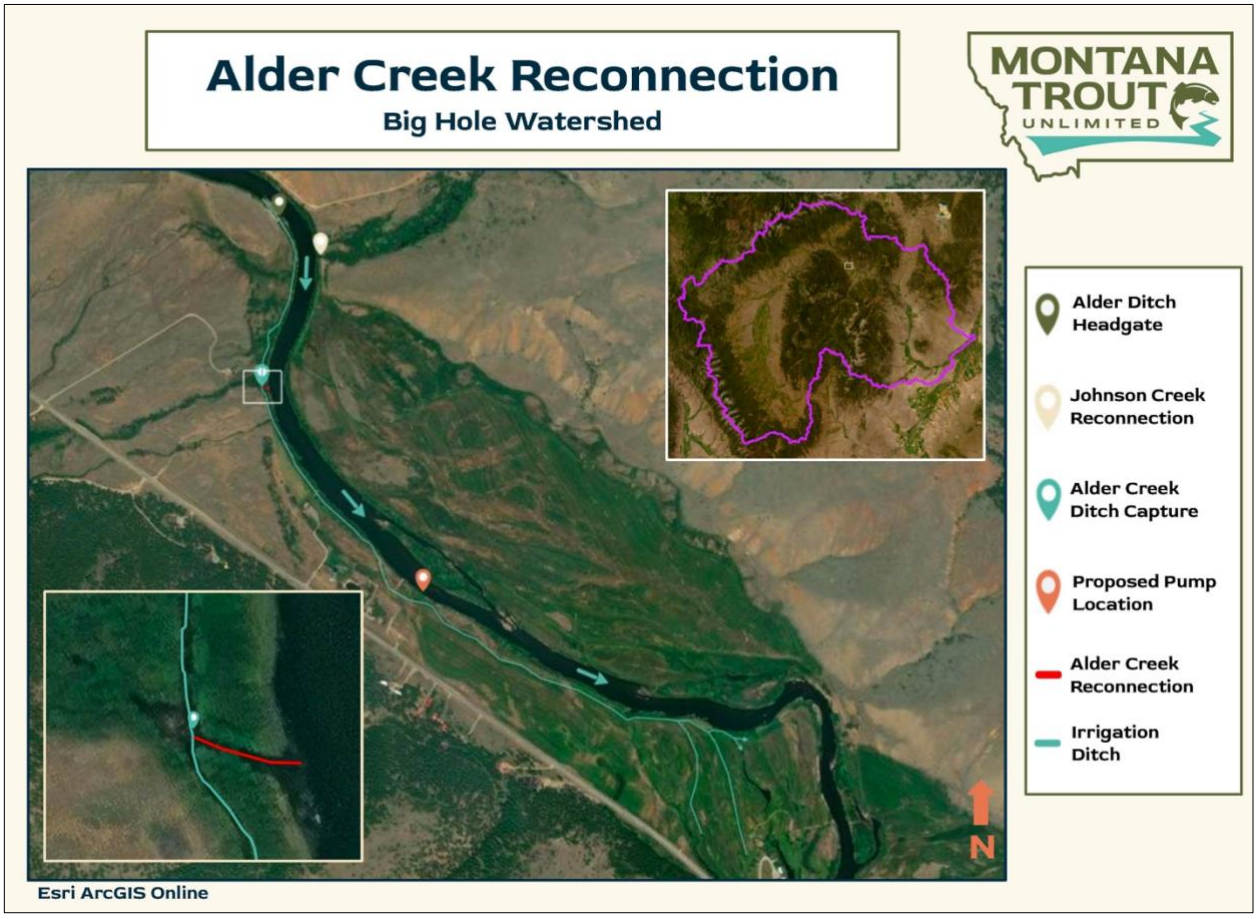


Figure 1. Location of the Alder Creek reconnection and irrigation infrastructure project.

Irrigation:
MTU is coordinating with the DNRC, FWP, and the Big Hole River Preserve (BHRP) to determine the most appropriate time to minimize irrigation. This could be a specific date (i.e., July 15) or a flow trigger on the Big Hole River at the Dickie Bridge DNRC stream gage. A water rights change to maximize the potential of Alder Creek is being managed by FWP to keep more coldwater instream during critical low-flow periods.

BHRP irrigates with water rights from the Big Hole River, Johnson, and Alder Creeks. The Mallon Ditch and Point of Diversion (POD), **41D_93265**, and Alder Creek POD, **41D_93272**, and associated Place of Use. While Johnson Creek PODs and ditches

are not part of this funding request, MTU is working with the BHRP on a similar tributary reconnection there in phase 1, and it is a component of the overall restoration strategy for BHRP. (**Figure 2**).

