

**FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION***All sections must be addressed, or the application will be considered invalid***I. APPLICANT INFORMATION**A. Applicant Name: Katelin KilloyMailing Address: 720 ½ N. Montana St.City: Dillon State: MT Zip: 59725Telephone: _____ E-mail: Katelin.Killoy@mt.gov

B. Contact Person (if different than applicant): _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

C. Landowner and/or Lessee Name (if different than applicant): Bill HuntsmanMailing Address: PO BOX 240086City: Dell State: MT Zip: 59724-0086Telephone: (406) 276-3459 E-mail: dell@3rivers.net**II. PROJECT INFORMATION**A. Project Name: Hellroaring Creek Streambank RestorationRiver, stream, or lake: Hellroaring CreekLocation: Township: 14 South Range: 1 East Section: 24Latitude: 44.59924 Longitude: -111.54656 *Within project (decimal degrees)*County: Madison

B. Purpose of Project: _____

The purpose of this project is to increase healthy riparian habitat along Hellroaring Creek, a tributary of Red Rock Creek within the Arctic Grayling Centennial Valley CCAA. This project will repair two unstable outside banks along Hellroaring Creek and install willow stakes and Carex sod mats. Red Rock Creek is the primary spawning tributary for Arctic grayling in the Centennial Valley, a population which has declined to historically low levels in recent years. This project will address one of the four primary threats to grayling persistence (i.e., Habitat Degradation) identified in the State of Montana's Upper Missouri River Arctic Grayling Conservation Strategy (2022).

The Objectives of the project include the following:

1. Improve bank stability.
2. Reconnect the floodplain to the stream.
3. Maintain or improve cover of deep rooting species.
4. Improve water quality and temperature.

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

High flow events and vegetation disturbances from grazing have aggravated two outside banks resulting in poor streambank stability, and high-risk potential for avulsion channel formation. The loss of deep binding roots from preferred native vegetation has resulted in approximately 195 feet of eroded bank channel along Hellroaring Creek that is disconnected from the water table. Consequently, the vegetation communities along the two outside banks are dominated by shallow rooted introduced grasses that are inadequate for maintaining streambank integrity. This project will restore the streambank by sloping the bank to the appropriate dimension and planting mature Salix and native Carex sod mats to improve channel function, bank stability, and reduce sediment loss.

As part of the Arctic Grayling CCAA, FWP surveys streams for incision, lateral erosion, bank stability, riparian vegetation, and deep rooting species. Hellroaring Creek has been over-widened due to low cover of deep rooting species which negatively impacts water and temperature.

Scope of Work:

- Repair 195' of streambank on five separate streambanks.
- Willows will be transplanted every 25' and the banks sloped to a minimum of 2:1.
- Wetland sod with 50% or more sedge species (e.g., Carex utriculata, etc.) will be transplanted on the newly excavated sod bench.

This project builds on a watershed scale restoration effort for Arctic Grayling in the Centennial Valley through the Candidate Conservation Agreement with Assurances Program (CCAA). The CCAA works with private landowners to address threats and implement conservation measures that benefit Arctic grayling and other native fish species.

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

Historic livestock and wildlife overgrazing contributed to reduced cover of deep rooting species. This project will correct the cause by improving current conditions and establishing a vegetative community which will maintain improved conditions in the future. The landowner's anticipated participation in the CCAA program will ensure that improved conditions are maintained.

E. Length of stream or size of lake that will be treated (project extent): 195'

Length/size of impact, if larger than project extent (e.g., stream miles opened): N/A

F. Project Budget Summary:

Grant Request (Dollars): \$ 10,400.00

Matching Dollars: \$ 15,600.00

Matching In-Kind Services:* \$ _____

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

Other Contributions (not part of this app) \$ _____

Total Project Cost: \$ 26,000.00

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 letters or statements of support (e.g., landowner consent, community or public support, and FWP fisheries support). List any other project partners:

FWP fisheries support letter pending internal review.

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.

