

FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

Please fill in the highlighted areas
all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid

I. APPLICANT INFORMATION

- A. Applicant Name: Trout Unlimited
- B. Mailing Address: 312 N. Higgins Ave, Suite 500
- C. City: Missoula State: MT Zip: 59802
Telephone: 406-546-5680 E-mail: chackathorn@tu.org
- D. Contact Person: Casey Hackathorn
Address if different from Applicant: _____
City: _____ State: _____ Zip: _____
Telephone: _____ E-mail: _____
- E. Landowner and/or Lessee Name (if other than Applicant): Beaverhead-Deerlodge National Forest
Mailing Address: 420 Barrett St
City: Dillon State: MT Zip: 59725
Telephone: 406-683-3900 E-mail: kweinner@fs.fed.us

II. PROJECT INFORMATION*

- A. Project Name: Green Canyon Fish Passage Improvement Project
River, stream, or lake: Green Canyon Creek
Location: Township: 4N Range: 16W Section: 33 NWSWSE
Latitude: 46.051405 Longitude: -113.595539 *within project (decimal degrees)*
County: Granite
- B. Purpose of Project:
To reconnect native bull trout and westslope cutthroat trout habitat on Green Canyon Creek, a spawning tributary in the Rock Creek watershed.
- C. Brief Project Description: _____

The Green Canyon Fish Passage Improvement Project will replace an undersized barrier culvert on USFS Road 5107 on Green Canyon Creek a tributary to Copper Creek, a primary spawning tributary in the Rock Creek watershed near Philipsburg, MT on the Beaverhead-Deerlodge National Forest. The current road crossing is at risk of failure from post-fire debris loading after last summer's Meyers Fire burned intensely through the watershed. The project will fully reconnect approximately 3 miles of Green Canyon Creek including ½ mile of westslope cutthroat and bull trout spawning habitat upstream of the culvert. Recent bull trout eDNA sampling suggests the presence of resident bull trout downstream of the culvert but not upstream, indicating a rare opportunity to potentially expand the range of occupied bull trout habitat in the Rock Creek watershed. With support from the Future Fisheries Improvement Program, Trout Unlimited proposes to manage the project in partnership with the Beaverhead-Deerlodge National Forest for completion in the 2018 field season. The Forest Service is providing the design and engineering services for the project along with funding for construction. Trout Unlimited will coordinate permitting, contract for construction, and coordinate field oversight and inspection with the USFS and other stakeholders.

D. Length of stream or size of lake that will be treated: 80'

E. Project Budget:

Grant Request (Dollars): \$ \$17,000

Contribution by Applicant (Dollars): \$ 668 In-kind \$ 3,400
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ 20,000 In-kind \$
(attach verification - See page 2 budget template)

Total Project Cost: \$ 41,068

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

G. **Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire* (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).**

H. **Attach land management & maintenance plans that will ensure protection of the reclaimed area.**

III. PROJECT BENEFITS*

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

Bull trout, westslope cutthroat trout, mountain whitefish, and native non-game species.

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

The project will fully reconnect Green Canyon Creek including over 3 miles of native trout habitat.

C. Will the project improve fish populations and/or fishing? To what extent?:

The project will reconnect approximately ½ mile of additional native spawning and rearing habitat that should support improved fish populations in Green Canyon and Copper Creeks.

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

The project has the potential to increase recruitment to Copper Creek and Middle Fork Rock Creek as well as improve fish populations on Green Canyon Creek—all streams with easy public access from Forest Service roads on public lands.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

The Beaverhead-Deerlodge National Forest will maintain the road crossing under their road maintenance plans.

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

The current 65"x40" culvert, an undersized and perched barrier to fish passage, will be replaced with an 84" pipe with appropriately sized bed material and rock grade control structures to provide year-round aquatic organism passage. In addition, the current culvert is at risk of failure from the potential sediment impacts of the recent Meyers Fire and the new crossing will provide adequate capacity to prevent the catastrophic impacts of a road washout into Green Canyon Creek.

G. What public benefits will be realized from this project?:

The public will receive the potential benefits of an improved recreational fishery in Green Canyon and Copper Creeks as well as continued use of a popular road for hunting, fishing and other recreation activities on public lands.

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

No, the project will not impact water use or adjacent property.