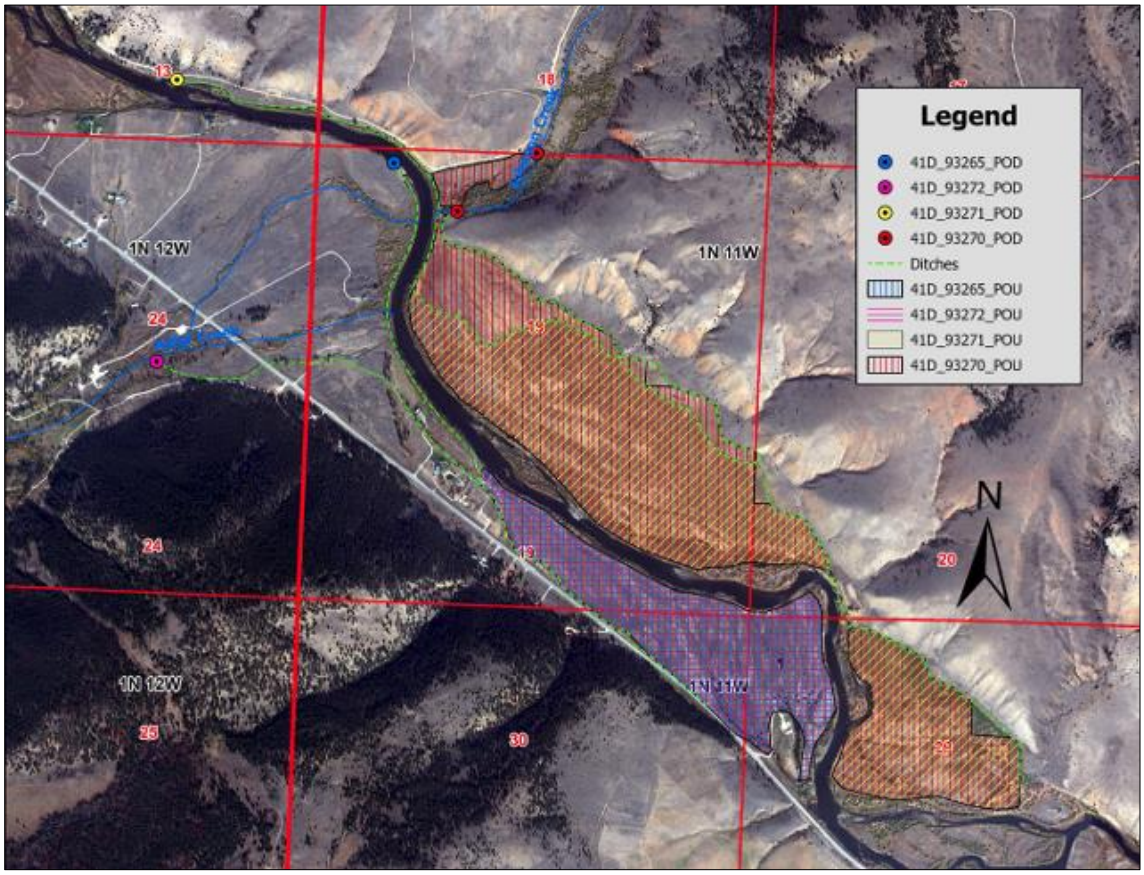


Figure 2. Mallon Ditch and Point of Diversion (POD), 41D_93265, and Alder Creek POD, 41D_93272, and associated Place of Use in blue and pink.

Four times from late July through September 2025, discharge and temperature data were taken for Alder Creek. When compared to the Big Hole River at Dickie Bridge, Alder Creek water temperatures were 10-15°F colder (**Figure 3**) during peak summer conditions. The Big Hole needs more cold water; Alder Creek can provide that.

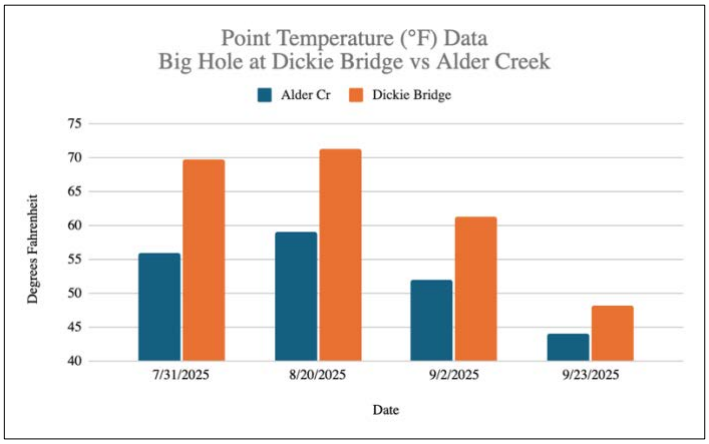


Figure 3. Alder Creek and Big Hole River water temperatures at four discrete measurements in summer 2025. Alder Creek water temperatures were 10-15°F colder.

Critical State Need:
Excerpt from FWP's 2023 – 2026 Statewide Fisheries Management Plan, Section 2.14

> **Pg 6.** *Prolonged drought, exacerbated by irrigation demand, has caused a well-documented decline of salmonids in the Big Hole watershed. "Water availability is the primary limiting factor for the fishery and its tributaries. Irrigation withdrawals and municipal use within the drainage can cause periods of low flow and high water temperatures.*
>
> **Pg 13.** *Tributary connectivity will be a priority for Big Hole River restoration over the next four years."*

The goals of this project are to:
Reconnect Alder Creek to the Big Hole where it currently doesn't exist **(Figure 4)**; maintain flood irrigation water delivery; and restore fish passage for spawning and thermal refugia to more than 25 miles of tributary habitat.

The objectives are to:
Design the irrigation infrastructure to allow fish passage, and construct a siphon for the Mallon Ditch under the Alder Creek stream channel (**Figures 5 & 6**). The stream channel will be designed to accommodate environmental conditions and enable fish passage for access to thermal refugia and spawning habitat.

Existing Conditions:

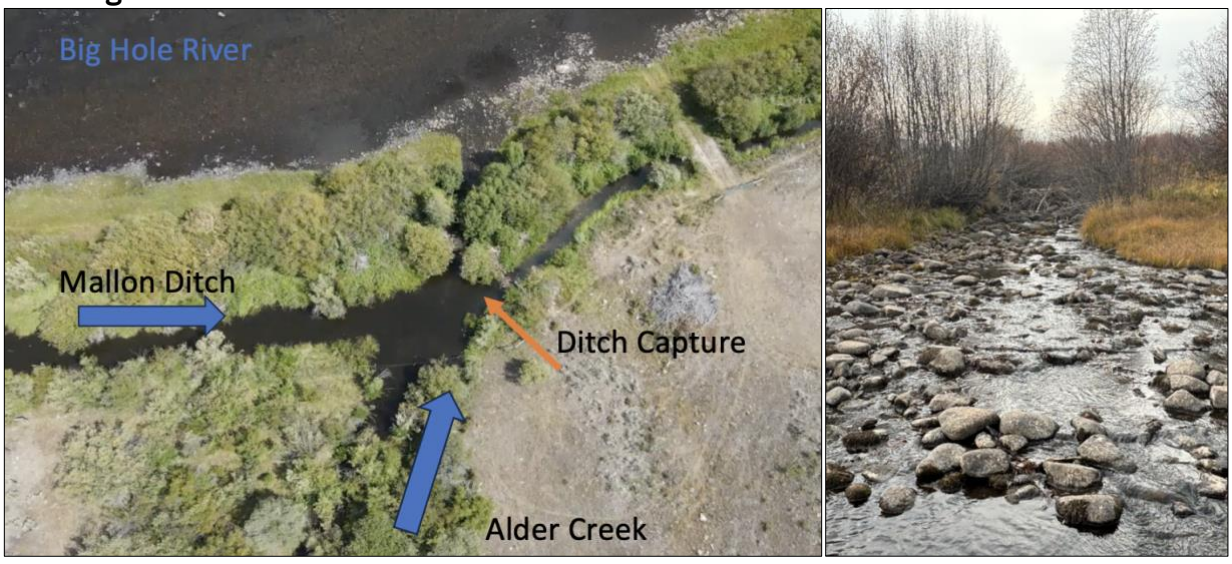


Figure 4. Besides some seepage, a pin and plank structure on the Mallon Ditch (aided by a beaver dam) captures Alder Creek during the irrigation season. Fish passage for thermal refugia and spawning does not currently exist. The creek will be reconnected with 90' of channel restoration and the addition of a siphon to convey Mallon Ditch water under the creek.