Yes No

**If it is a water leasing project, describe the length of the agreement.*

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☐

This project will be part of the Landowners Site Specific Conservation Plan (SSP) through the Centennial Valley Arctic Grayling CCAA. The SSP address threats to Arctic Grayling on the landowner's property including riparian health. The SSP is a 10-year agreement that is anticipated to be signed in 2024. The landowner has installed headgates for more accurate water management to meet stream flow target flows set by their future SSP. The landowner will sign both MFWP and USFWS landowner agreements.

- 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 be adjacent to the project. The landowner, Huntsman Ranch Family LTD Partnership, is in the process to be enrolled in the Arctic Grayling Candidate Conservation Agreement with Assurances program in the Centennial Valley (CCAA). In cooperation with the CCAA program, the landowner has agreed to work with FWP on withdrawals, improve irrigation water efficiency, grazing schedules, and fish passage in compliance with their water.

- 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?

The project will be monitored every five years as a part of the CCAA program using NRCS Riparian Assessment Method (NRCS 2004). In September 2023 a wetland delineation was completed pre-project of freshwater emergent wetlands within the proposed project area. The wetland delineation was completed using the on-site inspection method for areas less than 5 acres in size as described by the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987). The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) was used in conjunction for the on-site method (Environmental Laboratory, 2010). Riparian Assessment scores are often shared during presentations.

Additionally, Arctic grayling population estimates are conducted annually on Red Rock Creek by FWP staff, and biennial spawning substrate surveys on Red Rock Creek and its tributaries (including Hellroaring Creek) are also conducted. Combined, these surveys help managers determine the causes of grayling population fluctuations and should be positively influenced by the proposed project on Hellroaring Creek.

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

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

Arctic grayling (*Thymallus arcticus*), a designated Species of Concern by the State of Montana.

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

Improved riparian health of Hellroaring Creek enhances grayling habitat by increasing tree cover and reducing sediment inputs into the stream. Plant material installed in and on banks will be indigenous riparian species that will improve overall riparian function and habitat conditions along Hellroaring Creek. Additionally, increased tree cover helps to maintain cold water habitat. This project will ultimately contribute cleaner, colder water to downstream reaches where Arctic grayling spawn. Lastly, this project reduces the risk of stream avulsion, which would reroute the stream along a path with reduced riparian vegetation.

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

Improved riparian health will help maintain or improve spawning and rearing conditions for Arctic grayling, which allows the public to appreciate and catch a unique Montana species. Without streambank restoration, Hellroaring Creek will continue to contribute fine sediment into Red Rock Creek, the primary grayling spawning tributary in the Centennial Valley.

- D. Will the project increase public fishing opportunity for wild fish and, if so, how? Is public fishing allowed onsite? If not, describe how the public would access the project benefits.

This project will positively impact spawning conditions for Arctic grayling on a popular, publicly accessible fishery downstream.

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

Improved riparian health of Hellroaring Creek equates to improved spawning success in Red Rock Creek, and more opportunity for the public to appreciate and catch a unique Montana species. Additionally, a stable and healthy grayling population eliminates need to protect Arctic Grayling under the ESA which would likely translate to increased restrictions on land-use and angling on public land.

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

No. Project will not interfere with any water rights or property rights.

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

No. The project is located on a working ranch. There will be no development of commercial recreational use.

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: Katelin Killoy Date: 10/13/2023

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
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Hellroaring Creek Streambank Restoration

