FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

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

I. APPLICANT INFORMATION

A. Applicant Name: Clark Fork Coalition

Mailing Address: 140 S. 4th St. W. #1

City: Missoula State: MT Zip: 59801

Telephone: 406-542--0359 ext. 203 E-mail: karen@clarkfork.org

B. Contact Person (if different than applicant): Adam Switalski – Clark Fork Coalition Project Mgr.

Address: 140 S. 4th St. W. #1

City: Missoula State: MT Zip: 59801

Telephone: 406-542--0359 ext. 210
406-396-1941 (cell) E-mail: adam@clarkfork.org

C. Landowner and/or Lessee Name (if different than applicant): USDA Forest Service - Missoula Ranger District

Mailing Address: 24 Fort Missoula Road

City: Missoula State: MT Zip: 59804

Telephone: 406-329-3814 E-mail: dustin.walters@usda.gov

II. PROJECT INFORMATION

A. Project Name: East Fork Lolo and Lost Park Creeks - Instream Habitat Enhancement

River, stream, or lake: East Fork Lolo and Lost Park Creeks

Location: Township: 11 N Range: 23 W Section: 17, 20, 21, and 28.

Latitude: 46.709602 Longitude: -114.529058 *within project (decimal degrees)*

County: Missoula

B. Purpose of Project:

The purpose of this project is to increase the native fish populations in the Upper Lolo watershed, specifically on the East Fork of Lolo Creek and Lost Park Creek. We will enhance aquatic habitat conditions by installing large log jams in the East Fork Lolo and Lost Park Creeks, important tributaries of Lolo Creek which includes designated Bull Trout Critical Habitat. These streams support high densities of Westslope Cutthroat Trout and remnant Bull Trout populations, providing important spawning and rearing habitat for these and other salmonid species.

These stream segments have been impacted by channelization, stream-side roads, and past intensive grazing, but some of the most severe, direct impacts to habitat quality and trout carrying capacity have involved removal of large wood from the channel and inhibiting natural recruitment/retention of large wood. Project reaches generally have limited habitat complexity and roughness elements leading to greatly reduced quality of fish habitat and carrying capacity.

Recent, similar large log jam projects have been successful in mitigating these impacts and restoring more natural channel function based on independent monitoring data. This project is a collaborative project with the Clark Fork Coalition, the Missoula District of the Lolo National Forest, and Montana Fish Wildlife and Parks.

C. Brief Project Description (attach additional information to end of application):

In 2009, the Lolo National Forest acquired more than 32 square miles of corporate timber lands in Upper Lolo Creek watershed as part of the larger 'Montana Legacy Project' in Western Montana. This land acquisition provide an opportunity and segway for restoration and enhancement opportunities in the basin. The proposed collaborative project would take place on the East Fork Lolo Creek and Lost Park Creek – both tributaries to main stem Lolo Creek. Lolo Creek and its tributaries historically supported a productive coldwater fishery consisting of native and introduced salmonids. Fisheries values are highlighted by high Westslope Cutthroat Trout densities and Bull Trout Critical Habitat designation by the USFWS. Project reaches primarily represent spawning and rearing habitats for these and other coldwater species.

The proposed project is a continuation of long-term restoration efforts in the Lolo Creek watershed that have included removing undersized culverts (many fish passage barriers) and reclaiming impactful forest roads on the Montana Legacy Project lands. Since 2006, road decommissioning and other road treatments have reduced overall sediment inputs and hydrologic impacts at a large scale in the Lolo Creek headwaters. In total, more than 130 miles of forest roads have been treated (including 30 miles of high priority roads recontoured), dozens of stream crossings have been removed, and ten culverts have been converted to bottomless arches or bridges for enhanced fish passage.

For this project, treatments will involve installing large stream spanning log jams into the East Fork Lolo and Lost Park Creeks to dissipate energy to the stream, trap sediment, and create a diversity of aquatic habitat including spawning beds and pools. Additionally, smaller jams that do not span the entire stream will be installed to dissipate stream energy towards stream-side road fill. In some areas, jams will activate old channels and floodplains away from the roadbed further increasing habitat diversity and reducing the amount of road-generated sediment.

Project implementation is planned on USFS property during summer 2022. Physical habitat monitoring will be conducted by the Forest Service and include stream cross-sections, pool counts, and flow measurements to determine project effectiveness. Public outreach will be conducted by the Clark Fork Coalition, including field trips for local community members and government agencies.