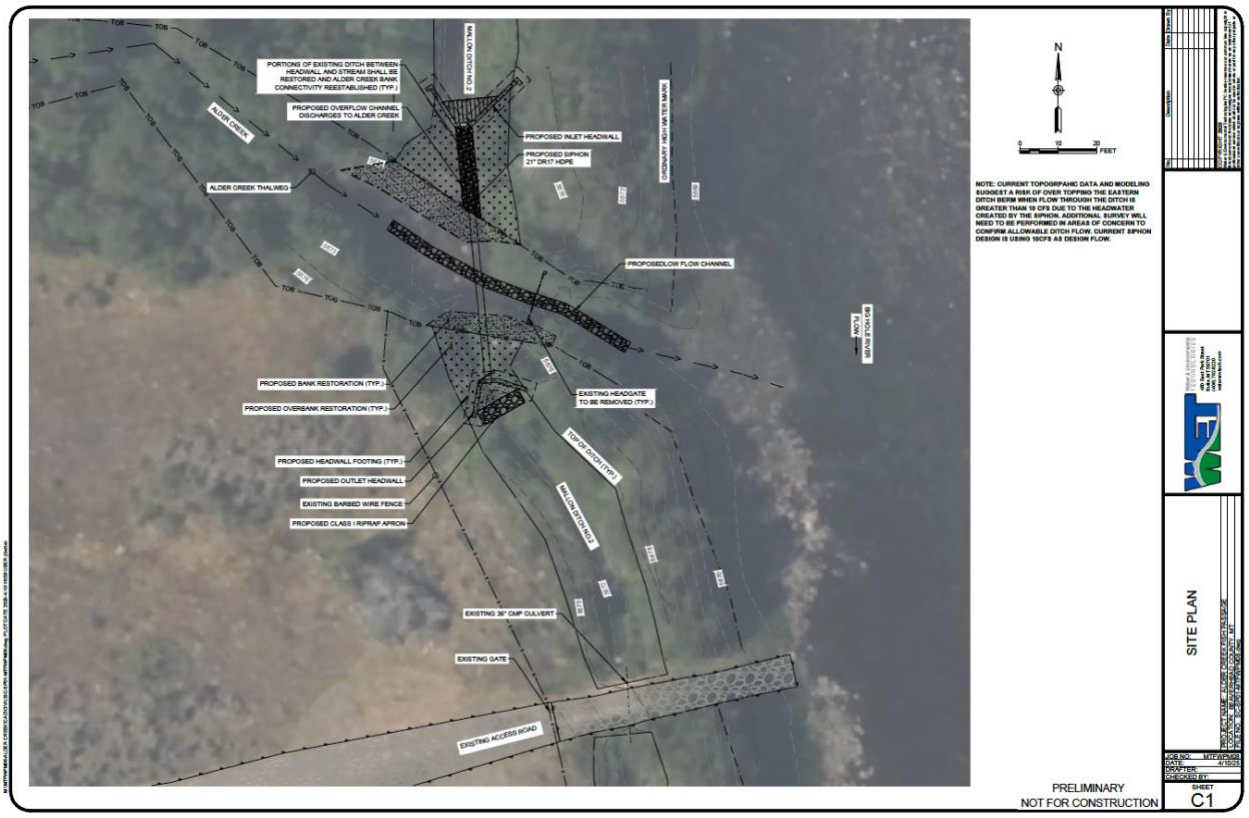


Figure 5. Planview of the Alder Creek reconnection project.