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

011-2024

Both tables must be completed or the application will be returned

PROJECT COSTS					CONTRIBUTIONS			
WORK ITEMS (Itemize by Category)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	FUTURE FISHERIES REQUEST	MATCH (Cash or Services)**	OTHER (Not part of this application)	TOTAL
Personnel***								
Survey	0	n/a		\$ -				\$ -
Design	5	hrs; provided by FWP	\$0.00	\$ -				\$ -
Engineering	0	n/a		\$ -				\$ -
Permitting	4.5	hrs; provided by FWP	\$0.00	\$ -				\$ -
Oversight	40	hrs; provided by FWP	\$0.00	\$ -	-			\$ -
				\$ -				\$ -
		Sub-Total		\$ -	\$ -		\$ -	\$ -
Travel								
Mileage	0		\$0.37	\$ -				\$ -
Per diem	0		\$0.00	\$ -				\$ -
		Sub-Total		\$ -	\$ -	\$ -	\$ -	\$ -
Construction Materials****								
				\$ -				\$ -
Willow Transplants	10	Mature Willow	\$250.00	\$ 2,500.00		2,500.00		\$ 2,500.00
Sod Mats	375	Square Yard	\$2.00	\$ 750.00		\$ 750.00		\$ 750.00
Willow Stakes	375	Square Yard	\$2.00	\$ 750.00		\$ 750.00		\$ 750.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
		Sub-Total		\$ 4,000.00	\$ -	\$ 4,000.00	\$ -	\$ 4,000.00
Equipment, Labor, and Mobilization								
Tracked Excavators (three)	80	hrs;	\$200.00	\$ 16,000.00	6,000.00	10,000.00		\$ 16,000.00
Tracked Dump Truck (one)	60	hrs;	\$100.00	\$ 6,000.00	4,400.00	1,600.00		\$ 6,000.00
				\$ -				\$ -
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BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

011-2024

			Sub-Total	\$	22,000.00	\$	10,400.00	\$	11,600.00	\$	-	\$	22,000.00
TOTALS				\$	26,000.00	\$	10,400.00	\$	15,600.00	\$	-	\$	26,000.00

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used). Do not use government salaries as match. Describe here or in text.

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a justification or minimum of two competitive bids for the cost of undertaking the project.

****The Review Panel recommends a maximum fencing cost of \$1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

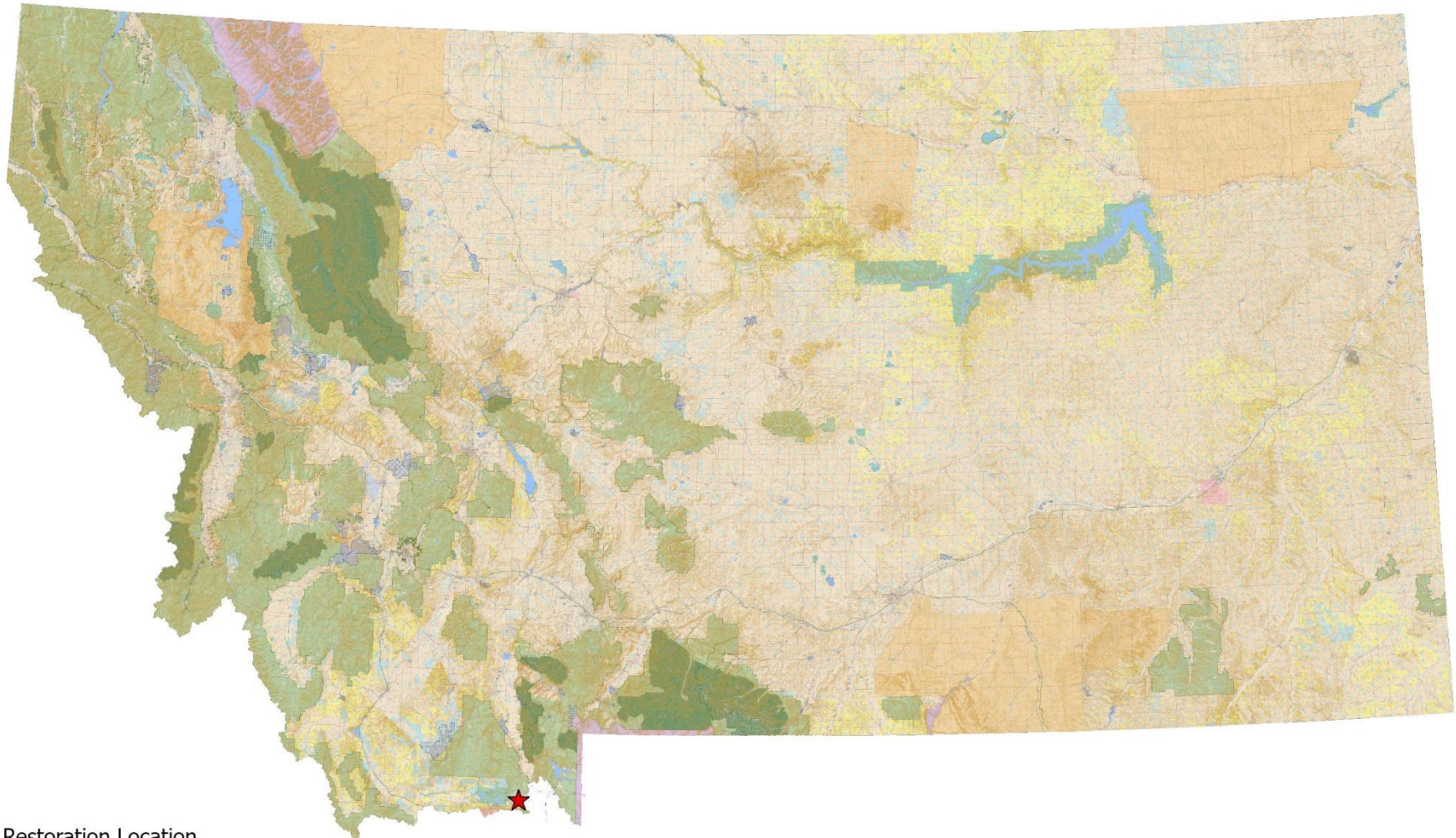
Additional details:

APPLICATION MATCHING CONTRIBUTIONS				
(do not include requested funds or contributions not associated with the application)				
CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
SWG	\$ -	\$ 15,600.00	\$ 15,600.00	N
	\$ -		\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ -	\$ 15,600.00	\$ 15,600.00	

OTHER CONTRIBUTIONS				
(contributions not associated with the application)				
CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ -	\$ -	\$ -	

Bank Restoration on Hellroaring Creek

MONTANA FWP



★ Restoration Location



Map Produced by Katelin Killoy Fisheries Region 3
Date Produced 10/10/2023

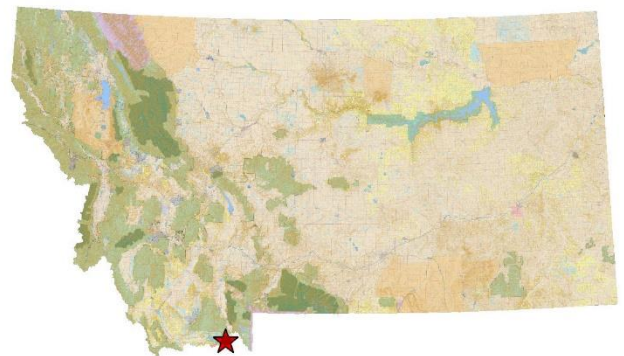
0 50 100
Miles

Softbank Restoration on Hellroaring Creek

MONTANA FWP

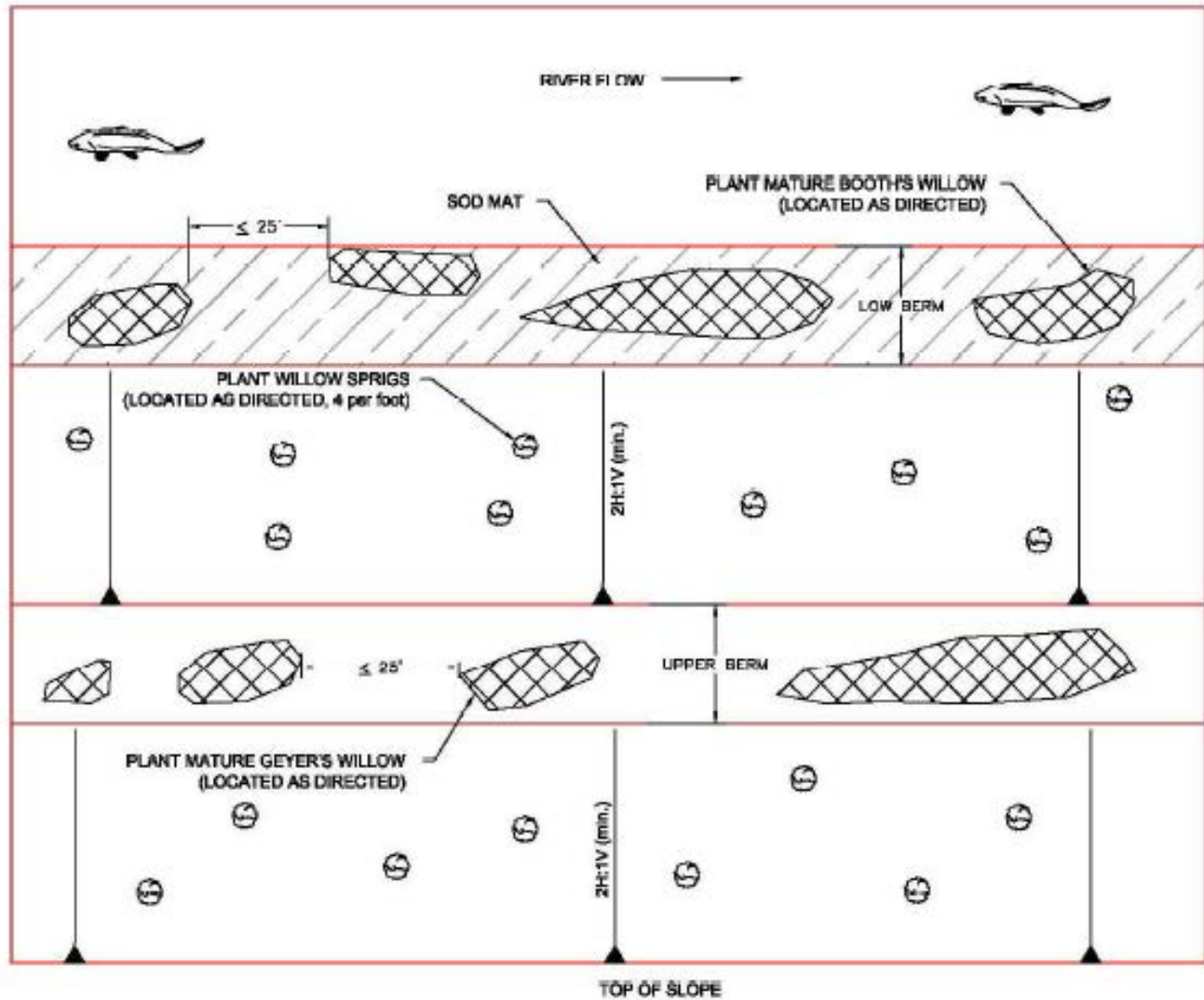


Legend

 Softbank Restoration

Area of Interest

MONTANA FISH,
