



FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

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



I. APPLICANT INFORMATION

A. Applicant Name: George Grant Chapter Trout Unlimited

Mailing Address: P.O. Box 563

City: Butte State: MT Zip: 59703

Telephone: 406-593-1058 E-mail: president@ggtu.org

B. Contact Person (if different than applicant): Jim Olsen

Address: 1820 Meadowlark Lane

City: Butte State: MT Zip: 59701

Telephone: 406-533-8451 E-mail: jimolsen@mt.gov

C. Landowner and/or Lessee Name (if different than applicant): Hairpin Ranch LLC, Jake Jenkins

Mailing Address: Hairpin Ranch Highway 278

City: Jackson State: MT Zip: 59736

Telephone: 801-913-4000 E-mail: jake@xmission.com

II. PROJECT INFORMATION

A. Project Name: Andrus Creek fish barrier

River, stream, or lake: Andrus Creek

Location: Township: 7S Range: 14W Section: 22

Latitude: 45.20745 Longitude: -113.30285 *within project (decimal degrees)*

County: Beaverhead

B. Purpose of Project:

The purpose of this project is to construct a fish barrier on Andrus Creek to protect a native population of westslope cutthroat trout that has recently been invaded by rainbow trout.

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

In 2009, Andrus Creek was home to a non-hybridized population of westslope cutthroat trout that was sympatric with brook trout. While abundance was low relative to brook trout, there was still a relatively robust population of cutthroat. However, when sampled in 2020 cutthroat numbers had dramatically declined and hybridization was detected. Only 24 cutthroat were captured in the reach with the formerly highest density of fish and of those 24 fish, 7 fish were hybrids and one was a pure rainbow trout. The decline in cutthroat density and the recent hybridization have elevated the urgency to perform restoration work in Andrus Creek. What has precluded previous restoration work is the lack of a suitable fish barrier location on public property. Andrus Creek is a low gradient system with high quality habitat. On National Forest lands it lacks a suitable barrier location where the floodplain is more naturally constricted and the gradient is higher. Such sites are only present on private property downstream.

In 2018 FWP began working with the Hairpin Ranch to conserve cutthroat in Andrus Creek. The ranch has agreed to allow a fish barrier to be constructed on Andrus Creek below the confluence of Bailey Creek (Figure 1) and is willing to fund 75% of the fish barrier costs. A barrier at this location would isolate roughly 9 miles of stream and would include 3 fish bearing tributary streams (Bailey Creek, South Fork Thayer and unnamed tributary to Thayer). The ranch has agreed to pay for the majority of the costs of constructing the fish barrier but has insisted that it be constructed of natural looking material. The design that has been developed is a barrier constructed of an earthen berm with a spillway constructed of geometric natural stone. The barrier would consist of a "U" shaped rock weir with the tails of the U facing downstream and rising as they tie into the earthen berm (Figure 2). The weir will have a 15-ft wide rock throat which is the bankfull width of Andrus Creek. The rock wall will be constructed as vertical as possible with the geometric blocks and the spillway height will be a minimum of 6 ft (Figure 3). Earthen fill and geotextile fabric would be used on the upstream face of the structure to prevent significant seepage and potential piping and through the boulders. A similar barrier structure was constructed on the outlet of Van Houten Lake only a few miles from the proposed Andrus Creek fish barrier (Figure 4). This barrier was constructed in 2015 and has successfully precluded upstream fish passage since.

Barrier construction is proposed for August 2021 and treatment of the stream with rotenone is planned for the first week in September. Prior to treatment all the remaining cutthroat trout will be captured using electrofishing. Captured fish will be held in a nearby stream in a live cage and genetically tested while brook trout removal is occurring in the stream. After brook trout are removed (removal will likely take 2 week) those cutthroat that are non-hybridized will be released back into Andrus Creek upstream of the fish barrier. Those fish that are hybridized will be released below the fish barrier. This project is of critical urgency because of the recent hybridization that occurred in the stream. There is likely only a handful of cutthroat trout left in the system that are non-hybridized and if conservation does not happen in the next few years there will likely be no cutthroat left.

