FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

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

I. APPLICANT INFORMATION

A. Applicant Name: Ben LaPorte-Big Hole Watershed Committee (BHWC)

Mailing Address: P.O. Box 21

City: Divide State: MT Zip: 59727

Telephone: 303-808-5611 E-mail: blaporte@bhwc.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): Montana Fish Wildlife and Parks-Mount Haggin WMA

Mailing Address: 1420 East Sixth Avenue, P.O. Box 200701

City: Helena State: MT Zip: 59620

Telephone: 406-444-2535 E-mail: fwpgen@mt.gov

II. PROJECT INFORMATION

A. Project Name: First Chance Gulch Habitat Improvements

River, stream, or lake: First Chance Gulch

Location: Township: 2 North Range: 12 West Section: 01

Latitude: 45.95079 Longitude: -113.02495 *Within project (decimal degrees)*

County:

B. Purpose of Project:

The purpose of this project is to improve native fish habitat by installing instream habitat features in First Chance Gulch, a placer-mined stream within the French Creek watershed, located in the state-owned Mount Haggin Wildlife Management Area. First Chance Gulch is a first-order (Strahler classification) tributary to French Creek and was extensively placer mined on and off from 1864 to 1911. The stream has been straightened and is severely incised. The mining activities obliterated most of the instream habitat (pools, scour, complexity, etc.) and have left behind a very channelized and homogenous stream system that lacks scour/pools and spawning habitat with suitable substrate.

This project proposes to construct 50-80 simple log step structures within a 1.5-mile reach of First Chance Gulch. The log step structures will create plunge and scour to break up the homogeneity of the streambed caused by the past pacer mining. The log steps will create a gradient drop, facilitating scour and pool formation, in turn creating fish habitat.

The project area is part of the second largest native fish project in Montana, in which the system was cleared of non-native fish and, for the last 2 years, has been stocked with native Arctic graying and Westslope cutthroat trout (and other natives). This project will aid in the success of that effort by improving important tributary habitat.

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

First Chance Gulch is a headwater tributary of French Creek, which flows into Deep Creek, which feeds into the Big Hole River upstream of Dickie Bridge. First Chance Gulch is located on the Mount Haggin Wildlife Management Area, approximately 17 miles southeast of Anaconda in Anaconda-Deer Lodge County. The project area was the location of the first gold strike in the Big Hole drainage in the 1860s, and mining occurred through the early 1900s.

The anthropogenic and resulting channel geomorphology impacts on the creek are abundantly evident. Most of the stream is comprised of linear features and continuous riffles pinned between large placer piles. The straightening and confining of the stream have led to decreased physical complexity and simplification of instream habitat. Currently, the stream lacks the ability to naturally heal itself and add complexity by recruiting large wood debris that would enable hydraulic conditions to form scour and pools and, therefore, habitat. The large placer piles on the banks act as a platform to catch falling trees. In many locations, downfall lodgepole pine sit perched above the streambed and bridges the stream on the two banks. This issue is well known by Montana Fish Wildlife and Parks (MFWP) Fisheries Biologist, Jim Olsen, who has documented very limited pool frequency and quality in the project reach.

This project will construct 50-80 simple log step structures within a 1.5-mile reach of First Chance Gulch to restore instream complexity and structure. The logs will create plunge hydraulics, which will in turn, create native fish habitat. All structures will be constructed by hand (no machinery) with on-site trees, consisting primarily of log pool drop structures where a log is placed across the stream perpendicular to the flow at the stream bed elevation and keyed into streambanks. Erosion control fabric will be stapled to the front face of the log and laid on the bed of the stream upstream. A pool will be excavated downstream of the log, and the fill removed will be placed by hand on the fabric upstream of the log to prevent scour underneath. The structures will aggrade the stream for 5-10 feet upstream but, more importantly, will create scour pools downstream of the structures. Project implementation is planned for the summer (August) of 2024 when water levels are low.

