ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife & Parks
Shanley Creek Restoration

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that direct Montana Fish, Wildlife & Parks (FWP) to administer a Future Fisheries Improvement Program (FFIP). The program involves providing funding for physical projects to restore degraded fish habitat in streams and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. This legislation was amended again in 2013 to open the program to all native fish species (statute section 87-1-283). The program now calls for the enhancement of native fish through habitat restoration, natural reproduction and reductions in species competition by way of the FFIP.

The FFIP is proposing to provide partial funding to a project calling for the decommissioning of approximately one mile of road adjacent to Shanley Creek and the renovation or replacement three undersized or poorly functioning stream crossings. The intent of the project is to improve fish passage and stream function in Shanley Creek.

## I. Location of Project:

The project site is located on Shanley Creek, a tributary to Cottonwood Creek, within Township 15 North, Range 13 West, Sections 3 and 4 in Powell County (Attachment 1). It is located about 3 miles southeast of the town of Woodworth.

## II. Need for the Project:

One goal within FWP's Statewide Fisheries Management Plan for the fisheries management program is to "protect, maintain, and restore native fish populations, their habitats, life cycles, and genetic diversity to ensure stewardship of native species and to ensure angling opportunities whenever possible." By implementing habitat restoration projects through the FFIP, this critical goal can be achieved. This project could improve fish passage, reduce sediment inputs, and improve stream health in a bull trout core area, potentially improving habitat for bull trout, a federally threatened species, and Montana "Species of Concern."

## III. Scope of the Project:

This project involves relocating approximately 1 mile of road out of the Shanley Creek floodplain. The road relocation will eliminate two undersized culverts that are partial barriers to fish passage, and install a single crossing capable of handling a 100-year flood. The bed and banks of the stream at each crossing site will also be restored, and the existing road affecting the drainage will be decommissioned. An unimproved ford will also be upgraded with a short-span bridge to accommodate the new road system location (Attachment 2). This project will correct the current road drainage problems, eliminate delivery of excessive sediment, provide for fish

passage, and restore the natural channel morphology at each impaired crossing site. To determine design parameters for the proposed bridge structure on Shanley Creek, a basic topographic and hydraulic field survey was conducted to locate key physical features within the area of the planned crossing location. The new structure dimensions were based on stream characteristics collected from the reference reach and hydraulic analysis. The hydraulic capacity of the structure was analyzed to ensure that it satisfies a 100-year flood event. Reference-reach data indicated that bankfull width is close to 9 feet. The new structure width will be 25 feet long to accommodate proper bankfull and floodplain dimensions.

The total estimated cost for this project is $40,402. Of this total, the FFIP would be contributing up to $12,100. The remaining funds will come from other sources and from in-kind services:

| Contributor | In-kind services | In-kind cash |
|---|---|---|
| University of Montana | | $10,000 |
| U.S. Fish and Wildlife Service | | $7,000 |
| Westslope Chapter of Trout Unlimited | | $7,000 |
| Big Blackfoot Chapter of Trout Unlimited (applicant) | $2,932 | $1,370 |
| TOTAL = $28,302 | | |

This project will obtain the proper permits for construction. A 310 permit (Montana Natural Streambed and Land Preservation Act) will be obtained from the local conservation district, and the U.S. Army Corps of Engineers will be contacted for requirements to meet the federal Clean Water Act (404 permit).

IV. Environmental Impact Review Checklist:

**Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment**

Project Title: Shanley Creek Restoration
Division/Bureau: Fisheries Division / Habitat Bureau (FFIP)
Description of Project: The FFIP tentatively plans to provide partial funding to a project calling for the decommissioning of approximately 1 mile of road and replacing three undersized and/or poorly functioning stream crossings.

## A. POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT

| Will the proposed action result in potential impacts to: | Unknown | Potentially Significant | Minor | None | Can Be Mitigated | Comments Provided |
|---|---|---|---|---|---|---|
| 1. Geology and soil quality, stability and moisture | | | X | | | X |
| 2. Air quality or objectionable odors | | | | X | | |
| 3. Water quality, quantity and distribution (surface or groundwater) | | | X | | | X |
| 4. Existing water right or reservation | | | | X | | |
| 5. Vegetation cover, quantity and quality | | | X | | | X |
| 6. Unique, endangered, or fragile vegetative species | | | | X | | |
| 7. Terrestrial or aquatic life and/or habitats | | | X | | | X |
| 8. Unique, endangered, or fragile wildlife or fisheries species | | | X | | | X |
| 9. Introduction of new species into an area | | | | X | | |
| 10. Changes to abundance or movement of species | | | X | | | X |

## B. POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

| Will the proposed action result in potential impacts to: | Unknown | Potentially Significant | Minor | None | Can Be Mitigated | Comments Provided |
|---|---|---|---|---|---|---|
| 1. Noise and/or electrical effects | | | | X | | |
| 2. Land use | | | | X | | |
| 3. Risk and/or health hazards | | | | X | | |
| 4. Community impact | | | | X | | |
| 5. Public services/taxes/utilities | | | | X | | |
| 6. Potential revenue and/or project maintenance costs | | | | X | | |
| 7. Aesthetics and recreation | | | | X | | |
| 8. Cultural and historic resources | | | | X | | X |
| 9. Evaluation of significance | | | | X | | |
| 10. Generate public controversy | | | | X | | |

V. Explanation of Potential Impacts on the Physical Environment

1. Geology and soil quality, stability and moisture.

This project will decommission approximately 1 mile of road adjacent to the stream. The road will be revegetated with grass seed, willows, and aspen. Over time, this will create more soil stability, and less sediment will be transported to the stream.

