

September 22, 2006
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
 Fisheries Division
 Endangered Species Coordinator
 Native Species Coordinator, Fisheries
 Bozeman Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Montana Wildlife Federation
Beaverhead Conservation District, 420 Barrett Street, Dillon, MT 59725
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
U.S. Fish and Wildlife Service, 420 Barrett Street, Dillon, MT 59725
State Historic Preservation Office, Helena
Big Hole Watershed Committee, P.O. Box 931, Butte, MT 59703
Montana Trout Unlimited, P.O. Box 7186, Missoula, MT 59807
Dick Hirschy Cattle Company, P.O. Box 50, Jackson, MT 59736

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding to a project calling for enhancing the riparian vegetative community along a one mile reach of the Big Hole River and stabilizing approximately 500 feet of eroding stream banks within this one mile reach. The intent of the project is to enhance overall aquatic and riparian habitat for the benefit of fluvial Arctic grayling and other species of fish. The proposed project is located approximately 2.5 miles north of the community of Jackson in Beaverhead County.

Please submit any comments that you have by 5:00 P.M., October 22, 2006 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Funding for this project through the Future Fisheries Improvement Program is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
e-mail: mlere@mt.gov

ENVIRONMENTAL ASSESSMENT

Fisheries Division

Montana Fish, Wildlife and Parks

Big Hole River Aquatic and Riparian Habitat Enhancement Project – Little Lake Reach

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 that directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal.

The Future Fisheries Improvement Program is proposing to provide partial funding for a project calling for enhancing the riparian vegetative community within a one-mile reach of the Big Hole River and stabilizing approximately 500 feet of actively eroding stream banks within this one-mile reach. The proposed project calls for installing wildlife friendly riparian fencing on both sides of the stream reach, transplanting locally borrowed willow clumps and sprigging willow cuttings within a 20-foot band on both sides of the stream, and stabilizing three actively eroding stream banks using bioengineering techniques. The intent of the project is to enhance habitat for fluvial Arctic grayling and other native and sport fish species within this reach of the Big Hole River. The project site is located on property owned by the Hirschy Cattle Company approximately 2.5 miles north of the community of Jackson in Beaverhead County (Attachment 1).

- I. Location of Project: This project will be conducted on the Big Hole River, located approximately 2.5 miles north of the community of Jackson within Township 5 South, Range 15 West, Section 10 in Beaverhead County.
- II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year plan of operation for the fisheries program is to “restore and enhance degraded habitat” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help achieve this goal.

The upper Big Hole River Basin, with the exception of a few attempts at re-founding fluvial grayling in several southwestern Montana waters, supports the last river dwelling Arctic grayling in the lower 48 states. These fish are classified as a “species of special concern” in Montana because of their low numbers and shrinking distribution.

Sparse willow vegetation, poor pool development, eroding stream banks and the loss of multiple threaded channels characterize the one-mile reach on the Big Hole River that is proposed for restoration. The existing degraded conditions primarily are due to historic overgrazing within the riparian corridor, the active removal of willows and the intentional blocking of side channels with earthen berms. The degraded channel and riparian conditions currently are providing marginal habitat for fluvial Arctic grayling and other species of fish.

- III. Scope of the Project:

This project calls for fencing the riparian corridor with 3 to 5 strands of barbed wire designed to allow for wildlife passage. The bottom wire would be no less than 16 inches from the ground and the top wire would be no more than 44 inches from the ground. Woody vegetation will be installed within a 20- foot

corridor along each bank of the river. This vegetation will include willow clump transplants and willow stems placed into pre-drilled holes. The willow transplants will be limited to outside meanders and will be installed in two rows to create a staggered pattern on 10-foot spacing. The row placed closest to the river will be installed in a manner so that stems overhang the water, providing overhead cover for resident fish species. Willow stems will be installed in pre-drilled holes perpendicular to the river channel, with each row having 7 planting holes spaced on three-foot centers. The pre-drilled holes will be deep enough to intercept the summer groundwater table. Willow stems will be harvested carefully to allow the donor plants to regenerate in a healthy manner.

Three eroding stream banks, as pilot sites, will be stabilized using bioengineering treatments (Attachment 2). The treatment will consist of grading the eroding bank to a 3:1 slope, installing cobble at the toe of the sloped bank and transplanting sod mats and large willow clumps on the treated bank. The toe of each treated bank will be stabilized by excavating a trench 3.5 feet into the riverbed and then installing a blanket of rounded cobble, extending approximately 6 inches above the normal water surface. The thickness of the cobble blanket will be 2 feet and the cobble will be a graded mixture of diameter sizes between the 85th and 100th percentile based on pebble counts taken on the natural bed of the river. Cobble diameters are expected to range between 3 and 10 inches, with the intent that these sizes will be immobile up to bank full discharge.