Since 2014, the Big Hole Watershed Committee (BHWC) has invested significant time and energy into the French Creek drainage. Restoration projects in adjacent tributaries and the nearby Superfund site have all worked toward the common goals of reducing sediment and improving habitat for native fish. Furthermore, this project comes off the heels of MFWP's efforts to restore the French Creek drainage to a completely native fishery. The newly introduced French Creek fish population represents one of the largest interconnected populations of Westslope Cutthroat trout in the upper Missouri River drainage and the only population of fluvial Arctic grayling in the absence of non-native species. This habitat enhancement project will greatly benefit these important native fish.

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

Placer mining between 1864 and early 1900s. Placer piles range between 2-4 feet on both sides of the creek, inhibiting natural geomorphic processes. In the case of this headwater tributary, the lack of habitat is the primary concern. These simple log step fish habitat structures will create the hydraulics necessary form plunge and scour and, therefore, native fish habitat.

E. Length of stream or size of lake that will be treated (project extent): 1.5 miles
Length/size of impact, if larger than project extent (e.g., stream miles opened): _____

F. Project Budget Summary:

Grant Request (Dollars):	**$**	**24,000.00**
Matching Dollars:	**$**	**786.00**
Matching In-Kind Services:*	**$**	**297.60**

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

Other Contributions (not part of this app)	**$**	**2,029.60**
Total Project Cost:	**$**	**27,113.20**

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

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

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

I. Attach project plans:

- [X] Detailed sketches or plan views with the location and proposed restoration
- [X] 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:

A letter of support from MFWP's Big Hole Fisheries Biologist, Jim Olsen, is forthcoming.

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 [X] No [ ]
**If it is a water leasing project, describe the length of the agreement.*

A 20-year Landowner Agreement will be signed upon FFIP approval. Montana Fish Wildlife and Parks are the landowner and primary partner on this project. The principal fisheries biologist, Jim Olsen, and Vanna Boccadori (Wildlife Biologist) have both been involved in multiple BHWC habitat restoration projects on the Mount Haggin WMA over the last 12 years and are familiar with the Landowner Agreement commitment.

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 not be part of or adjacent to the project. There are no grazing allotments in the project area. Furthermore, there are no operation and maintenance costs necessary to support this project in the future.

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?

In 2023, MFWP completed the second year of Westslope Cutthroat (WCT) and Arctic grayling introductions in the drainage, including introductions into First Chance Creek through the proposed restoration area. Before native fish restoration took place, fish population (brook trout) monitoring was done in First Chance Creek. In conjunction with these introductions, FWP will perform monitoring to determine the survival and reproduction of cutthroat trout in First Chance Creek. The habitat improvement should result in increasing the carrying capacity of the stream for WCT above that of brook trout which were 500 fish/mile prior to removal. Jim Olsen, will be responsible for post-project data collection and overall monitoring coordination. The BHWC staff will support MFWP with monitoring activities as needed.

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

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

This project will directly benefit Westslope cutthroat trout and Arctic grayling.

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

From its confluence to French Gulch to roughly 1.5 miles upstream (project reach), First Chance Gulch has very limited pool frequency and lacks quality pool habitat. This absence of habitat in this reach inhibits the ability of the stream to support a strong fishery. This project will manually create/enhance habitat desired for wild fish habitat and long-term residency.

In 2016, the same technique was used in our French Gulch Restoration Project in areas of French Gulch that were less impacted by mining, but habitat was still lacking diversity. 48 in-stream fish habitat structures were constructed in the same proposed manner. All of the structures are still intact and properly functioning, providing quality habitat.

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

First Chance Gulch is a headwater tributary near the upper portion of its watershed. These areas can contain important refuge areas as fish move upstream seasonally for spawning or to access cold-water refuge areas. Creating habitat in this reach of First Chance Gulch will create a more robust fishery. All of the streams on Mount Haggin WMA are open to the public for fishing. Creating more robust fisheries in these smaller tributary streams will aid in more robust fisheries in the larger streams that do see more angling use.