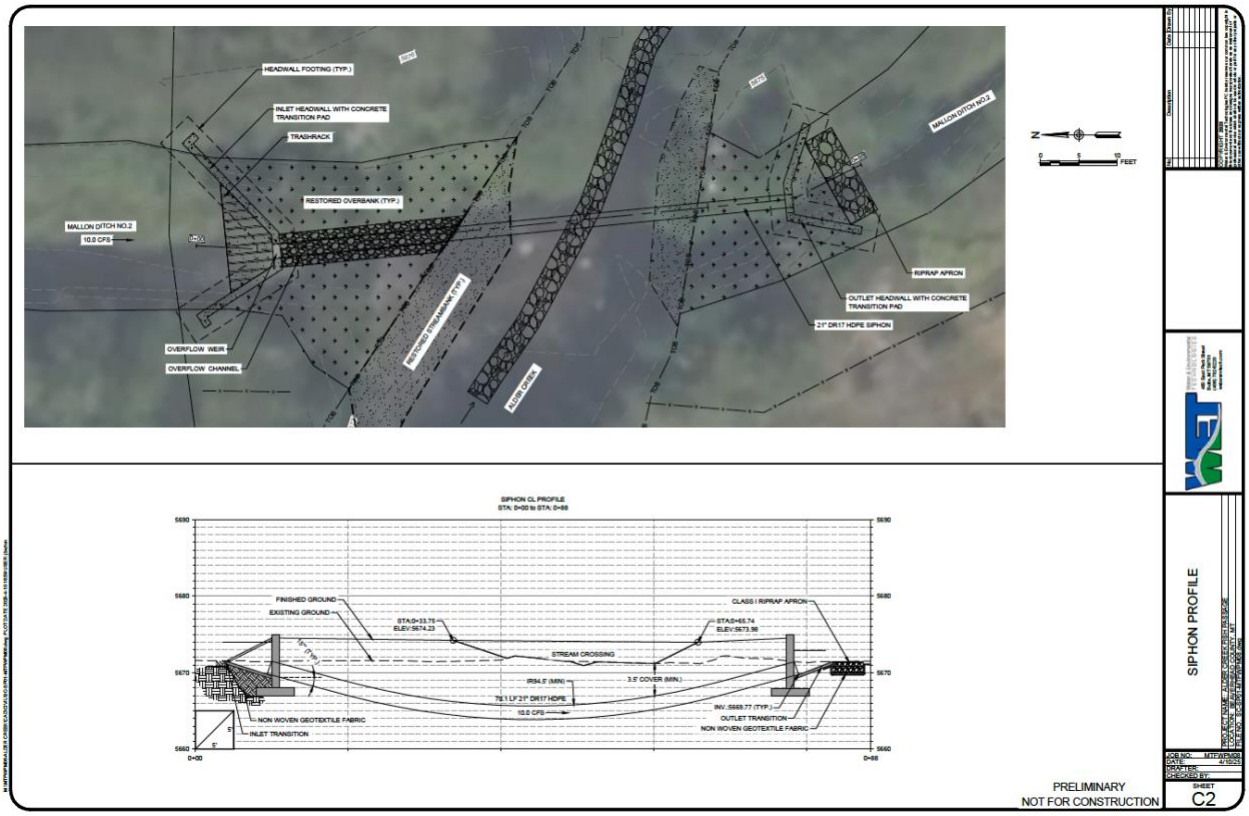


Figure 6. Planview and profile of the irrigation ditch siphon.

The two-phase project to reconnect Johnson and Alder Creeks (**Figure 7**) with the Big Hole River will increase coldwater in the river, restore fish passage to the two tributaries, and maintain access to irrigation water. The kind of true win-win project that MTU strives to develop.

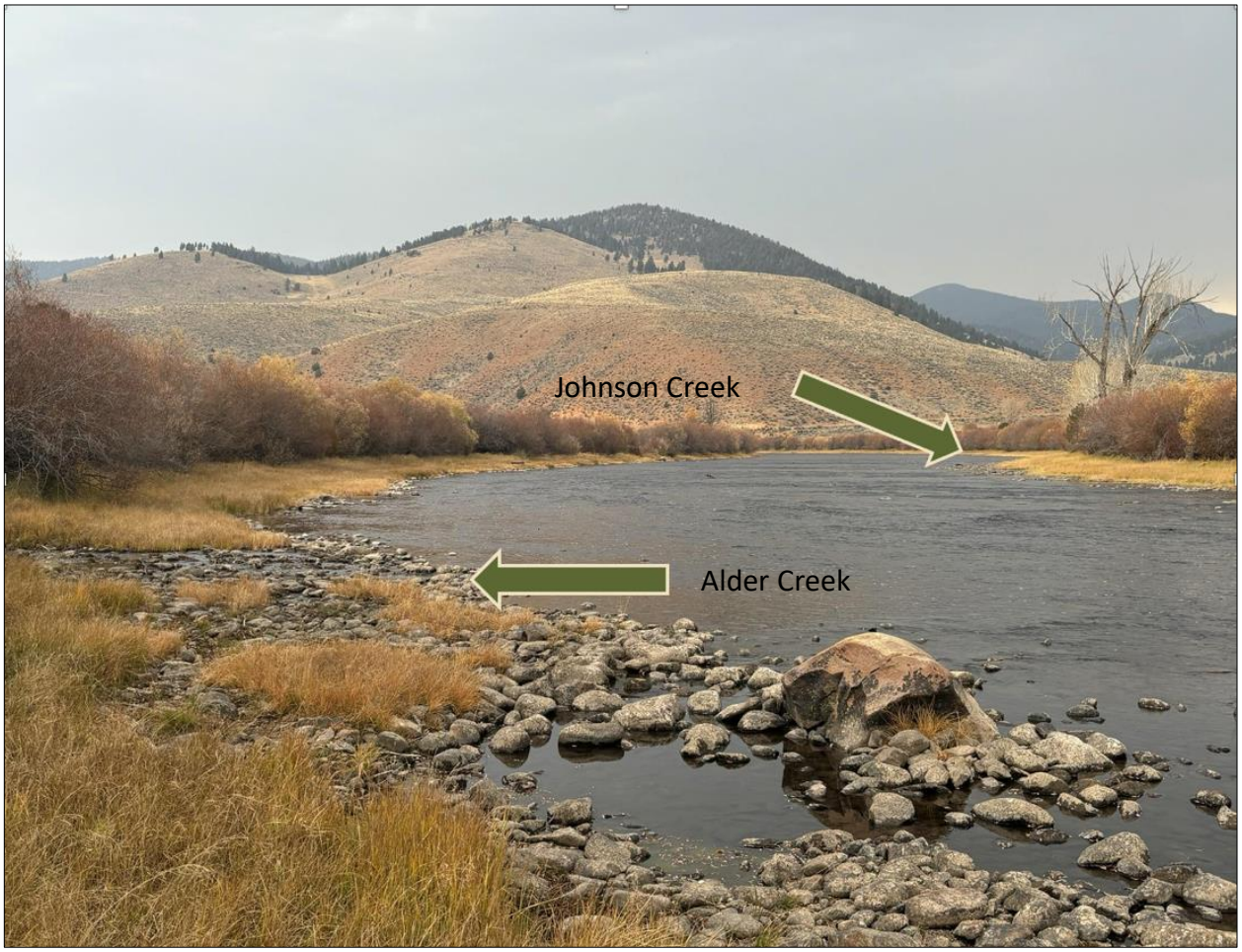
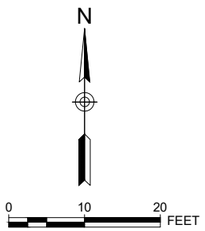


Figure 7. The confluences of Johnson and Alder Creeks will reconnect to the Big Hole just 400 yards apart. Once the two-phase project is completed, these two coldwater tributaries will once again be available for thermal refugia and spawning habitat for wild and native fish in the Big Hole River.

Big Hole Tributary Reconnection, Phase 2 - Alder Creek

001-2026



NOTE: CURRENT TOPOGRPAHIC DATA AND MODELING SUGGEST A RISK OF OVER TOPPING THE EASTERN DITCH BERM WHEN FLOW THROUGH THE DITCH IS GREATER THAN 10 CFS DUE TO THE HEADWATER CREATED BY THE SIPHON. ADDITIONAL SURVEY WILL NEED TO BE PERFORMED IN AREAS OF CONCERN TO CONFIRM ALLOWABLE DITCH FLOW. CURRENT SIPHON DESIGN IS USING 10CFS AS DESIGN FLOW.