D. Length of stream or size of lake that will be treated (project extent): 5 miles

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

E. Project Budget:

Grant Request (Dollars):	**$**	**33,000**
Matching Dollars:	**$**	**61,780**
Matching In-Kind Services:*	**$**	

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

Other Contributions (not part of this app)	**$**	**10,000**
Total Project Cost:	**$**	**104,780**

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

G. **Insert** or **attach** a project location map showing the project area in relation to a major landmark or town. Please indicate if the project location is on public or private property.

The project is on Forest Service Lands. Please see attached project map

H. **Attach** specific project plans (e.g. detailed sketches, plan views [showing location and type of channel modifications], example photographs), current condition photographs, and maps. **If project involves water leasing or water salvage complete and attach a supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).*

I. **Attach** letters or statements of support. This includes landowner consent, community or public support, and fish biologist support.

J The project agreement includes a 20-year maintenance commitment. Please indicate (yes or no) that you will ensure project protection for 20 years. Discuss your ability to meet this commitment.

Yes [x] No [ ]

The Clark Fork Coalition, public and private land managers, and project partners have been implementing and maintaining stream restoration projects since 2009. We are committed to our protection and restoration work and have staff dedicated to monitoring the effectiveness of these projects.

K. **Describe** or **attach** land management & maintenance plans, including changing to grazing regimes, that will ensure protection of the restored area.

Grazing is not currently allowed or planned in this area.

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

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

The project will benefit the coldwater fish community in upper Lolo Creek. Westslope Cutthroat Trout are the predominant fish species, but the project will also enhance habitat for Bull Trout, Brook Trout, Brown Trout and other coldwater species.

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

Installing large wood jams and enhancing habitat complexity will significantly improve trout carrying capacity based on monitoring of similar projects over the past 5 years (L. Knotek, MFWP). Benefits will be realized in reaches known to be important spawning and rearing habitat for native and wild trout in the watershed. Specifically, proper installation of large wood has been demonstrated to increase overhead cover, channel complexity, physical habitat diversity, and deposition of spawning gravels in oversimplified channels, resulting in significantly higher fish densities and enhanced size structure.

C. Will the project improve fish populations and/or fishing? To what extent? What are the expected short term and long term benefits to the fishery?

Yes, it is expected the project will improve fish populations and angling opportunities through increased fish carrying capacity and recruitment potential. The entire project area is on public land and is open to angling. Wild fish populations downstream (i.e., Bitterroot River) are also expected to benefit through enhanced wild trout recruitment. Monitoring of similar, completed projects by MFWP biologists in similar stream reaches where habitat simplification was a limiting factor (Miller, Twelve Mile, and Cedar Creeks) has found a 2-3 fold increase in fish densities after significant improvements in stream complexity associated with enhancement projects (Ladd Knotek, MFWP, personal communication).

D. Will the project increase public fishing opportunity for wild fish and, if so, how?

The entire project area lies on accessible public land and is open to angling. Wild fish populations are expected to increase as a result of the project, leading to more opportunity for angling success. The proposed project, in combination with past restoration efforts (road decommissioning, stream crossing restoration, and upsized culverts), will increase trout abundance, bull trout and westslope cutthroat trout conservation, and overall health, productivity and resiliency of upper Lolo Creek at a larger scale. These benefits will ultimately benefit public fishing opportunities in the lower Bitterroot River.

E. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?

These stream segments have been impacted by channelization, stream-side roads, and past intensive grazing, but some of the most severe, direct impacts to habitat quality and trout carrying capacity have involved removal of large wood from the channel and poor natural recruitment and retention of large wood. Project reaches generally have limited habitat complexity and roughness elements leading to greatly reduced quality of fish habitat and carrying capacity. The Montana DEQ has also listed the East Fork of Lolo Creek as a sediment impaired stream due to road-associated sediment delivery to streams. The proposed project is designed to address and help mitigate these issues.

F. What public benefits will be realized from this project?

Overall public benefits from this project will include increased salmonid population resiliency and density, enhanced fishing opportunities, and improved opportunity for recruitment to local and downstream public fisheries.

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

The project will not interfere with the water or property rights of adjacent landowners. The entire project will take place on USFS property.

H. Will the project result in the development of commercial recreational use on the site? (explain):

No, there is planned development of commercial recreational use at the site of the project.

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

No, the project is not associated with mine reclamation.

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.