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.

Yes, this project will enhance critical headwater habitat for Arctic grayling and Westslope cutthroat, as the entirety of the project is located on public lands. First Chance Creek is quite small and likely receives little to no fishing pressure. However, it has the potential, with improved habitat, to feed fish into downstream waters like French Creek, which will receive fishing pressure.

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

Montanans will directly benefit from this project through the restoration of aquatic and riparian habitat that belongs to them. Because the project area is located on public property that is accessible year-round, all recreationists that recreate on the Mount Haggin Wildlife Management Area will be positively affected. Opportunities for both Montanans and visitors to observe and, in some cases, harvest these fish in this area will be increased through the implementation of the proposed action. Arctic grayling and westslope cutthroat trout and both species of concern in Montana. Efforts to conserve these species and prevent their listing as Threatened or Endangered under the Endangered Species Act will benefit all Montanan's.

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

No, the project is located entirely on public property on the state-owned Mount Haggin WMA.

G. Will the project develop commercial recreational use on the site (including paid access)? Explain:

No.

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

Yes. The entire French Creek drainage was subject to extensive mining activity from 1884 to the mid-1930s. First Chance Gulch was severely impacted by placer mining.

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: Ben Lalonde Date: 11/8/2023

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

First Chance Gulch habitat improvements 006-2024

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

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				$ -				$ -
Design				$ -				$ -
Engineering				$ -				$ -
BHWC Permitting	20	HR	$50.00	$ 1,000.00	1,000.00			$ 1,000.00
BHWC Oversight	40	HR	$50.00	$ 2,000.00	2,000.00			$ 2,000.00
Maintenance				$ -				$ -
			Sub-Total	$ 3,000.00	$ 3,000.00	$ -	$ -	$ 3,000.00
Travel								
BHWC Mileage	1200	miles	$0.66	$ 786.00		786.00		$ 786.00
MFWP Mileage	320	miles	$0.66	$ 209.60			209.60	$ 209.60
Per diem				$ -				$ -
			Sub-Total	$ 995.60	$ -	$ 786.00	$ 209.60	$ 995.60
Construction Materials****								
Native/on-site trees/logs (10" x 12')	80	tree/log	$3.72	$ 297.60		297.60		$ 297.60
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 297.60	$ -	$ 297.60	$ -	$ 297.60
Equipment, Labor, and Mobilization								
Professional Hand Labor Crew (1 crew lead/3 crew laborers)	7	days	$3,000.00	$ 21,000.00	21,000.00			$ 21,000.00
Jim Olsen (MFWP Fisheries Biologist)	20	hours	$48.00	$ 960.00			960.00	$ 960.00
Lance Breen (MFWP Fisheries Technician)	20	hours	$43.00	$ 860.00			860.00	$ 860.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 22,820.00	$ 21,000.00	$ -	$ 1,820.00	$ 22,820.00
			TOTALS	$ 27,113.20	$ 24,000.00	$ 1,083.60	$ 2,029.60	$ 27,113.20

OTHER REQUIREMENTS:

(Revised 11/9/2023)

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

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.

In-kind log value was derived from MFWP Forester, Jason Parke. A 10"x 12' foot log (value to landowner-stumpage) equates to $3.72 per log if used for firewood ($86.25 per cord). Additional information on how this value was derived can be given to the FFIP review committee upon request.

***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 may require a justification or minimum of two competitive bids for the cost of undertaking the project. For projects that include a maintenance request, it must not exceed 10% of the total project cost.

****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: Professional hand labor crew day rate includes mobilization, prep hours , travel hours, truck, trailer, ATV (as needed) overtime, lodging and per Diem).