PRELIMINARY
NOT FOR CONSTRUCTION

No	Description	Date	Drawn

Water & Environmental TECHNOLOGIES
480 East Park Street
Butte, MT 59701
(406) 782-5220
watenvtech.com

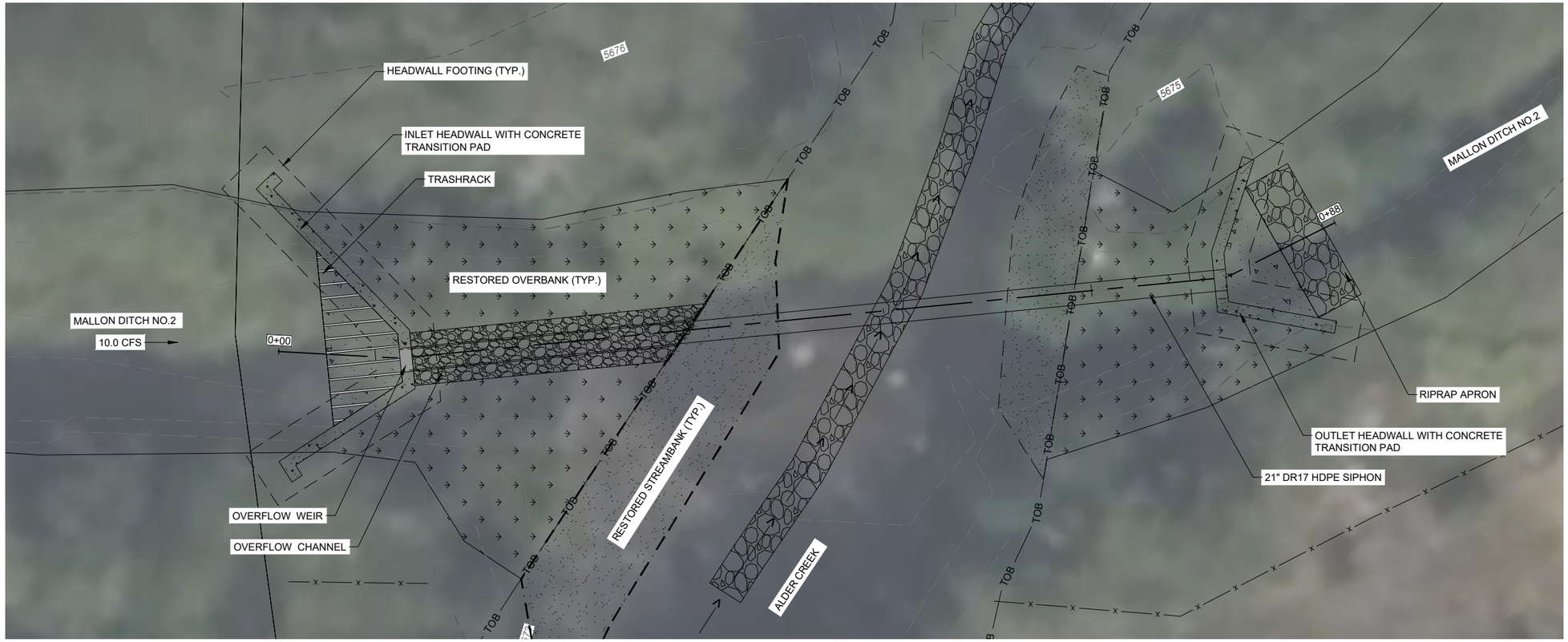
SITE PLAN

PROJECT NAME: ALDER CREEK FISH PASSAGE
LOCATION: BEAVERHEAD COUNTY, MT
FILE NO. SC-SP01-MTFWPM08.dwg

JOB NO:	MTFWPM08
DATE:	4/10/25
DRAFTER:	
CHECKED BY:	

SHEET
C1

M:\MTFWPM08-ALDER CREEK\CAD\CIVIL\SC-SP01-MTFWPM08.dwg PLOT DATE 2025-4-10 16:59 USER: jburton



SIPHON CL PROFILE
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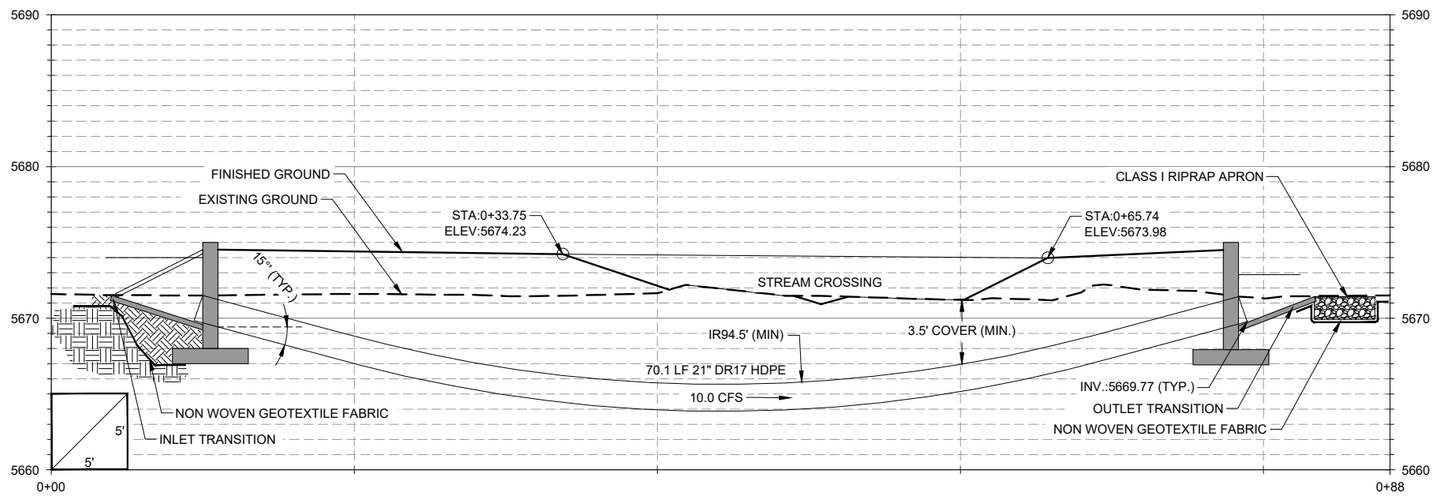


PRELIMINARY
NOT FOR CONSTRUCTION

No	Description	Date	Drawn

Water & Environmental TECHNOLOGIES
480 East Park Street
Butte, MT 59701
(406) 782-5220
waterenvtech.com