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

The project will maintain an existing road crossing and result in no changes to the current travel management on the Beaverhead-Deerlodge National Forest. The project should not result in any new development or commercial use.

J. 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.

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:

11/30/2019

Sponsor (if applicable):



***Highlighted boxes will automatically expand.**

Mail To: Montana Fish, Wildlife & Parks
Fisheries Division
PO Box 200701
Helena, MT 59620-0701

E-mail To: Michelle McGree
mmcgree@mt.gov
(electronic submissions MUST be signed)

Incomplete or late applications will be rejected and returned to applicant.
Applications may be rejected if this form is modified.

*****Applications must be signed and *received* by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN-KIND CASH	TOTAL
Personnel***								
Survey				\$ -		USFS		\$ -
Design				\$ -		USFS		\$ -
Engineering				\$ -		USFS		\$ -
Permitting	8	HR	\$50.00	\$ 400.00			400.00	\$ 400.00
Oversight	60	HR	\$50.00	\$ 3,000.00			3,000.00	\$ 3,000.00
			Sub-Total	\$ 3,400.00	\$ -	\$ 3,400.00	\$ -	\$ 3,400.00
Travel								
Mileage	1248	MI	\$0.535	\$ 667.68			667.68	\$ 667.68
Per diem				\$ -				\$ -
			Sub-Total	\$ 667.68	\$ -	\$ -	\$ 667.68	\$ 667.68
Construction Materials****								
84" Round CMP	40	FT	\$275.00	\$ 11,000.00	4,000.00	-	7,000.00	\$ 11,000.00
			Sub-Total	\$ 11,000.00	\$ 4,000.00	\$ -	\$ 7,000.00	\$ 11,000.00
Equipment and Labor								
Structural Excavation	1	LS	\$8,000.00	\$ 8,000.00	4,000.00		4,000.00	\$ 8,000.00
Provide and Place Rock	50	YDS	\$80.00	\$ 4,000.00	2,000.00		2,000.00	\$ 4,000.00
Dewatering	1	LS	\$5,000.00	\$ 5,000.00	2,500.00		2,500.00	\$ 5,000.00
Erosion Control	1	LS	\$2,000.00	\$ 2,000.00	1,000.00		1,000.00	\$ 2,000.00
Culvert Removal and Disposal	1	LS	\$1,000.00	\$ 1,000.00	500.00		500.00	\$ 1,000.00
Rental Equipment	1	LS	\$1,000.00	\$ 1,000.00	500.00		500.00	\$ 1,000.00
			Sub-Total	\$ 21,000.00	\$ 10,500.00	\$ -	\$ 10,500.00	\$ 21,000.00
Mobilization								
Mobilization and Wash	1	LS	\$5,000.00	\$ 5,000.00	2,500.00		2,500.00	\$ 5,000.00
			Sub-Total	\$ 5,000.00	\$ 2,500.00	\$ -	\$ 2,500.00	\$ 5,000.00
TOTALS				\$ 41,067.68	\$ 17,000.00	\$ 3,400.00	\$ 20,667.68	\$ 41,067.68

OTHER REQUIREMENTS:

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 for calculations). Describe here or in text.