IV. 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: 11/10/21

Sponsor (if applicable): _____

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

Applications may be rejected if this form is modified.

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS 003-2022

East Fork Lolo & Lost Park Creeks instream habitat enhancement

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	40	hrs	$50.00	$ 2,000.00		2,000.00		$ 2,000.00
Design	40	hrs	$50.00	$ 2,000.00		2,000.00		$ 2,000.00
Engineering				$ -				$ -
Permitting				$ -				$ -
Oversight (Clark Fork Coalition)	120	hrs	$50.00	$ 6,000.00		6,000.00		$ 6,000.00
Oversight (Contractor)	120	hrs	$79.00	$ 9,480.00		9,480.00		$ 9,480.00
			Sub-Total	$ 19,480.00	$ -	$ 19,480.00	$ -	$ 19,480.00
Travel								
Mileage	2500	miles	$0.56	$ 1,400.00		1,400.00		$ 1,400.00
Per diem				$ -				$ -
			Sub-Total	$ 1,400.00	$ -	$ 1,400.00	$ -	$ 1,400.00
Construction Materials****								
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ -	$ -	$ -	$ -	$ -
Equipment, Labor, and Mobilization								
Mobilization and demobilization	1	lump		$ 5,000.00		5,000.00		$ 5,000.00
Soil erosion and pollution control	1	lump		$ 2,000.00		2,000.00		$ 2,000.00

Loading logs that have been already felled (using either a self-loading log truck, or excavator and side-dump)	40	hourly	$150.00	$ 6,000.00		6,000.00		$ 6,000.00
Using a side dump (or log truck) to transport logs from the Lee Creek Campground and staging them at the log jam sites on East Fork Lolo.	40	hourly	$120.00	$ 4,800.00		4,800.00		$ 4,800.00
Using an excavator to grub out access poins and harvest additional logs with root wads at other identified locations and loading them onto side dump truck	30	hourly	$150.00	$ 4,500.00		4,500.00		$ 4,500.00
Using a side dump truck to transport logs to log jam installation sites (<5 mile distance)	30	hourly	$120.00	$ 3,600.00		3,600.00		$ 3,600.00

Using an excavator to pioneer acces routes and install several log jams that span the channel; install several log jams adjacent to stream-side roads that span 1/3 to 1/2 of the channel; place wood in the floodplain	160	hourly	$150.00	$ 24,000.00	24,000.00	-		$ 24,000.00
Using a second excavator in tandem to help move logs to installation site, and to harvest additional logs with root wads from riparian areas adjacent to log jam sites during construction; rehabilitate access routes	160	hourly	$150.00	$ 24,000.00	9,000.00	15,000.00		$ 24,000.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 73,900.00	$ 33,000.00	$ 40,900.00	$ -	$ 73,900.00
			TOTALS	$ 94,780.00	$ 33,000.00	$ 61,780.00	$ -	$ 94,780.00

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)
Montana DEQ	$ -	$ 41,780.00	$ 41,780.00	Y
Forest Service	$ -	$ 10,000.00	$ 10,000.00	Y
Clark Fork Coalition	$ -	$ 10,000.00	$ 10,000.00	Y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ -	$ 61,780.00	$ 61,780.00	

OTHER CONTRIBUTIONS

(contributions not associated with the application)

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Forest Service permitting and oversight	$ 10,000.00	$ -	$ 10,000.00	y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 10,000.00	$ -	$ 10,000.00	