D. Length of stream or size of lake that will be treated (project extent): 75 ft of stream

Length/size of impact, if larger than project extent (e.g. stream miles opened): 9 Miles of stream upstream of barrier

E. Project Budget:

Grant Request (Dollars): \$ \$22,342

Matching Dollars: \$ \$73,400

Matching In-Kind Services:* \$ _____

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

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

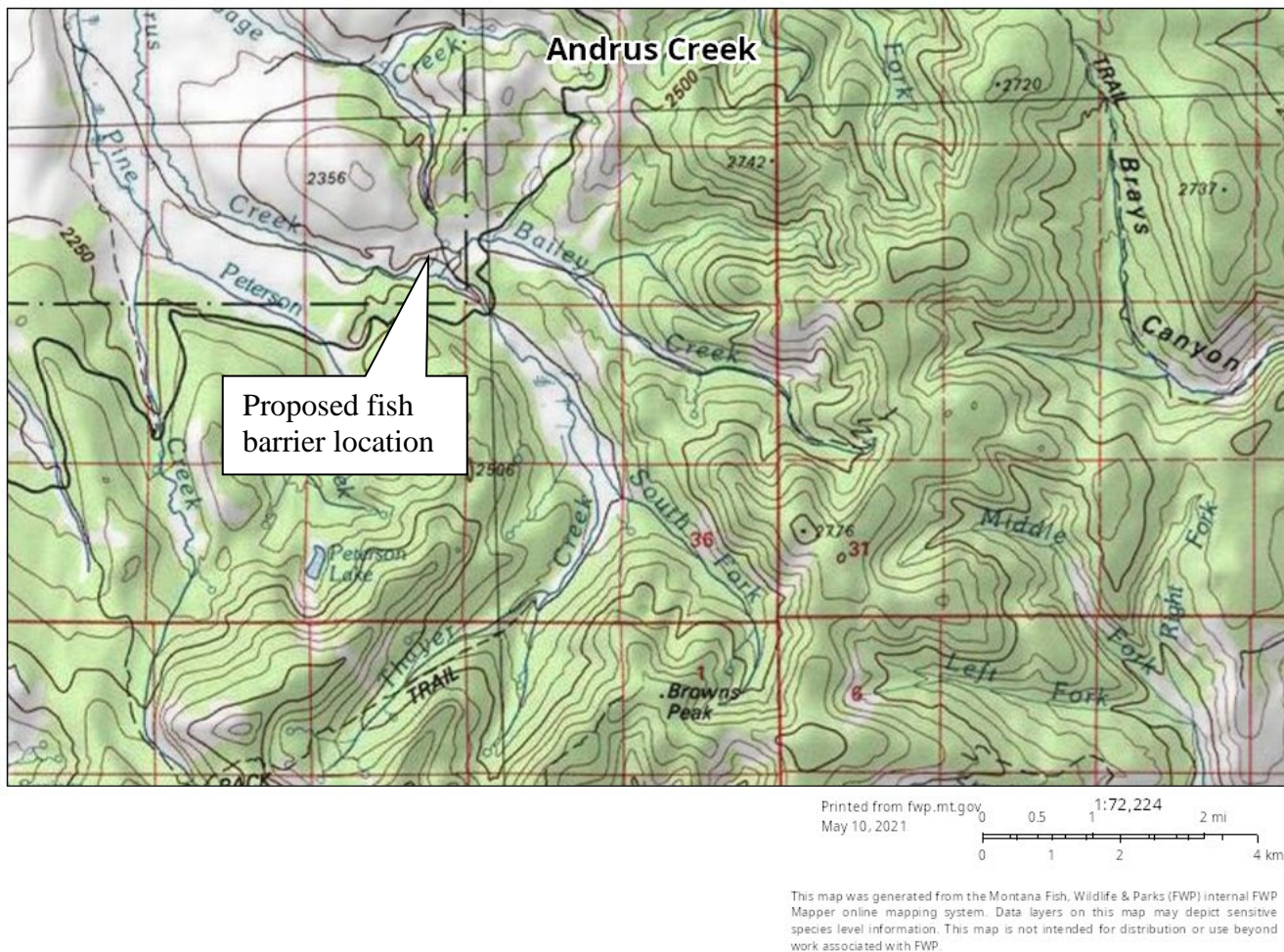
Total Project Cost: \$ \$95,724

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.

This project is located approximately 15 miles southeast of Jackson Montana or 30 miles west of Dillon, MT and is located on private property. The majority of the stream upstream of the proposed fish barrier is on the Beaverhead Deerlodge National Forest.

H.



Some layers may not appear in the legend due to page size limitations.

Figure 1. Map showing the proposed location of the Andrus Creek fish barrier which is 13 miles northwest of Jackson, MT and 30 miles west of Dillon, MT.

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 No

An agreement has been established between FWP and the ranch to perform cutthroat restoration on their property. This agreement would be in addition to that with the landowner should FFIP funds be granted for the project.

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

Cattle grazing does occur in the area and the stream is not fenced from grazing. However, cattle impacts are minimal and the Forest Service is proposing a riparian fence for Bailey Creek.