Reminder: Government salaries cannot be used as in-kind match

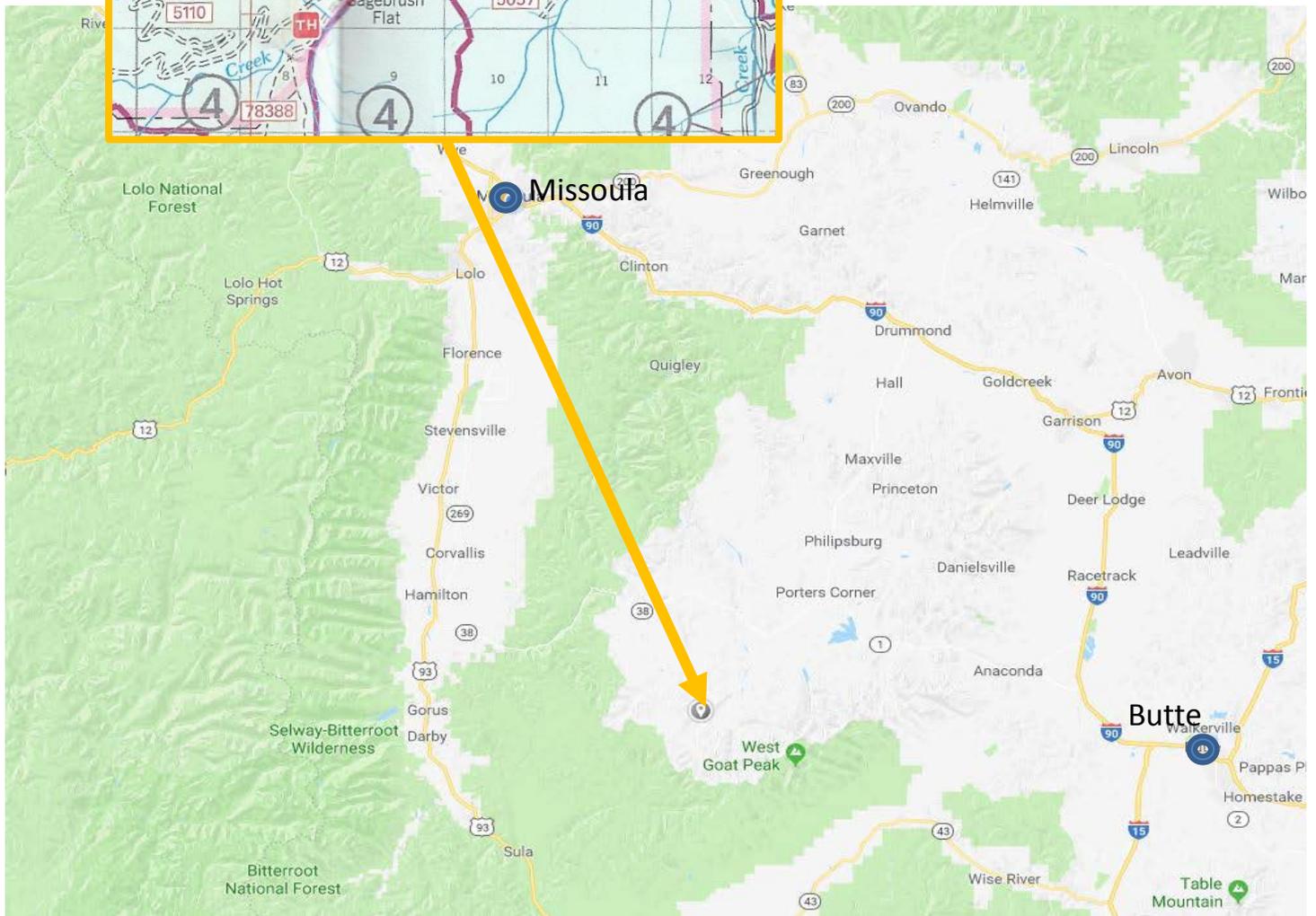
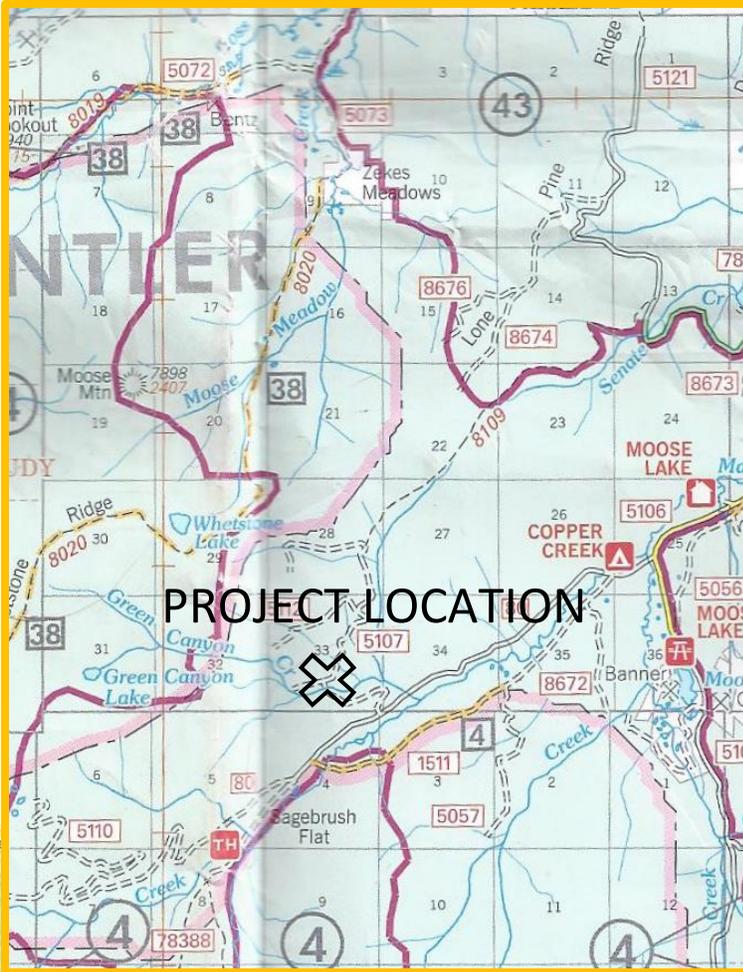
***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project.