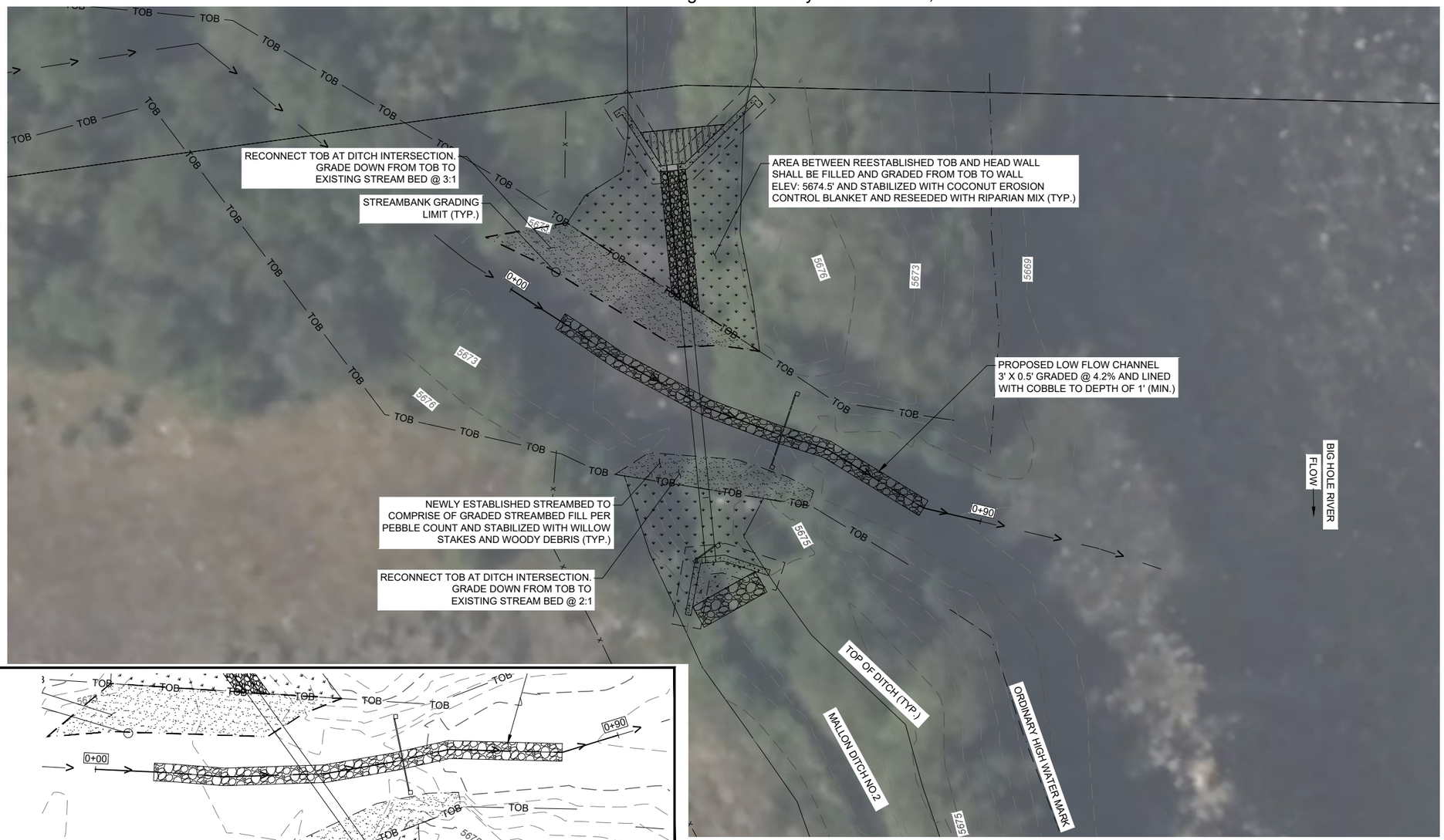
SIPHON PROFILE

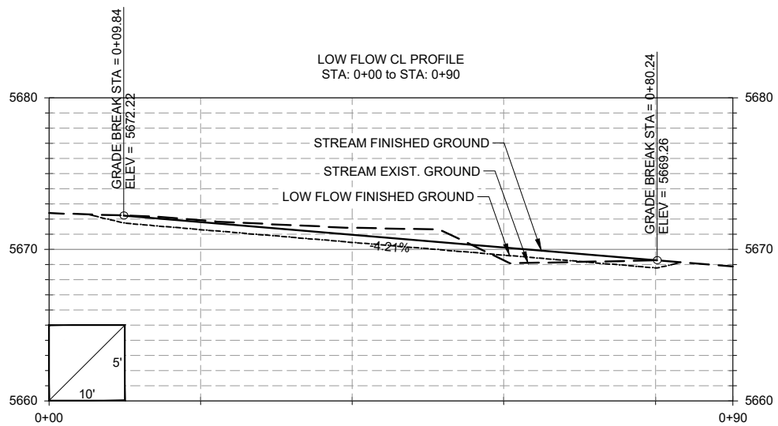
PROJECT NAME: ALDER CREEK FISH PASSAGE
LOCATION: BEAVERHEAD COUNTY, MT
FILE NO: SC-SP01-MTFWPM08.dwg

JOB NO:	MTFWPM08
DATE:	4/10/25
DRAFTER:	
CHECKED BY:	

SHEET
C2

M:\MTFWPM08-ALDER CREEK\CAD\CIVIL\SC-SP01-MTFWPM08.dwg PLOT DATE 2025-4-10 16:59 USER: jburton





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PRELIMINARY
NOT FOR CONSTRUCTION

No	Description	Date	Drawn

Water & Environmental TECHNOLOGIES
118 East 7th Street
Anaconda, MT 59711
(406) 563-7476
waterenvtech.com

RESTORATION PLAN

PROJECT NAME: ALDER CREEK FISH PASSAGE
LOCATION: BEAVERHEAD COUNTY, MT.
FILE NO. SC-SP01-MTFWPM08.dwg

JOB NO:	MTFWPM08
DATE:	4/10/25
DRAFTER:	JB
CHECKED BY:	SF

SHEET
C3

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Opinion of Probable Cost - 30% Design