APPLICATION MATCHING CONTRIBUTIONS

(do not include requested funds or contributions not associated with the application)

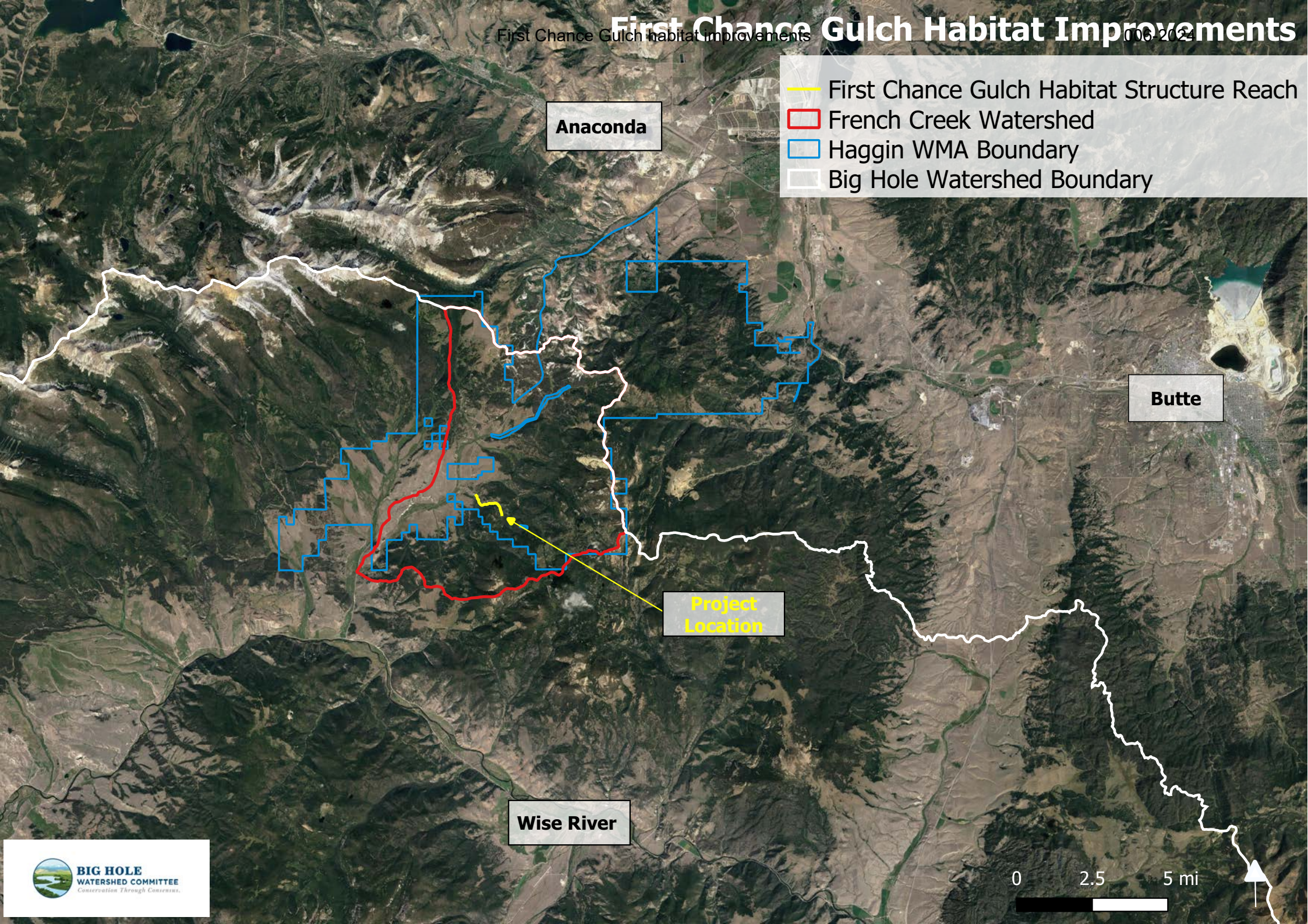
CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
BHWC	$ -	$ 786.00	$ 786.00	Yes
MFWP Mount Haggin Wildlife Management Area	$ 297.60	$ -	$ 297.60	Yes
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 297.60	$ 786.00	$ 1,083.60	