****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.

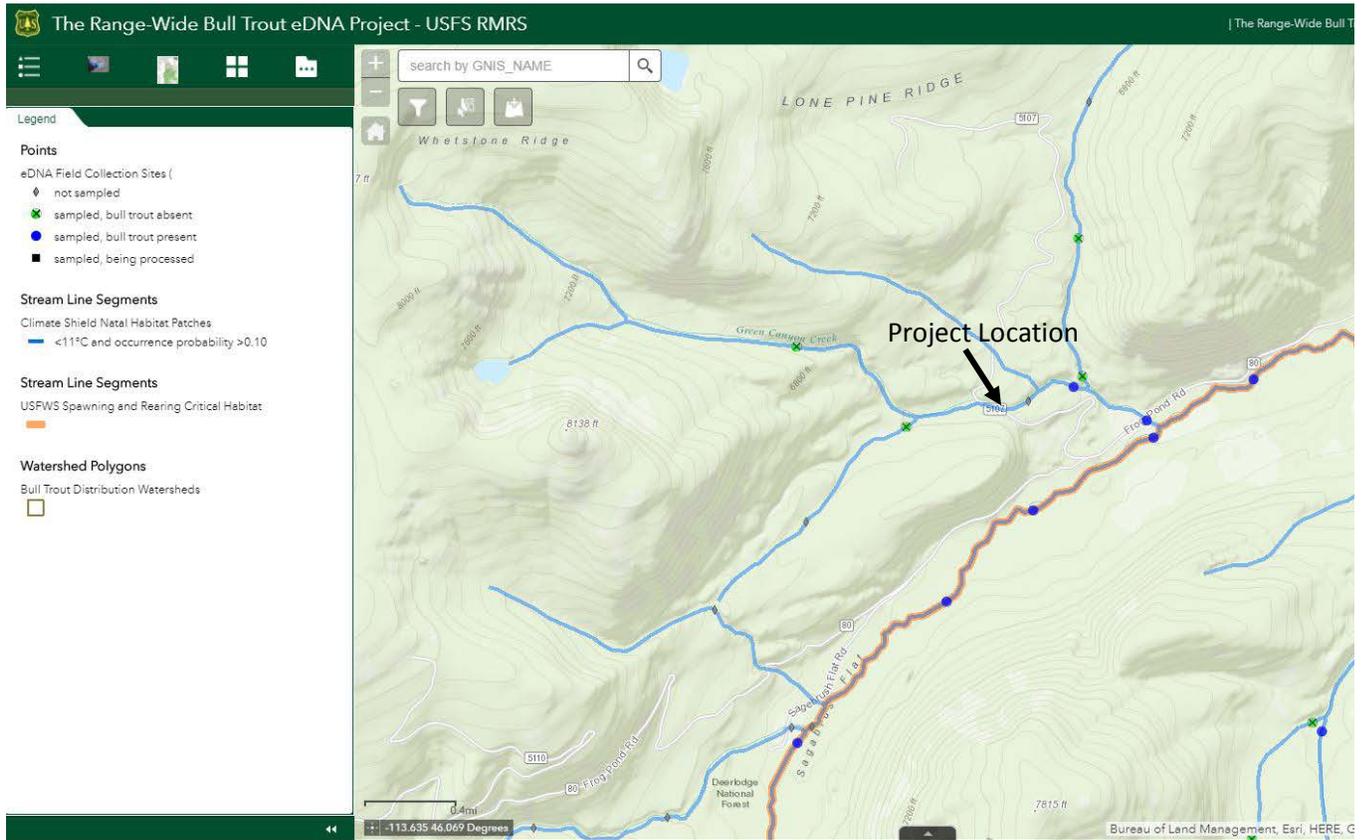
MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
Trout Unlimited	\$ 3,400.00	\$ 667.68	\$ 4,067.68	Y
USFS	\$ -	\$ 20,000.00	\$ 20,000.00	Y
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
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	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ 3,400.00	\$ 20,667.68	\$ 24,067.68	