WILDLIFE & PARKS



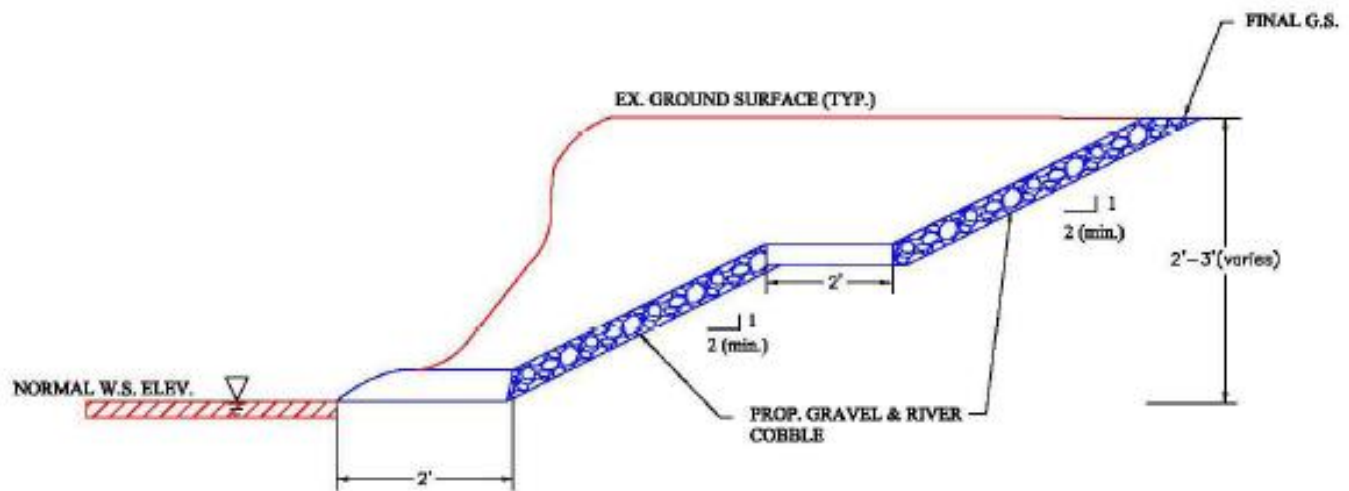
TYP. BANK RESTORATION - PLAN VIEW

SCALE: 1" = 3'

Detail Sheet

General Streambank Restoration Plans for Upper Big Hole 2020

SHEET: 1
of 1



TYP. BANK RESTORATION CROSS-SECTION

SCALE: 1" = 3'

D. Jorgensen 9/10/20
 DRAWN BY: DATE:
 P. Jagoda 9/10/20
 CHECKED BY: DATE:

REVISED BY: DATE:

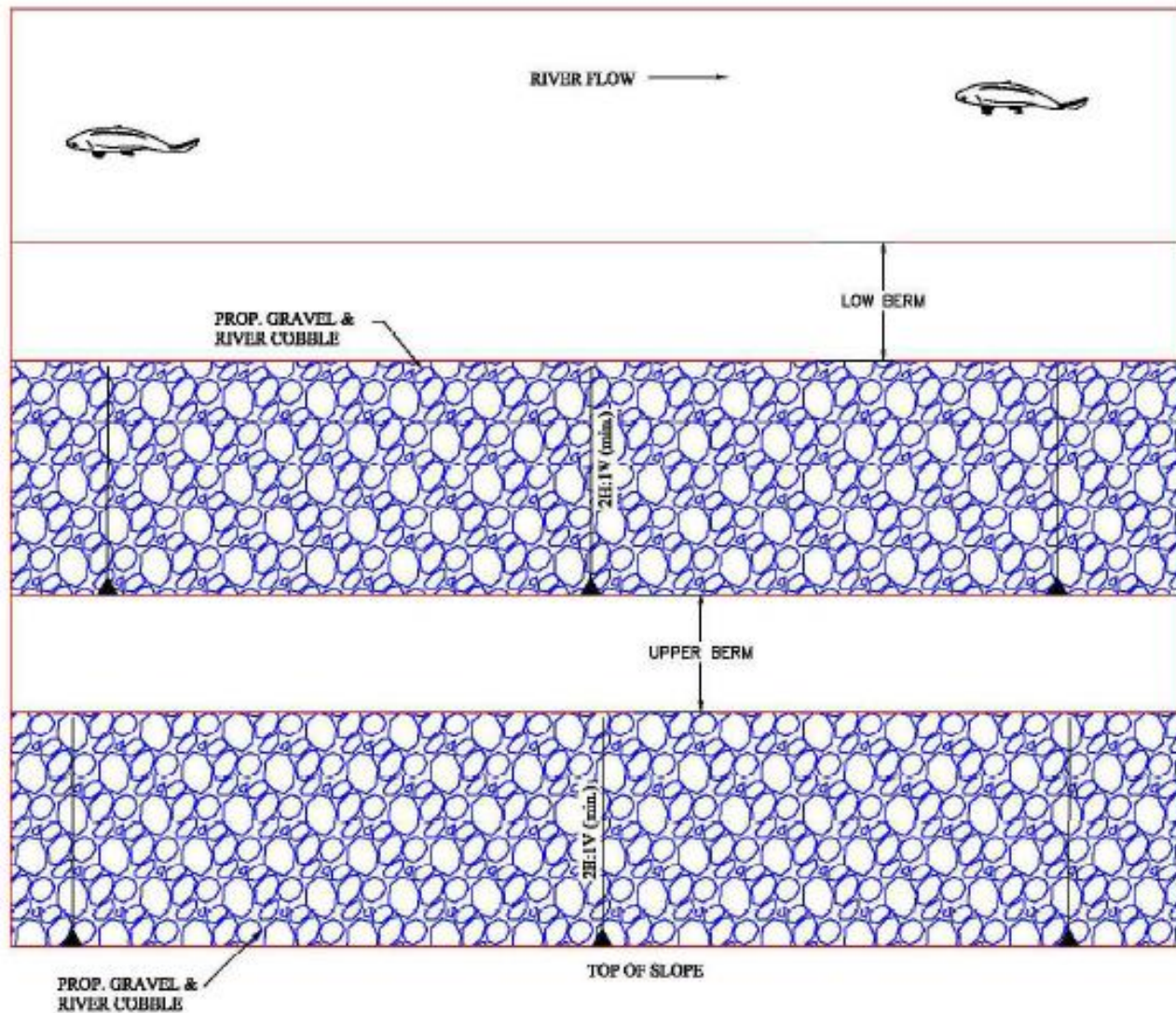
APPROVED BY: DATE:

APPROVED BY: DATE:

APPROVED BY: DATE:



**MONTANA FISH,
WILDLIFE & PARKS**



TYP. BANK RESTORATION - PLAN VIEW

SCALE: 1" = 3'



Figure 1: Upstream view of bank 1 along Hellroaring Creek with planned bank restoration.



Figure 2: Downstream view of bank 1 along Hellroaring Creek with planned bank restoration.



Figure 3: Upstream view of bank 2 along Hellroaring Creek with planned bank restoration.



Figure 4: Downstream view of bank 2 along Hellroaring Creek with planned bank restoration.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Montana Partners for Fish & Wildlife
420 Barrett Street, Dillon, MT 59725



Michelle McGree
Future Fisheries Improvement Program
1420 E 6th Avenue
PO Box 200701
Helena Montana
59620-0701

October 12, 2023

Dear Michelle,

Please accept this letter of support for The Hell Roaring Creek Streambank Restoration Project Future Fisheries proposal in the Centennial valley. I have had the pleasure of working with the Montana Fish, Wildlife & Parks, and private landowners for over two decades and appreciate their stewardship and accomplishments to enhance the Centennial Valley Watershed. This proposal continues those efforts by restoring an unstable eroding bank on Hell Roaring Creek. High flow events and legacy land uses have aggravated a stream reach resulting in poor streambank stability, increased sediment, and high-risk potential for avulsion channel formation. The loss of deep binding roots from native vegetation has resulted in approximately 195 feet of eroded bank and an over-widened channel. The vegetation communities are now dominated by shallow rooted introduced grasses that are inadequate for maintaining streambank integrity. This project proposes to restore the streambank by sloping the bank to the appropriate dimension and planting mature *Salix* and native *Carex* sod mats to improve channel function, bank stability, and reduce sediment loss.

This project builds on a watershed scale restoration effort for Arctic Grayling in the Centennial Valley through the Candidate Conservation Agreement with Assurances Program (CCAA). The CCAA works with private landowner to address threats and implement conservation measures that benefit it Arctic grayling.