Upper Lolo Wood Placement

Legend

WoodPlacementReaches

Reach7
Reach6
Reach5
Campground
Reach4
Reach3
Reach2
Reach1
LP1
LP2

2182
461
2185
LEE CREEK
4322
699
17154
17120
4304
2195
295

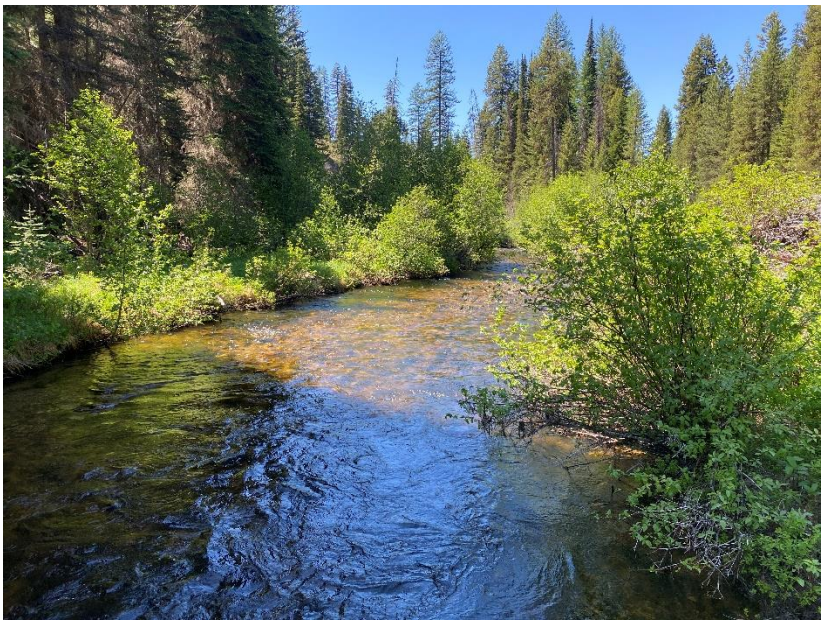
17
20
21
28
29

5000
4500
5500

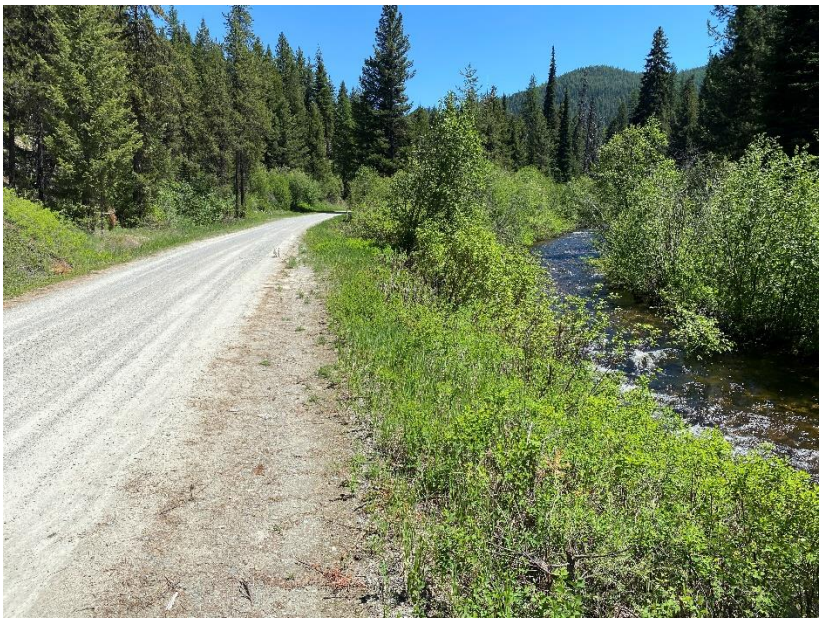
0 0.15 0.3 0.6 0.9 1.2 Miles

East Fork Lolo Creek and Lost Park Creek
Instream Habitat Enhancement Project

East Fork Lolo Creek Existing Condition with Lack of In-stream Wood

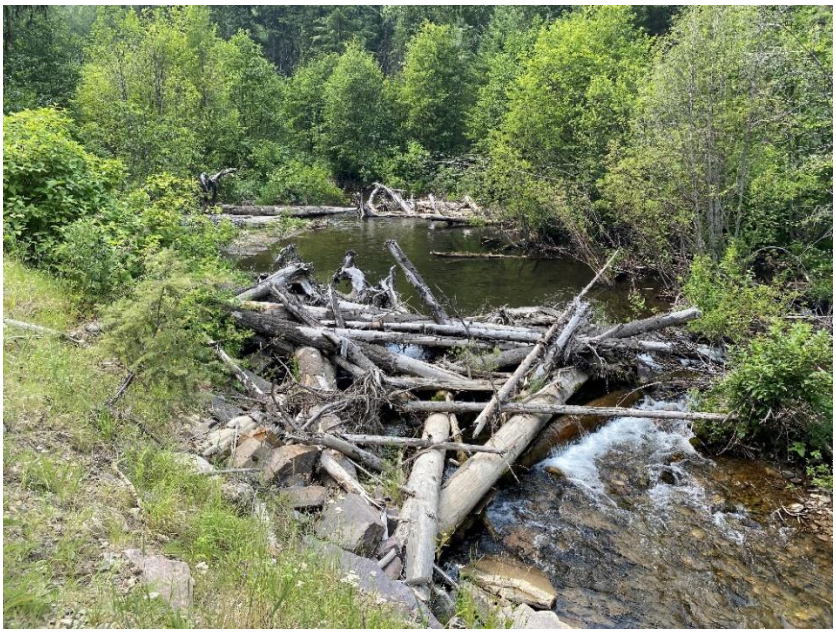


An example of how lack of wood has reduce stream complexity on East Fork Lolo Creek.