Green Canyon Fish Passage Improvement Project Map



Bull Trout eDNA Sample Locations



Green Canyon Creek Habitat Upstream of Project



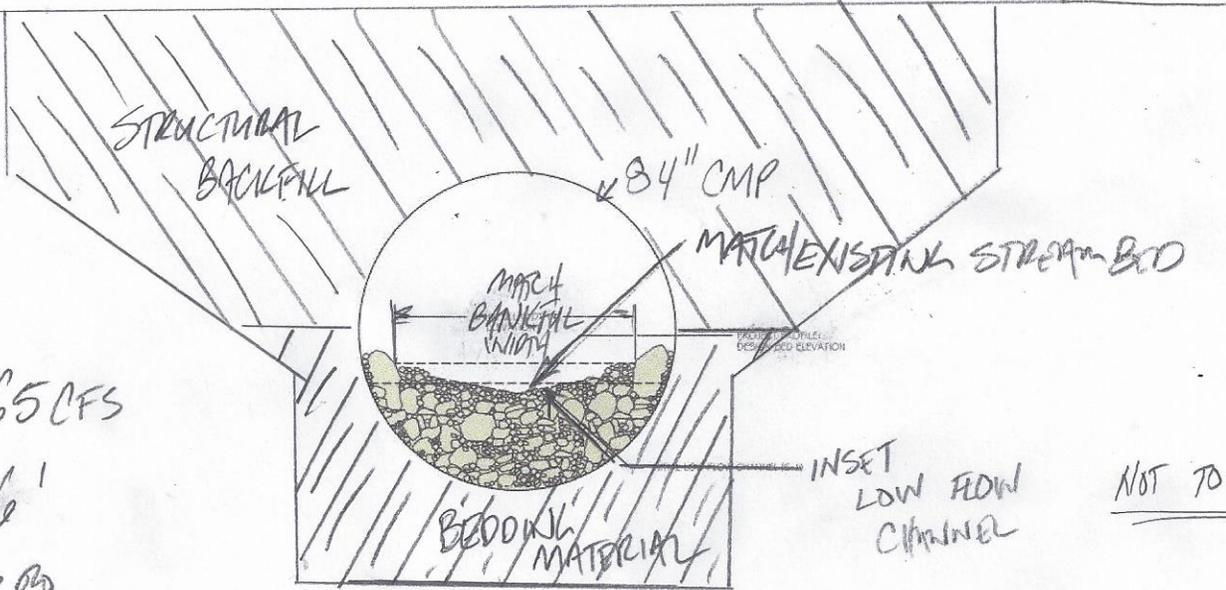
Green Canyon Creek Downstream of FS Road 5107 Culvert – Project Site