3. Water quantity, quality, and distribution.

No changes in stream flow would occur in Shanley Creek as a result of the proposed project. Short-term increases in turbidity will occur during project construction, as three stream crossings will be removed. To minimize turbidity, operation of equipment in the stream channel will be minimized to the extent practicable. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota (318 authorization).

5. Vegetation cover, quantity and quality.

This project will decommission the road and plant vegetation in its place. The end result will be an increase in vegetation cover and quantity, returning the landscape to a more natural state.

7. Terrestrial and aquatic life habitats.

Construction activities that will affect terrestrial and aquatic life habitats will be short-term and involve road decommissioning and stream crossing removal or replacement. Long term, this project should increase aquatic habitats, resulting in reduced sediment inputs and proper stream function. Terrestrial habitat is expected to increase with revegetation of the decommissioned road.

8. Unique, endangered, or fragile wildlife or fisheries species.

This project will affect westslope cutthroat trout and bull trout, federally identified as sensitive and threatened, respectively. Both are designated “Species of Concern” in Montana. The impacts are predicted to be positive, increasing recruitment and survival of these species.

10. Changes to abundance or movement of species.

Long term, this project should increase stream connectivity through the removal or replacement of three stream crossings. The impacts to aquatic life could include increased recruitment and survival through improved spawning conditions, and unobstructed movement and migration corridors throughout the creek.

VI. Explanation of Impacts on the Human Environment.

8. Cultural and historic resources.

No cultural or historical resource impacts are anticipated. However, the State Historical Preservation Office will be notified of this project and any potential concerns will be addressed.

VII. Narrative Evaluation and Comment.

There are no anticipated cumulative effects. The long-term impacts to the physical and human environments are considered minor and positive.

VIII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no funding is provided through the FFIP, either the applicant would have to seek additional sources of funding to complete the project, or the existing undersized stream crossings and adjacent road would remain unaltered. The road would not be decommissioned and the stream crossings would not be removed or replaced.

2. The Proposed Alternative

The proposed alternative intends to provide partial funding through the FFIP to decommission approximately 1 mile of road adjacent to Shanley Creek and renovate or replace three undersized or poorly functioning stream crossings.

IX. Environmental Assessment Conclusion Section

1. Other groups or agencies contacted or which may have overlapping jurisdiction:

North Powell Conservation District, Montana Department of Natural Resources and Conservation, US Fish and Wildlife Service, US Army Corps of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None.

3. Is an EIS required?

No. We conclude, from this review, that the proposed activities will have an overall positive impact on the physical and human environment, and will therefore not require the extensive analysis associated with an EIS.

4. Level of public involvement.

The project application to the FFIP has been posted on the FWP webpage for public comment. No comments have been received to date. The proposed project was reviewed and supported by the public review panel of the FFIP. The proposed project also will be reviewed by the Fish and Wildlife Commission, and funding will be contingent upon their approval. The EA will be distributed to all individuals and groups listed on the cover letter and will be published on the FWP webpage: **www.fwp.mt.gov**.