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

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

Westslope cutthroat trout

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

This project isolates roughly 9 miles of stream for a native population of westslope cutthroat trout.

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

This project will significantly benefit westslope cutthroat trout in Andrus Creek. It will increase fishing opportunity for this particular species, but fishing overall opportunity will remain unchanged because most of the stream is located on public property and there is an existing brook trout in the stream.

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

Public fishing opportunity will increase for cutthroat trout, but the over opportunity to fish for trout will remain unchanged because there is currently a primarily brook trout fishery in Andrus Creek. Other nearby and similar sized streams such as Governor, Fox, Pine, Indian and Sage Creek will continue to provide brook trout fisheries in the immediate area.

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

The habitat in Andrus Creek is high quality. It suffers from some grazing impacts, but overall the stream is in relatively good shape.

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

The public benefits of the project are that a native, non-hybridized population of westslope cutthroat will be conserved in its natal habitat. The number one priority of cutthroat conservation is to protect existing populations in their natal habitat. Conserving populations like that in Andrus Creek will help with the long-term conservation of the species as a whole. As projects like these are completed westslope will be protected from listing under the Endangered Species Act and the species as a whole will be available for Montanans to enjoy for generations to come.

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

No. The Hairpin Ranch is a cooperator on this project.

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

No.


I. 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: 6/1/21

Sponsor (if applicable): _____

Submittal: **Applications must be signed and received before December 1 and June 1 of each year 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>

Applications may be rejected if this form is modified.



Figure 2. Drawing of the proposed fish barrier on Andrus Creek (not to scale) showing the earthen berm and rock spillway. Flow of Andrus Creek is right to left on the photo.

Printed from fwp.mt.gov
May 11, 2021

1:1,129

0 0.0075 0.015 0.03 mi

0 0.015 0.03 0.06 km

This map was generated from the Montana Fish, Wildlife & Parks (FWP) internal FWP Mapper online mapping system. Data layers on this map may depict sensitive species level information. This map is not intended for distribution or use beyond work associated with FWP.