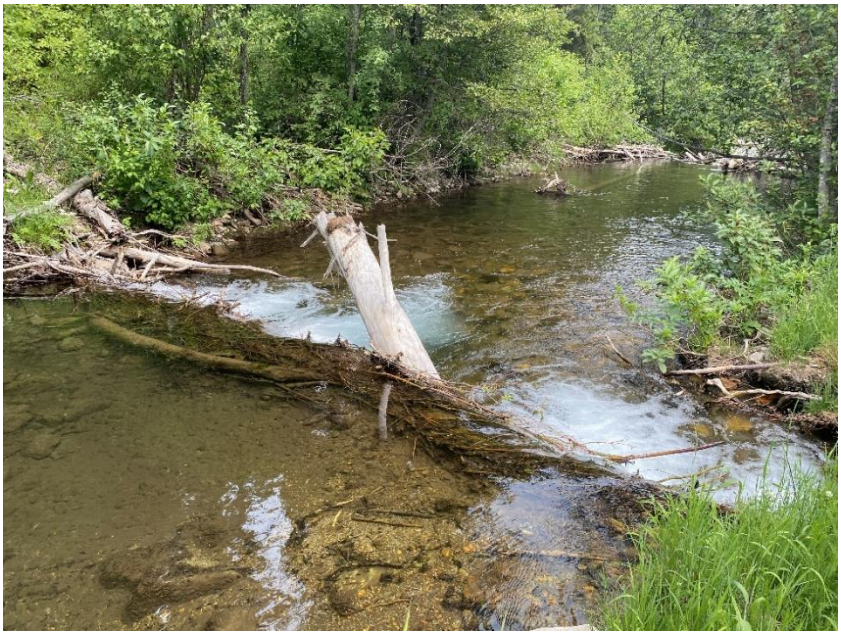


The East Fork Lolo road is chronically delivering sediment to the stream and limiting wood recruitment into the stream.

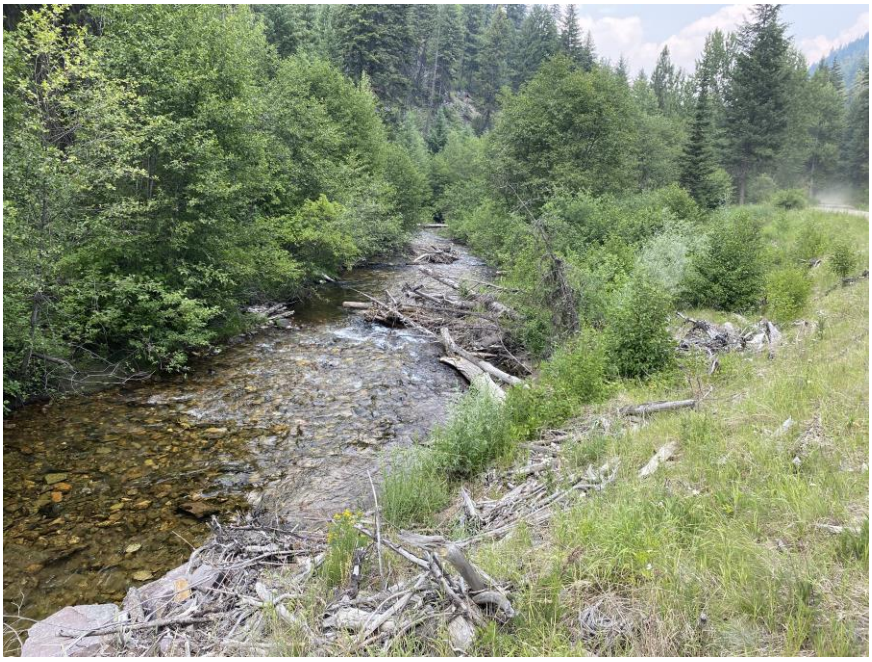
Examples of Large Wood Jam Installations from **Cedar Creek, MT**