OTHER CONTRIBUTIONS

(contributions not associated with the application)

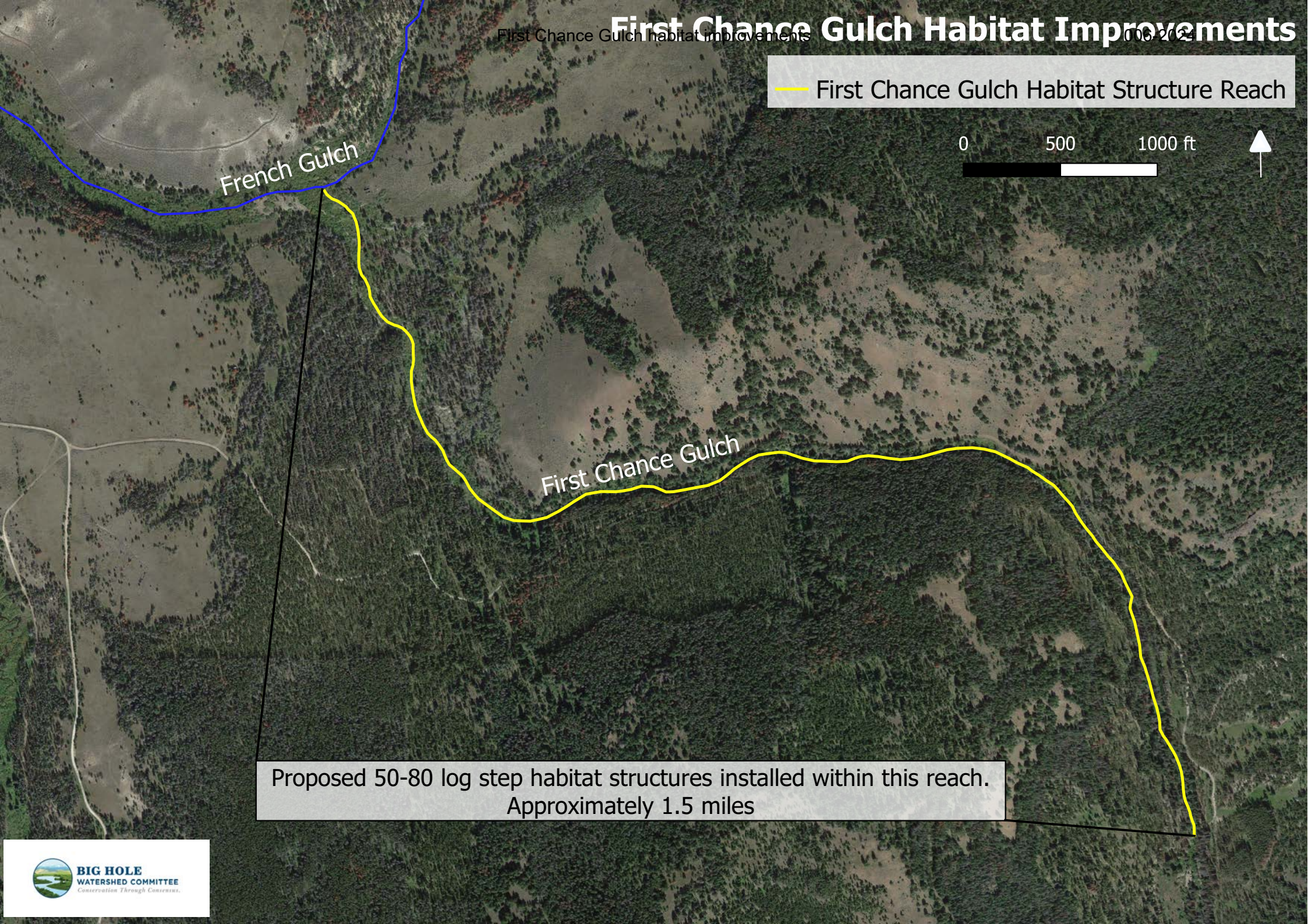
CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
MFWP Fisheries Department (Jim Olsen and Lance Breen)	$ 2,029.60	$ -	$ 2,029.60	Yes
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 2,029.60	$ -	$ 2,029.60	