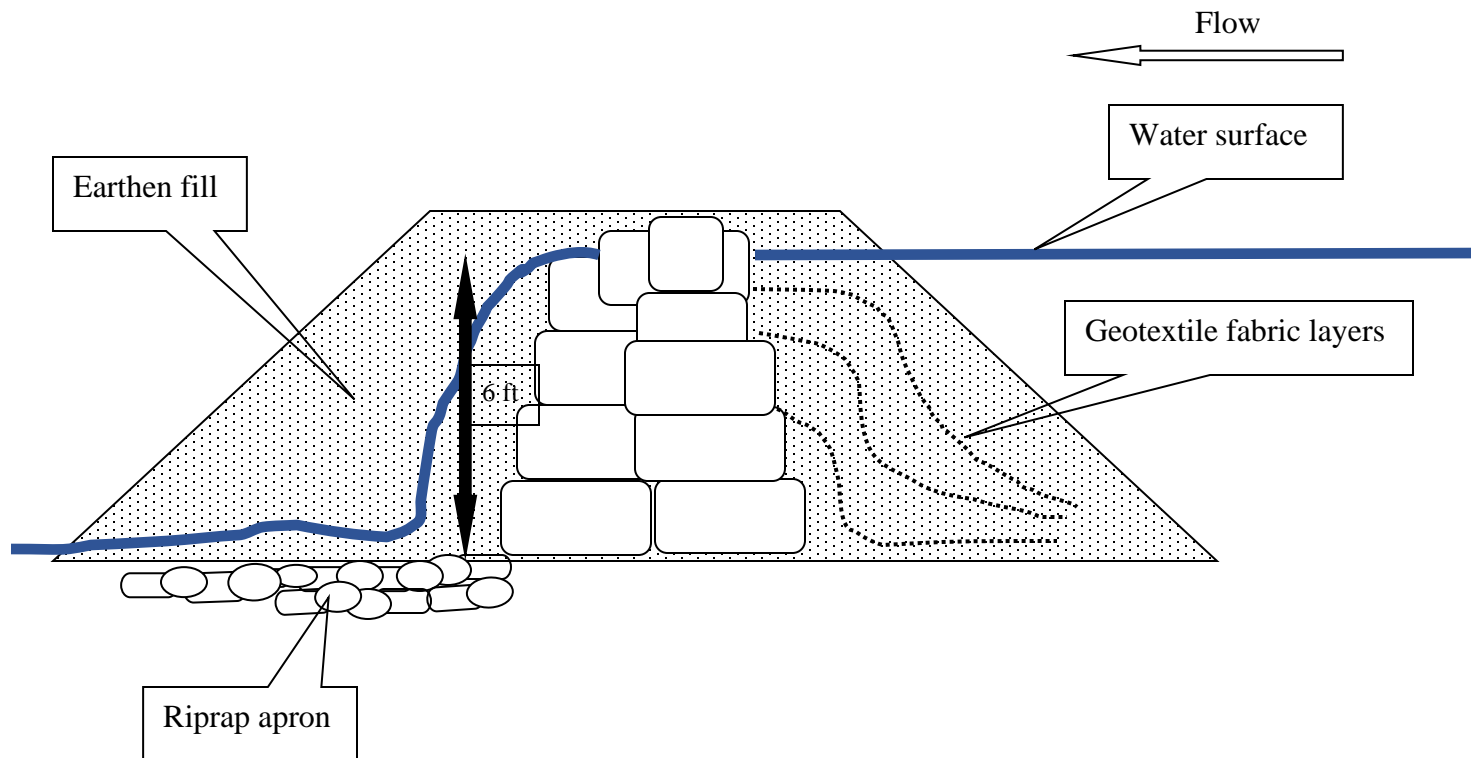


Figure 3. Cross section of the proposed fish barrier on Andrus Creek (not to scale) showing the earthen berm and rock spillway. Geotextile fabric would be placed upstream of the structure to prevent water from piping through the earthen fill.



Figure 4. Fish barrier on the outlet of Van Houten Lake. Photo on top is immediately after construction in the fall of 2015 and the figure on the right is 6 years after construction in 2021.

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) |
| Landowner | \$ - | \$ 73,382.00 | \$ 73,382.00 | Y |
| | \$ - | \$ - | \$ - | |
| | \$ - | \$ - | \$ - | |
| | \$ - | \$ - | \$ - | |
| | \$ - | \$ - | \$ - | |
| | \$ - | \$ - | \$ - | |
| | \$ - | \$ - | \$ - | |
| TOTALS | \$ - | \$ 73,382.00 | \$ 73,382.00 | |

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



FWP Region 3
1400 S 19th Ave
Bozeman, MT 59718
(406) 577-7900

5/20/21

Dear FFIP Review Panel,

I am writing this letter in support of the proposed fish barrier on Andrus Creek. The stream is home to native populations of westslope cutthroat trout that is at risk of extirpation due to hybridization, competition from brook trout and small population size. Andrus Creek is located at the headwaters of the Big Hole River in the Governor Creek drainage. This small population has historically been non-hybridized. The population in the past has been relatively robust, despite the presence of brook trout. However, sampling in the summer of 2020 indicated that the population has declined dramatically in the past 10 years. Further and more concerning, hybridization with rainbow trout has recently taken place in the stream. If native fish conservation does not happen within the next year or 2 in the drainage, there will not likely be any pure cutthroat left in the stream. It has taken a long time to develop a conservation plan for this population of cutthroat because there are not suitable fish barrier sites on public property, due to the low gradient nature of the stream. However, recently an agreement has been developed with the neighboring ranch downstream of the National Forests where there is a suitable site to construct a fish barrier that will exclude non-native fish from going upstream. A barrier at this location will exclude roughly 9 miles of habitat for native fish. The barrier design for this project meets the minimum criteria of being able to pass a 100-year flood and preclude fish passage up to a 50-year flood event. Further, a barrier of similar design has been in place at the outlet of Van Houten Lake, and it has been structurally sound and functional for several years. It is the preference of the landowner, who is also funding majority of the project, to have a structure that is more natural looking on his property. Once the fish barrier is in place, the remaining cutthroat in the drainage will be salvaged and genetically tested. Only non-hybridized fish will be released back to Andrus Creek.

Andrus Creek is scheduled for consideration by the Fish & Wildlife Commission on June 24th, pending approval this barrier could be constructed in the fall of 2021.

Protecting non-hybridized populations in their original habitat is the highest priority set out in the Conservation Plan for cutthroat trout in the upper Missouri River basin. Restoring westslope cutthroat trout to 20% of their historic habitat in the Upper Missouri River Basin is also one of the goals in the State-Wide Fisheries Management Plan. This project will be a step in achieving both of these goals. If the genetics of the few isolated populations of remaining cutthroat are lost, they could greatly decrease the ability of the species as whole to persist which is why their conservation is such as high priority. I would hope that you would consider full funding of this conservation project, contingent on endorsement by the Fish & Wildlife Commission.

Sincerely,

Jim Olsen (Big Hole Fisheries Biologist)