Alder Creek Siphon-10cfs

Bid Item #	Description	Quantity	Units	Unit Cost	Total Cost
1	Mobilization / Demobilization (**Not to Exceed 10% of the Total Bid**)	1	Lump Sum	$20,000.00	$20,000.00
2	Taxes, Bonds, and Insurance	1	Lump Sum	$10,000.00	$10,000.00
3	Erosion Control	1	Lump Sum	$11,000.00	$11,000.00
4	Clearing and Grubbing	1	Lump Sum	$10,000.00	$10,000.00
5	Dewatering	1	Lump Sum	$25,000.00	$25,000.00
6	Topsoil Salvage and Place	25	Cubic Yard	$75.00	$1,875.00
7	Excavation & Grading	105	Cubic Yard	$25.00	$2,625.00
8	Fill and Grading	250	Cubic Yard	$30.00	$7,500.00
9	Riprap	5	Cubic Yard	$75.00	$375.00
10	Geotextile Separation Fabric	25	Square Yard	$25.00	$625.00
11	21" DR17 HDPE	71	Linear Foot	$300.00	$21,150.00
12	CIP Concrete Headwall - Siphon Inlet	17	Cubic Yard	$2,200.00	$36,740.00
13	CIP Concrete Headwall - Siphon Outlet	11	Cubic Yard	$2,200.00	$24,200.00
14	Trash Rack	1	Each	$6,000.00	$6,000.00
15	Guard Rail	1	Lump Sum	$4,800.00	$4,800.00
16	Upland Soil Seeding/Planting	0.2	Acre	$5,000.00	$1,000.00
17	Riparian Soil Seeding/Planting	0.1	Acre	$5,000.00	$500.00
18	Erosion Control Blanket	180	Square Yard	$6.00	$1,080.00
19	Willow Stakes	900	Each	$5.00	$4,500.00
20	Contingency (15%)	1	Each	$28,345.50	$28,345.50
21	Construction Admin (7.5%)	1	Lump Sum	$16,298.66	$16,298.66
				Total All Bid Items	**$233,614.16**

Big Hole River Preserve, LLC.
C/0 The Allemall Foundation, INC.
117 W. Patrick St. Suite 200
Frederick, MD 21701

Future Fisheries Improvement Program
FWP Fisheries Division
P.O. Box 200701
Helena, MT 59620
Submitted Electronically

RE: FFIP Application for the Big Hole Tributary Reconnection, Phase 2 - Alder Creek

Dear Bailey Duxbury and the Future Fisheries Citizens Review Panel,

I am writing you today to express our permission for Montana Trout Unlimited (MTU) to apply for project funding on our behalf. MTU's mission is to Conserve, Protect, and Restore Montana's coldwater fisheries and their watersheds. We share a common goal with MTU to improve the Big Hole fishery, which is the main focus that led us to buy the Elkhorn Ranch, MT (Elkhorn), a couple of years ago.

On the western portion of the Elkhorn, known as the Big Hole River Preserve LLC (BHRP), we have two unique opportunities to reconnect two cold water tributaries, Alder and Johnson Creeks, to the Big Hole River (BHR) just downstream of Dickie Bridge. The application MTU is submitting is for funding for Phase 2 - Alder Creek (AC). Seasonally, the entirety of its water volume is diverted for flood irrigation, where an existing irrigation ditch that runs parallel to BHR captures the water of AC during the irrigation season. The project aims to reconnect AC directly to BHR by constructing a siphon under the existing BHR irrigation ditch.

The water from AC in the summer months is much cooler than the BHR based on point data collected by MTU last irrigation season. It is the opinion of BHRP, along with the Montana Fish, Wildlife & Parks (FWP), that spawning and rearing could increase dramatically in AC because the fish will be able to access it directly from the BHR instead of coming down the irrigation ditch, which is currently its only access to AC.

The BHRP is working through a more holistic landowner agreement with MTU and FWP. In the meantime, please consider this letter our support of MTU's application to the Future Fisheries Improvement Program.

Thank you for the opportunity to help us help the Big Hole River.

Edward Scott
Managing Member

MONTANA FISH, WILDLIFE & PARKS

Future Fisheries Improvement Program

Appendix: FWP Statement

Project Title: Alder Creek (Big Hole River drainage) reconnection

Please describe the potential impact of the project, including the priorities of the Fisheries Division and the importance to Montana's anglers.

Alder Creek is a tributary to the Big Hole River upstream of Wise River. This section of the Big Hole suffers from chronic dewatering and high temperatures. The Wise River, roughly 3 miles downstream provides some buffering against warm water temperatures, but the reach in which Alder Creek enters the river chronically exceeds 70F. The addition of cooler water in this reach of river could be highly beneficial for the aquatic life in the river including trout and Arctic grayling. Arctic grayling routinely use cold tributaries upstream of Alder Creek as thermal refuge during warm summer months. Currently, although there is cold water present in Alder Creek, grayling use of Alder Creek is not possible because fish passage is completely blocked during the irrigation season by a pin and plank irrigation diversion structure. The proposed project would permanently remove this blockage and provide unrestricted, year-round fish passage into Alder Creek. Warm water from the Big Hole River would be used to satisfy irrigation needs and the cold water in the creek would be allowed to flow directly to the Big Hole. FWP's water rights team is assisting in converting the water rights from Alder Creek to the Big Hole River to make this possible. Alder Creek is one of several tributary reconnection projects in this area. Johnson Creek which is across the river to the north of Alder Creek was funded by FFIP is also a project that is currently underway. All of these tributary-reconnects cumulatively could have a substantial positive impact on the fishery of the Big Hole River.

In addition to providing cold water to the Big Hole, the creation of year-round connectivity between Alder Creek and the Big Hole River could have positive impacts on the fishery. Alder Creek is moderate gradient and does not have abundant spawning potential, but there is adequate habitat to support a self-sustaining fishery and therefore presumably able to potentially support migratory fish from the Big Hole River. The fishery of Alder Creek consists of primarily brook trout; however, recent surveys found both juvenile rainbow and brown trout in low abundance in the downstream reaches of the creek. It is possible that with improved passage the number of rainbow and brown trout that use Alder Creek for spawning and rearing could increase. Typically, there is no connectivity between Alder Creek and the Big Hole River in the spring for spawning rainbow trout and limited connectivity for brown trout in the fall. Both species could significantly benefit from improved fish passage.