First Chance Gulch Habitat Improvements



BIG HOLE WATERSHED COMMITTEE
Conservation Through Consensus

First Chance Gulch Habitat Improvements



BIG HOLE WATERSHED COMMITTEE
Conservation Through Consensus.

First Chance Gulch Habitat Improvements

First Chance Gulch habitat improvements 2024

First Chance Gulch Habitat Structure Reach

0 500 1000 ft

French Gulch

First Chance Gulch

BIG HOLE WATERSHED COMMITTEE
Conservation Through Consensus.

First Chance Gulch Habitat Improvements: Photos

Figure 1. Existing conditions in First Chance Gulch showing incision and placer piles on both sides of the stream channel. Note the downfall perched/bridged above, inhibiting natural habitat formation.

Figure 2. Downfall log perched above placer piles in First Chance Gulch. Due to the terribly incised and straightened channel, the stream has limited complexity/habitat. Placer piles hinder natural recovery.

Figure 3. 2016 French Gulch habitat log structure. The same structure design and approach will be used in this proposed Frist Chance Gulch project.

Figure 4. 2016 French Gulch habitat log structure. NOTE the parallel logs used as additional bank side cut habitat. The same technique will be used in strategic locations in First Chance Gulch. Also to NOTE is the fish spawning in the tail-out of the created scour pool (yellow circle) created by the habitat structure.

Figure 5. 2016 French Gulch habitat log structure.

Figure 6. Freshly installed habitat log structure in French Gulch. The same structure design and approach will be used in this proposed Frist Chance Gulch project.

