



## **Montana Fish, Wildlife & Parks**

January 29, 2010  
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 Bureau  
Endangered Species Coordinator  
Native Species Coordinator, Fisheries  
Bozeman Office

Montana State Library, Helena  
Montana Department of Natural Resources and Conservation  
MT Environmental Information Center  
Montana Audubon Council  
Montana Wildlife Federation  
Wayne Hadley, 1016 Eastside road, Deer Lodge, MT 59722  
Montana River Action Network, 304 N 18<sup>th</sup> Ave., Bozeman, MT 59715  
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  
Martin Jackson, General Delivery, 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 the development of a new stockwater well that would eliminate the need to leave a large diversion from the Big Hole River on after the irrigation season. The diversion season typically ends in early July. The intent of the project is to eliminate a late-season open ditch stock-water diversion on the Lapham Ditch to increase flows in the main stem Big Hole River for the benefit of fluvial Arctic grayling and other species of fish. The project site is located approximately 4.5 miles south of the community of Jackson in Beaverhead County.

Please submit any comments that you have by March 3, 2010 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](mailto:mlere@mt.gov)

ENVIRONMENTAL ASSESSMENT  
Fisheries Division  
Montana Fish, Wildlife and Parks  
Upper Big Hole River Stock Water Well

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 the development of a new stockwater well and a 4-tank livestock water system to replace the need to leave the Lapham ditch open after the end of the irrigation season for livestock watering purposes. The intent of the project would be to enhance the fluvial Arctic grayling population and other sport fish species by enhancing late season in-stream flows in this portion of the upper Big Hole River.

I. Location of Project: This project will be conducted in the valley bottom of the upper Big Hole River located approximately 4.5 miles south of the community of Jackson within Township 6 South; Range 15 West; Sections 15 and 22 in Beaverhead County (Attachment 1).

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.

Currently, some open ditches continue to divert water out of the upper Big Hole River after the end of the irrigation season to provide for stock water. These water diversions occur at a time when in-stream flows are critically low and stream temperatures are high, conditions that contribute to fishing closures and stressful conditions for many of the fish species residing in the upper Big Hole drainage, including fluvial Arctic grayling. Developing an off channel stockwater site to allow for the closure of the Lapham Ditch would help improve late season in-stream flow and reduce thermal loading in the upper Big Hole River.

III. Scope of the Project:

This project calls for installing a well, a solar pump and a 4-tank stockwater system on the Martin Jackson Ranch to replace stockwater that would become unavailable due to the closure of the Lapham ditch at the end of the irrigation season. The solar pump would have an approximate capacity of 11 gallons per minute. Mr. Jackson has an irrigation water right on the Lapham ditch

totaling 21.67 cubic feet per second (cfs) for a period of use from April 20 through September 20. The irrigation season for this area typically ends sometime in early July and Lapham ditch flows have been monitored over more than a 6-year period. Flows from late July through October have ranged from 1.5 cfs to more than 8 cfs, representing between 6 and 35% of the flow in the river during corresponding time frames. Closure of the Lapham ditch after the irrigation season would significantly contribute to late season flows in this reach of the upper Big Hole River. Volumetrically, late season in-stream flows could increase by as much as 700-acre feet. This proposed project would be part of a larger effort associated the Candidate Conservation Agreement with Assurances (CCAA) for fluvial Arctic grayling in the Big Hole River drainage. The project is expected to cost \$35,000.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$15,000.00. The remaining funds would be from cash contributions coming from other sources.

#### IV. Environmental Impact Checklist:

Please see attached checklist.

#### V. Explanation of Impacts to the Physical Environment

##### 1. Terrestrial and aquatic life and habitats.

Enhancing late season in-stream flow on a portion of the upper Big Hole River is expected to benefit fluvial Arctic grayling, as well as other species of fish. Water diversions from the upper Big Hole drainage at a time when in-stream flows are critically low and stream temperatures are high can contribute to fishing closures and stressful conditions for many of the fish species.

##### 2. Water quantity, quality and distribution.

The project is expected to enhance in-stream flow and reduce water temperatures in the upper Big Hole drainage. Development of this stock-water system would not require a water use permit because the system will not use more than 35 gallons per minute or 10 acre-feet of ground water per year.

##### 4. Vegetation cover, quantity and quality.

Riparian vegetation and cover may benefit from enhanced in-stream flow during late summer when stream flow is commonly critically low. Less than 0.5 acres would be disturbed as a result of the well development and placement of the water tanks.

##### 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 would be completed over a one to two week period.

7. 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. Improvement of late season in-stream flow on a reach of the upper Big Hole River is expected to enhance aquatic habitat conditions and enhance grayling and other species of fish residing in the Big Hole River. This proposed project is part of a larger watershed-wide effort, under the CCAA, to improve habitat for fluvial Arctic grayling, a candidate species under the Endangered Species Act.

8. Demands on environmental resources of land, water, air and energy.

Converting to the use of groundwater wells during the late summer season will result in the need for electrical energy to run the pump. The pump will be powered with a solar panel.

9. Historic and archaeological sites

This proposed project is contained entirely on private property and therefore is not covered under the State Antiquities Act. However, the project is receiving federal funds from the U.S. Fish and Wildlife Service (USFWS) and, as a result, the USFWS reviewed the proposed project for potential cultural resource issues. The USFWS archeologist has concluded that there is low potential for this project to disturb cultural resources and no field review would be required.

## VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

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

12. Demands for energy.

The well pump will be powered with a solar panel.

13. Locally adopted environmental plans and goals.

This proposed project is part of the CCAA that has been adopted for fluvial Arctic grayling in the Big Hole drainage.

## VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, late season flows in a portion of the upper Big Hole River will

continue to be depleted to provide for stock water at a time when in-stream flows are critically low and stream temperatures are high. Depleted flows will continue to contribute to fishing closures and create stressful conditions for many fish species, including fluvial Arctic grayling. Additionally, these lower stream flows will contribute toward poorer health of the riparian community.

2. The Proposed Alternative

The proposed alternative is designed to supplement late summer in-stream flow within a portion of the upper Big Hole River and, at the same time, provide for needed livestock water by installing a well and stock tank water distribution system. The stock water system would replace the need to continue diverting river flow into the Lapham Ditch after the end of the irrigation season to provide stock water. Fluvial Arctic grayling, as well as other species of fish residing in the river, would benefit by enhanced late-season in-stream flows due to improved habitat conditions and overall lower water temperatures. Streamside vegetation also would benefit from these enhanced in-stream flows.

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](http://fwp.mt.gov).

3. Duration of comment period?

Public comment will be accepted through 5 PM on March 3, 2010.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer  
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Fisheries Bureau  
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 Upper Big Hole River Stock Water well

Division/Bureau Fisheries Bureau-Future Fisheries Improvement

Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding to a project calling for the development of a new stock water well and a 4-tank distribution system to replace the need to leave the Lapham ditch open after the end of the irrigation season for stock watering purposes. The intent of the project would be to enhance fluvial Arctic grayling and other sport fish species by enhancing late season in-stream flows in a portion of the upper Big Hole River. The project site is located adjacent to the Big Hole River approximately 4.5 miles 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		
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		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		
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		X
13. Locally adopted environmental plans & goals			X			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, Montana Department of Natural Resources and Conservation, State Historic Preservation Office

Individuals or groups contributing to this EA Jeff Everett, USFWS.

Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: January 19, 2010

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