The USFWS Montana Partners for Fish & Wildlife Program (PFW) has collaborated with private landowners and the MFWP for many years to implement watershed scale conservation and identify long-term strategies that protect and maintain resiliency in our watersheds. We have identified the Centennial Valley Watershed as a conservation focus area due to its unique assemblage of wildlife species, intact habitats, and potential to implement conservation at a landscape scale. I am confident as a partner that your support for these efforts are building a better future for SW Montana. Thank you for considering this proposal.

Sincerely,
James Magee
James Magee
Fish and Wildlife Biologist
MT Partners for Fish and Wildlife Program
U.S. Fish and Wildlife Service

INTERIOR REGION 5
MISSOURI BASIN

KANSAS, MONTANA*, NEBRASKA, NORTH DAKOTA,
SOUTH DAKOTA

*PARTIAL

INTERIOR REGION 7
UPPER COLORADO RIVER BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Red Rock Lakes National Wildlife Refuge
27650B South Valley Road
Lima, Montana 59739



IN REPLY REFER TO:
FWS/R6/

October 11, 2023

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

Employees of Montana Fish, Wildlife and Parks (FWP) and the Fish and Wildlife Service (FWS) are working together to improve habitat that will benefit a rare endemic adfluvial population of Arctic grayling, and other species of wild native fish and invertebrates in the Centennial Valley. Lower Hell Roaring Creek was once an important spawning area for the population. Over the years some of the streambanks became eroded, and that has affected the quality of the stream for grayling and other species. A Softbank restoration is proposed for this reach of the creek on private land. This project is intended to reestablish healthy streambanks that will restore ecological functioning and benefit grayling and many other species. Several years ago the grayling population declined and is currently hanging on at a low level. Rapid action is necessary. Our office supports efforts to acquire funds necessary to complete this project. Do not hesitate to contact me if I can answer any questions. Thank you for your consideration!

Mike Bryant
Wildlife Refuge Manager
406 276-3536 x103
406 596-1853 (c)

FWP.MT.GOVTHE **OUTSIDE** IS IN US ALL.

Montana Fish, Wildlife & Parks
Region 3 Headquarters
1400 South 19th Street
Bozeman, MT 59715

November 15, 2023

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

Dear Future Fisheries Improvement Program panel and board,

Montana Fish, Wildlife & Parks (FWP) supports the proposed streambank restoration on Hellroaring Creek as submitted by Katelin Killoy, FWP Riparian Ecologist. The project will improve the riparian health of a major tributary to Red Rock Creek in the Centennial Valley. Red Rock Creek is the primary spawning tributary for grayling in Upper Red Rock Lake (URRL). In recent years, the URRL population of grayling has declined to historically low levels.

Arctic grayling are a top priority for conservation in the state of Montana. The Big Hole River and Centennial Valley URRL populations are the only two indigenous populations remain in the lower 48 states. Due to the success of the Candidate Conservation Agreement with Assurances (CCAA) program in the Big Hole River, a CCAA was also developed for Arctic grayling in the Centennial Valley in 2018. Since then, FWP and its partners have worked with the six enrolled private landowners in the Centennial Valley to improve habitat for Arctic grayling. This has resulted in increased connectivity, decreased water temperatures, and decreased sediment in streams historically occupied by grayling. Montana's Upper Missouri River Arctic Grayling Conservation Strategy (2022) states that FWP will pursue one mile of streambank restoration on Red Rock Creek and its tributaries per year.

This project will repair a degraded stream channel by increasing tree cover and reducing sediment inputs into the stream. Additionally, increased tree cover helps to maintain cold water habitat. The project will also reduce the risk of stream avulsion, which would reroute the stream along a path with reduced riparian vegetation. The success of Arctic grayling conservation in Montana is due to successful relationships with private landowners such as those enrolled in the Centennial Valley CCAA program.

For questions or concerns, please reach out to the following FWP personnel:

Ryan Kreiner, Region 3 native species biologist (406-683-9310, RKreiner@mt.gov)
Jen Smitham, Region 3 public comment coordinator (406-495-3262, jsmitham@mt.gov)

Sincerely,

Warren Hansen
Acting Region 3 Supervisor