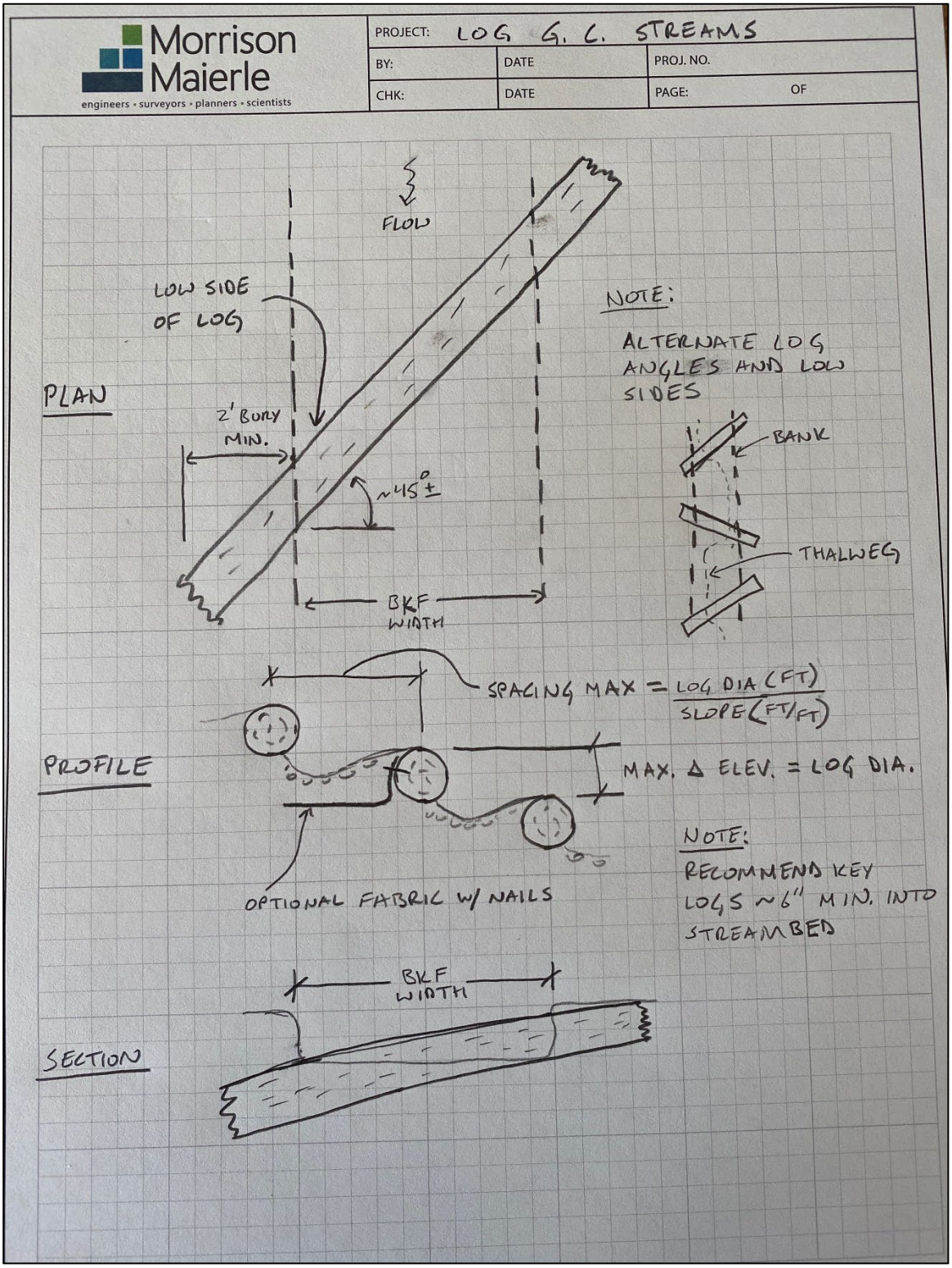


Figure 7. Sketched typical (provided by Matt Barnes, Tetra Tech) of log habitat structures proposed for First Chance Gulch. NOTE that this typical shows the alternating angles and low side of the log to push the thalweg back and forth. In certain cases, we will install the logs perpendicular to the channel to form a uniform drop/plunge.

FWP.MT.GOV

THE **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 Review Panel,

Montana Fish Wildlife and Parks (FWP) fully supports the Big Hole Watershed Committee in their request for funds to improve fish habitat in First Chance Gulch. The stream was severely placer mined in the late 1800s and early 1900s. The stream is small but has historically supported a self-sustaining population of brook trout numbering as many as 500 fish/mile. First Chance Creek is part of the French Creek drainage and has been restored to native fish species. Westslope cutthroat trout have been restocked in the reach proposed for habitat enhancement. Improved pool quality and frequency will increase the carrying capacity of the stream and provide critically lacking over winter habitat for fish. Full channel restoration in this area would be ideal, but the cost would be very high and given the small size of the stream the benefits compared to other nearby restoration efforts would be less. This habitat improvement project is a compromise providing high quality habitat for a relatively minimal cost. Similar work was done in the French Gulch drainage and has resulted in high quality pools that have maintained themselves for nearly 10 years. We would hope that you would support this project as it benefits native species, is mining related, and relatively inexpensive.

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

Jim Olsen, Big Hole River fisheries biologist (406-533-8451, jimolsen@mt.gov)
Jen Smitham, Region 3 public comment coordinator (406-495-3262, jsmitham@mt.gov)

Sincerely,

Warren Hansen
Acting Region 3 Supervisor