Green Canyon Creek Habitat Downstream of Project Site



ROAD

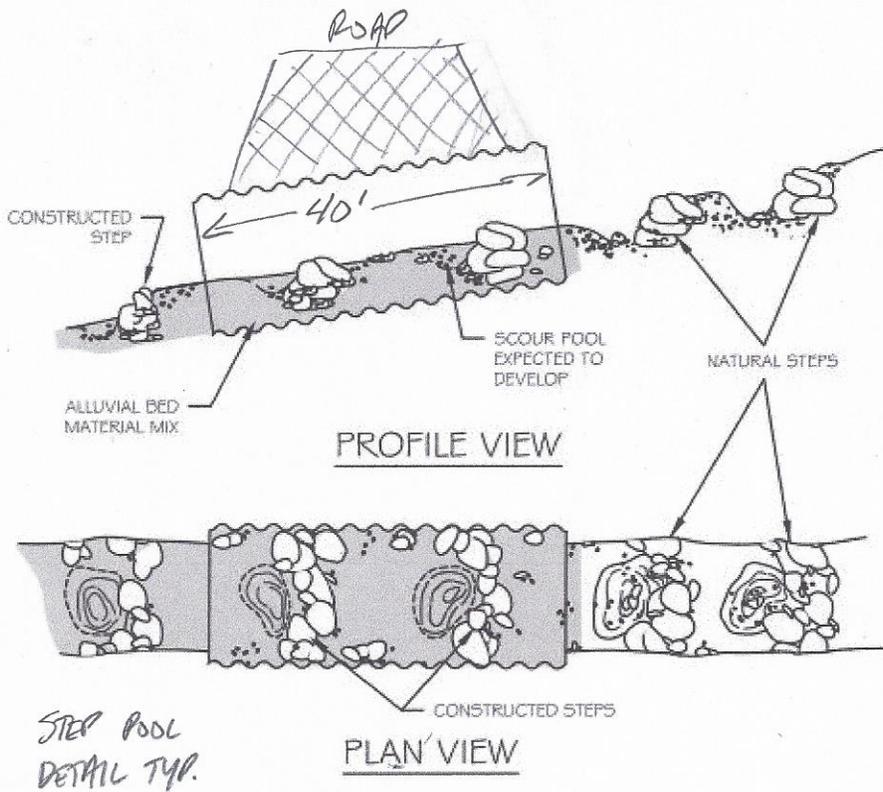


$Q_{100} = 65 \text{ CFS}$

$W_{BF} = 6'$

$S = 3\%$

NOT TO SCALE





United States
Department of
Agriculture

Forest
Service

Beaverhead-Deerlodge
National Forest

420 Barrett Street
Dillon, MT 59725
406 683-3900

11/30/2017

To: Casey Hackathorn
Upper Clark Fork Program Manager
312 N. Higgins Ave, Suite 200
Missoula, MT 59802

RE: Green Canyon Fish Passage Improvement Project

I wanted to send this letter of support for the Future Fisheries application associated with the replacement of the Green Canyon Crossing on FS road 5107.

The Forest Service has had the opportunity to be partnered with TU in the replacement of the existing structure that is currently an impediment to fish passage and undersized which has become even more of an issue due to the recent fire in the basin. We have done some of the leg work for this structure during the BAER response for the Meyers fire but realized immediately that funding was going to be an issue to properly implement that replacement. We fully support the funding proposal and look forward to being active partners as we move into the implementation stages of this effort.

Kevin Weiner

/s/ Kevin Weiner

Forest Hydrologist

Beaverhead-Deerlodge National Forest





Montana Fish, Wildlife & Parks

72 Rock Creek Rd
Clinton, MT 59825
November 30, 2017

Montana Fish, Wildlife and Parks
Attn: Michelle McGree
1420 East 6th Ave.
Helena, MT 59620

Future Fisheries Panel:

This memo represents a letter of support for the Green Canyon Creek culvert replacement project. Green Canyon Creek is a small tributary to Copper Creek in the Upper Rock Creek drainage. Copper Creek is one of the main bull trout spawning tributaries for fluvial bull trout in the Rock Creek drainage. Bull trout are also present in Green Canyon Creek, although I am not certain that bull trout spawn in Green Canyon Creek. This stream may simply serve as rearing habitat for some juveniles spawned in Copper Creek. Native westslope cutthroat trout are also abundant in Green Canyon Creek.

It appears that this project could provide significant benefits to the fishery of Green Canyon Creek and Copper Creek. This drainage was extensively burned by wildfires in the summer of 2017. Sediment and debris loads are expected to be extremely high in this system during the upcoming years due to the scarred condition of the landscape. With excessive debris and sediment in this system, it is much more likely that this culvert and road prism will be washed out leading to even further sedimentation in Green Canyon Creek and Copper Creek below the mouth of Green Canyon Creek. Copper Creek below the mouth of Green Canyon is a spawning reach for bull trout with bull trout redds being observed in this reach annually. This habitat will already be significantly altered by the post-fire sediment regime and additional fine sediment in this habitat would likely be destructive. Unfortunately, the Copper Creek population appears to be in decline over the last 10 years and any additional disturbance could put this population at further risk of extirpation. Installing a new culvert at this site may also open up approximately a half mile of bull trout habitat above the culvert that is currently unoccupied. E-DNA sampling in Green Canyon Creek found evidence of bull trout below this culvert, but not above. Thank you for considering funding this project and please do not hesitate to contact me regarding any questions you have on this project.

Thanks,

Brad Liermann, Fisheries Biologist