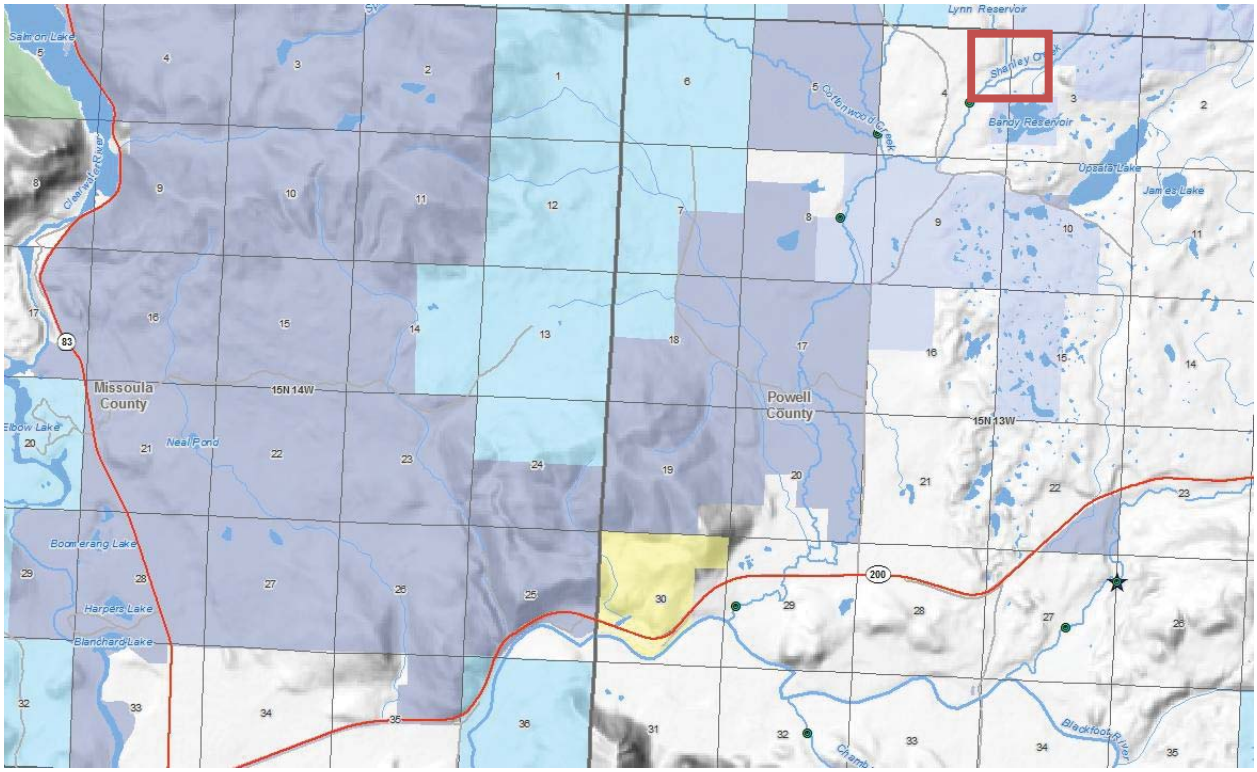
5. Duration of comment period?

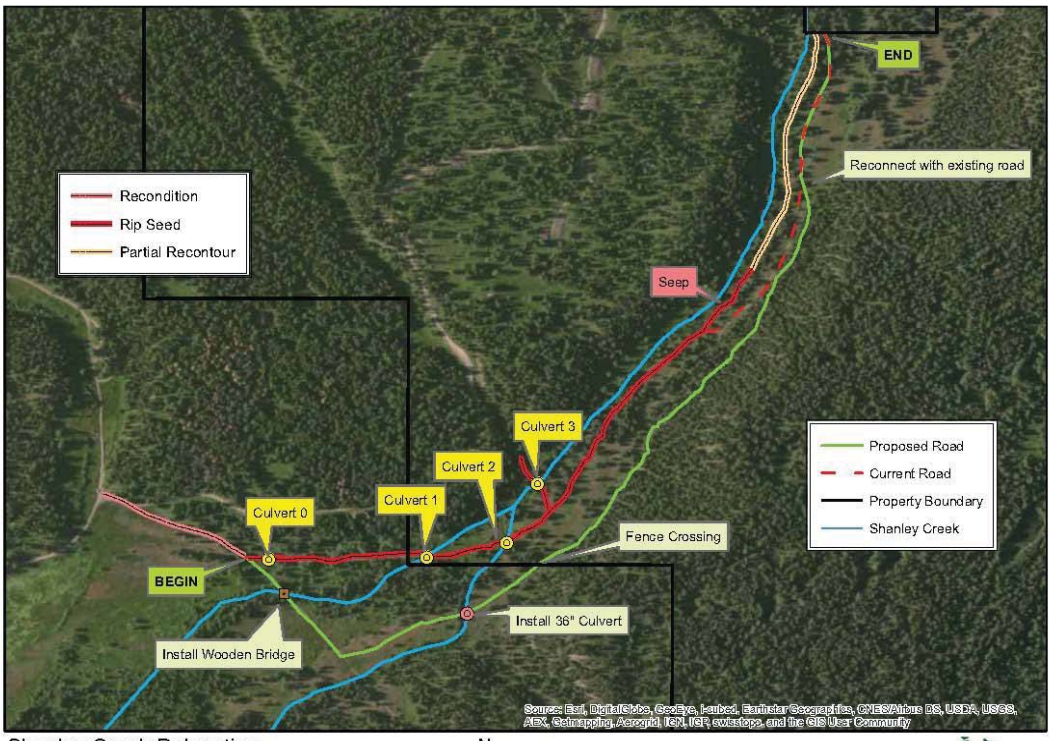
Public comment will be accepted through 5:00 PM on February 16, 2015.

6. Person(s) responsible for preparing the EA.

Michelle McGree, Program Officer
Montana Fish, Wildlife & Parks
1420 East 6th Avenue
PO Box 200701
Helena, MT 59620
Telephone: (406) 444-2432
E-mail: mmcgree@mt.gov

ATTACHMENT 1




Shanley Creek Relocation
N1/2, Section 3, T15N, R13W to
SE1/4, Section 4, TN, R13W

Proposed Road = 1.42 miles

N

0 0.05 0.1 0.2 0.3 0.4 Miles

1 inch = 719 feet

ATTACHMENT 2

Photos 1-2: Existing road and lower culvert to be removed

Photos 3-4: Upper culvert to be removed and unimproved ford proposed to be upgraded with a bridge