Tributary reconnection was set out as one of the primary management goals for the Big Hole River in the State-Wide Fisheries Management Plan. Tributaries in and round the Wise River were particularly called out as a management priority due to the cold water they could potentially provide to the Big Hole River during critical time periods. Alder Creek would represent the second project to accomplish this goal.

Name of FWP Biologist Jim Olsen Date: 11/6/25

Please attach to the FFIP application and materials and submit according to listed deadlines.

Water Resources Division
1539 Eleventh Ave
Helena, MT 59601
(406) 830 1678

November 11th, 2025

Montana Fish, Wildlife & Parks
Fisheries Division- Future Fisheries Improvement Program
1420 E. Sixth Ave.
P.O. Box 200701
Helena, MT 59620-0701
Submitted Electronically

Subject: Big Hole River Tributary Reconnection, Phase 2 – Alder Creek

Dear Bailey Duxbury and the Future Fisheries Citizens Review Panel,

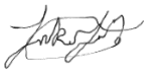
Please accept this letter from the Department of Natural Resources and Conservation (DNRC) in support of Montana Trout Unlimited's (MTU) proposal, Big Hole Tributary Reconnection: Phase 2 - Alder Creek. Thanks to the success of voluntary conservation through the Candidate Conservation Agreement with Assurances (CCAA), arctic grayling distribution has increasingly been more present downstream of the CCAA boundary. The Upper Big Hole River, home to the last aboriginal population of fluvial Arctic grayling, is often chronically dewatered annually. Furthermore, the Big Hole has experienced one of the most well-documented and publicized declines in wild trout populations in the West. The DNRC facilitated initial landowner outreach and drafted a water management and conservation plan for the Big Hole River Preserve property. Along with Phase 1 - Johnson Creek, these projects will have a positive impact on the Big Hole River. The goals of this project are to reconnect Alder Creek to the Big Hole, where it currently doesn't exist, maintain flood irrigation water

delivery, and restore fish passage for spawning and thermal refugia to more than 25 miles of tributary habitat by reconnecting this cold-water habitat. The CCAA has determined the adjacent reach of the CCAA (Reach E) near this project is critical late season habitat for adult Arctic grayling. Reach E provides access to thermal refugia when the mainstem of the Big Hole River is at low flows and elevated temperatures. The Alder Creek Reconnection Project is a project that supports both the health of the fisheries while maintaining the functionality of the landowner's property and resembles much of the work the CCAA does upstream.

Thank you for the opportunity to comment.

Sincerely,

Luke Lutz



Hydrologist - Big Hole Arctic Grayling CCAA Program
Water Sciences Bureau, Water Resources Division
Montana DNRC

BIG HOLE
WATERSHED COMMITTEE
Conservation Through Consensus.

Post Office Box 21
Divide, Montana 59727
(406) 960-4855
info@bhwc.org
www.bhwc.org

11/4/2025

RE: FFIP Application for the Big Hole Tributary Reconnection, Phase 2 - Alder Creek

Dear Bailey Duxbury and the Future Fisheries Citizens Review Panel,

Please accept this letter from the Big Hole Watershed Committee (BHWC) in support of Montana Trout Unlimited's (MTU) proposal to reconnect Alder Creek to the Big Hole River. Established in 1995, the BHWC is a watershed group and central hub of diverse viewpoints on resource and community concerns. We are a consensus-based 501(c)(3) nonprofit organization dedicated to the conservation of the Big Hole River and the surrounding watershed. Our work is comprehensive, spanning floodplains, communities, wildlife, water, and fisheries.

The Upper Big Hole River is home to the last aboriginal population of fluvial Arctic grayling and has experienced one of the most well-documented and publicized declines in wild trout populations in the West, which has impacted the region's recreation economy. BHWC is glad to support and work with MTU to prioritize the Big Hole watershed for investment in critical drought adaptation strategies. Much like the BHWC, MTU strives to complete voluntary, win-win conservation projects with landowners and land management agencies.

This project, at its simplest, seeks to fully reconnect Alder Creek's cold water to the Big Hole, where it currently gets captured by a ditch. The work will maintain flood irrigation water delivery and restore fish passage for spawning and thermal refugia to more than 25 miles of tributary habitat. We are working on a large riparian restoration project on the same property and want to deliver wins for this new, large conservation-minded landowner. Success with this effort will certainly increase goodwill and future projects for the fish. Thank you for the opportunity to comment in support of this project.

Pedro Marques
Executive Director
pmarques@bhwc.org
406-552-2369

George Grant TU
PO Box 563
Butte, MT 59703

Cold Clean Fishable Water

Montana Fish, Wildlife & Parks
Fisheries Division
1420 E. Sixth Ave.
P.O. Box 200701
Helena, MT 59620-0701

November 8, 2025

Dear Bailey Duxbury and the Future Fisheries Citizens Review Panel,

Please accept this letter from the George Grant Chapter of Trout Unlimited (GGTU) in support of Montana Trout Unlimited's (MTU) proposal, *Big Hole Tributary Reconnection: Phase 2, Alder Creek*. For over 50 years, GGTU has invested deeply in this watershed. For *Phase 1, Johnson Creek*, GGTU committed up to $25,000 in chapter funds as a match for the Future Fisheries Improvement Program grant and other funding sources. We will consider a funding request for this phase at our January board meeting.

The Upper Big Hole River, home to the last aboriginal population of fluvial Arctic grayling, is one of the most chronically dewatered rivers in Montana. Furthermore, the Big Hole has experienced one of the most well-documented and publicized declines in wild trout populations in the West. The latter has resulted in a significant economic decline in the region's recreational economy. MTU and GGTU have prioritized the Big Hole for investment in critical drought adaptation strategies.

The goals of this project are to reconnect Alder Creek to the Big Hole, where it currently doesn't exist, maintain flood irrigation water delivery, and restore fish passage for spawning and thermal refugia to more than 25 miles of tributary habitat. A water rights change to maximize the potential from Alder Creek is being managed by FWP to keep more coldwater in this tributary and the Big Hole River during critical low-flow periods.

Projects like this align with our mission statement to: Conserve, Protect, and Restore cold water fisheries and their watersheds in southwest Montana. This is a rare project opportunity that has the potential to not only reconnect a key tributary but also provide instream flow for a critically dewatered portion of the Big Hole. GGTU is enthusiastic to offer our support and the support of our 400+ members.

Thank you for this opportunity to comment and please reach our if you have any questions.

Alex Leone

Alex Leone
President, George Grant TU
president@ggtu.org