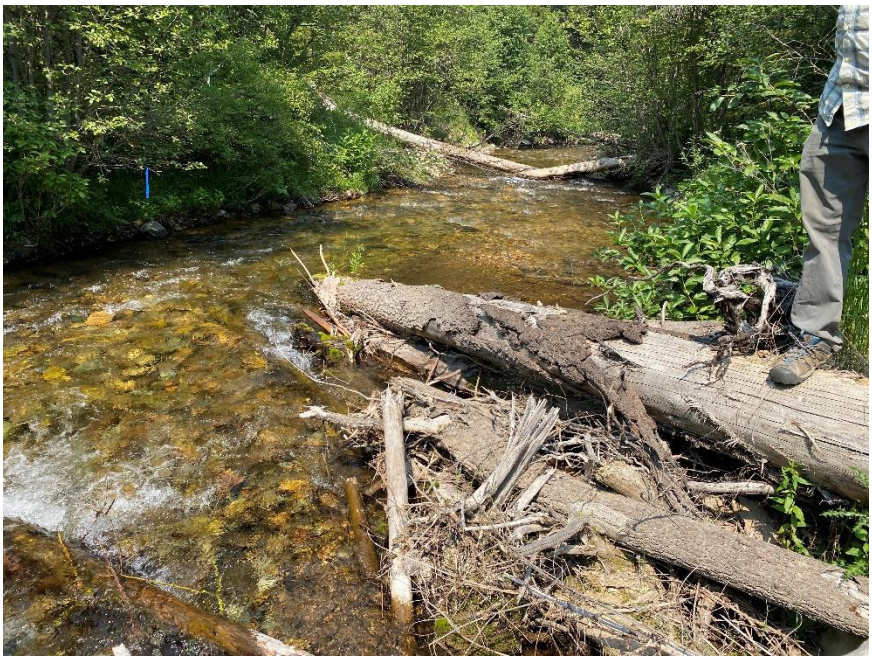
An example of the proposed treatment - a full spanning large wood jam on Cedar Creek.



Another example of the proposed treatment - a full spanning wood jam on Cedar Creek. Notice how sediment is captured behind the jam, pools are created downstream of jam, and spawning gravels are scoured of sediment downstream all creating improved fish habitat.



An example of the proposed treatment - a 1/3 spanning large wood jam installed along the Cedar Creek Road.



An example of the proposed treatment - a ½ spanning large wood jam installed along the Cedar Creek Road.

USDA United States Department of Agriculture | Forest Service | Lolo National Forest | Building 24, Fort Missoula
Missoula, MT 59804-7297
406 329-3750

File Code: 2500
Date: October 25, 2021

Michelle McGree
Future Fisheries Improvement Program Officer
Montana Fish, Wildlife & Parks
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
406-444-2432

To Ms. McGree and the Future Fisheries Panel,

The Lolo National Forest supports the Clark Fork Coalition's grant application for the Lolo Creek Tributaries Wood Jams Project. The Clark Fork Coalition is applying for grant funds from the Future Fisheries Improvement Program to work with the US Forest Service to reduce human-caused sediment sources and improve fisheries habitat in the East Fork Lolo and Lost Park Creeks, important bull trout and westslope cutthroat trout fisheries. These creeks have been impacted by channelization and lack of in-stream wood. They have limited habitat complexity and roughness elements leading to reduced quality of fish habitat and elevated sediment load. Installing large wood jams will trap sediment and create a diversity of habitat including spawning beds and pools.

The Clark Fork Coalition and the Lolo National Forest have been working on cooperative projects for several years, including decommissioning 30 miles of roads in the upper Lolo Creek watershed, establishing temperature monitoring stations, collecting stream discharge data for instream flow management, working to understand beaver habitat feasibility and reintroduction, and a completed climate change watershed vulnerability assessment. The Lolo National Forest continues to provide funding to these efforts when possible. As such, the Clark Fork Coalition and the Lolo National Forest have a track record of proven success and are now continuing the partnership with the Lolo Creek Tributaries Wood Jams Project.

Funds from the Future Fisheries Improvement Program are essential to completing on-the-ground reclamation projects and will be matched by federal and private funds.
Thank you for the funding opportunity and your continued work for conserving natural resources. Please do not hesitate to contact me if you have any questions.

Sincerely,

JENNIFER HENSIEK
Digitally signed by JENNIFER HENSIEK
Date: 2021.10.25 09:18:17 -06'00'

JENNIFER HENSIEK
Missoula District Ranger

cc: Dustin Walters, Shane Hendrickson