The project is expected to cost \$111,826.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$70,514.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Enhancing both channel stability and the riparian vegetative community on this reach of the upper Big Hole River is expected to benefit fluvial Arctic grayling, as well as other species of fish. Riparian fencing will help insure long-term recovery. Habitat for riparian dependent wildlife also would be improved by controlling livestock grazing within the riparian corridor and by planting riparian shrubs.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and 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). A 124 permit (Stream Protection Act) will be obtained from Montana Fish, Wildlife and Parks and the U.S. Army Corp of Engineers will be contacted for requirements needed to meet the federal Clean Water Act (404 permit).

3. Geology and soil quality, stability and moisture.

Soils along the stream margin would be disturbed during bank stabilization efforts and during the installation of willow transplants and sprigs. Soils disturbed by construction will be re-seeded with native vegetation and re-graded banks will be stabilized with the placement of dense sod mats and transplanted willow clumps.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be disturbed during the period of construction. The tracked excavator will actively avoid disturbance of existing woody shrubs within the construction site. Re-seeding, transferring sod mats and transplanting native willow clumps would mitigate any disturbance of vegetation that occurred during construction. Installation of fencing along the riparian corridor would act to protect the riparian vegetative community from over-grazing by livestock over the long-term.

5. Aesthetics.

Aesthetics would be negatively affected during project construction because of ground disturbance and the presence of heavy equipment. These negative effects would be relatively short term since the project is expected to be completed over an approximately one-month period.

6. Unique, endangered, fragile, or limited environmental resources.

Fluvial Arctic grayling are native to Montana and are classified as a “species of special concern” because of their declining numbers and shrinking distribution. The enhancement and long-term protection of the riparian corridor would improve channel stability and lead to a more complex aquatic environment over the long-term. A more complex aquatic environment is expected to enhance grayling and other species of fish residing in the Big Hole River.

7. Historic and archaeological sites

The proposed project likely will require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office will be contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

1. Agricultural or industrial production.

Fencing the riparian corridor to protect the vegetative community is expected to temporarily remove approximately 15 acres from livestock grazing. Following approximately 5 years of complete rest, this riparian pasture would be managed with short-term, high intensity grazing under a grazing management plan.

2. Access to & quality of recreational activities.

This proposed project is expected to enhance populations of fish residing in the upper Big Hole River and, as a result, the associated recreational fishery.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this reach of the upper Big Hole River will remain degraded. The carrying capacity for fluvial Arctic grayling and other species of fish will remain below potential and the riparian vegetative community will continue to be overgrazed by livestock.

2. Riparian Protection Alternative

Under this alternative, the stream corridor would be protected from livestock grazing by installing riparian fencing. Unstable stream banks would be allowed to continue to erode until such time they reached a stable angle of repose and re-vegetation occurred naturally. The time period required for recovery for this alternative is unknown, but certainly would be significantly longer than for the preferred alternative. Additionally, the lack of pilot bank stabilization efforts would eliminate the opportunity to evaluate techniques that, if proven successful, potentially could be used in future restoration work.

3. The Proposed Alternative

The proposed alternative is designed to enhance overall aquatic and riparian habitat within a one-mile reach of the upper Big Hole River. Fluvial Arctic grayling, as well as other species of fish residing in the river, would benefit by protecting the riparian corridor with fencing and by stabilizing a series of eroding stream banks. The bank stabilization work would be used as a pilot project to help determine potential enhancement activities that could be successfully used in future years. Enhancing streamside vegetation also would benefit riparian dependent wildlife.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and funding will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on

the cover letter. The EA also will be published on Montana Fish, Wildlife and Parks web page: fwp.mt.gov.

3. Duration of comment period?

Public comment will be accepted through 5 PM on October 22, 2006.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
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Fisheries Division
Montana Department of Fish, Wildlife and Parks
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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
 1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
 (406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Big Hole River Aquatic and Riparian Habitat Enhancement Project - Little Lake Creek Reach

Division/Bureau Fisheries Division-Future Fisheries Improvement
 Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding to a project calling for enhancing the riparian vegetative community within a one-mile reach of the upper Big Hole River and stabilizing approximately 500 feet of actively eroding stream bank within this one-mile reach. The work would involve installing wildlife friendly riparian fencing, transplanting willow clumps and installing willow stems within the riparian corridor and stabilizing three actively eroding stream banks using bioengineering techniques. The intent of the project is to enhance habitat for fluvial Arctic grayling and other species of fish. The project site is located approximately 2.5 miles north of the community of Jackson in Beaverhead County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites					X	X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Beaverhead Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA Peter Lamothe, Montana
Fish, Wildlife and Parks; Confluence Consulting, Inc.

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: September 11, 2006