

March 18, 2005
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
Ruby Valley Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
U.S. Fish and Wildlife Service, 420 Barrett St., Dillon, MT 59725
State Historic Preservation Office, Helena
Lewis and Clark Chapter Trout Unlimited, P.O. Box 475, Twin Bridges, MT 59754
Ruby Watershed Council, P.O. Box 295, Sheridan, MT 59749
Turner Enterprises, Inc., 1123 Research Road, Bozeman, MT 59718

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding toward a stream channel restoration project located on an altered reach of Willow Creek, a tributary to the Ruby River. This proposed project is located on the Snowcrest Ranch approximately 18 miles south of the community of Alder in Madison County.

Please submit any comments that you have by 5:00 P.M., April 18, 2005 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 Willow Creek Channel Restoration Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which 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 restoration of a 1,330-foot channelized reach of Willow Creek, a tributary to the Ruby River. The straightened, incised channel would be restored to a proper dimension, pattern and profile by constructing a new, meandering 6,350-foot channel that has access to the historic floodplain. The intent of this project is to improve over-all aquatic habitat in lower Willow Creek and enhance recruitment of sport and non-game species of fish, including fluvial arctic grayling, to the Ruby River. The project site is located approximately eighteen miles south of the community of Alder in Madison County (Attachment 1).

I. Location of Project: This project will be conducted on Willow Creek, a tributary to the Ruby River, located approximately eighteen miles south of the community of Alder within Township 9 South, Range 4 West, Sections 1 and 2 in Madison County. The project site is located on property owned by Turner Enterprises, Inc.

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.

Presently, the upper Big Hole basin supports the last remaining self-sustaining river dwelling grayling population currently found in Montana. In an effort to help secure this remnant population, the upper Ruby River drainage has been prioritized as a site for attempting to re-found fluvial arctic grayling in waters other than the Big Hole. Recent grayling restoration efforts in the upper Ruby River have been encouraging, with grayling incubated in 2003 surviving over-winter to yearlings in 2004.

The lower reach of Willow Creek, a tributary to the upper Ruby River, was straightened and shortened in the 1960's for agricultural purposes, creating an unstable and incised channel with poor fish habitat. Additionally, past grazing practices and an on-channel stockyard have contributed to a chronic sediment delivery problem to the Ruby River. Restoring healthy aquatic habitat in lower Willow Creek would help support the re-founding of fluvial arctic grayling in the upper Ruby River drainage, as well as enhancing other native and sport fish species.

III. Scope of the Project:

The project proposes to restore a 1,330-foot channelized reach of lower Willow Creek by returning the stream to its approximate original location (Attachment 2). The new meandering channel would be

lengthened approximately five-fold (6,350 feet) and would be constructed with an appropriate dimension, pattern and profile to match a Rosgen E-type channel. Construction will require heavy excavation to create an appropriate channel dimension and profile throughout the restored reach of stream. The newly constructed channel is designed to provide access to a substantial floodplain. The restored stream reach would be fenced with high tensile wire designed to contain bison in a manner that would include a livestock crossing, providing the management flexibility to create two grazing pastures. Additionally, the ranch plans to modify irrigation practices to insure adequate flow for fish and aquatic invertebrates. The ranch owners removed the existing on-channel stockyard and a culvert that acted as a migration barrier in 2004. This project is expected to cost \$109,996.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$25,000.00 to complete the project. A professional stream restoration consultant would provide design and oversight for this project.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Returning the existing straightened channel to a proper dimension, pattern and profile is expected to create healthier habitat for aquatic life by lengthening the channel and by creating much greater environmental complexity. Expected improvements in the aquatic habitat should enhance fisheries recruitment to the Ruby River, as well as resident populations in the stream – including newly introduced fluvial arctic grayling. Habitat for riparian dependent wildlife also would be improved by enhancing the riparian vegetative community by protecting the corridor with fencing to exclude livestock.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction of the new channel will occur “in the dry” and construction of the restored stream reach would be completed before water is turned in from the existing active channel. Operation of equipment in the active stream channel would 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 310 permit will be obtained from the local Conservation District and the U.S. Army Corp of Engineers will be contacted for requirements needed to meet the federal Clean Water Act (404 permit). In the long term, restoring the existing channel would reduce sediment and nutrient contributions to downstream areas, thereby improving the overall quality of downstream waters.

3. Geology and soil quality, stability and moisture.

Soils along the stream margin would be disturbed during construction of the new channel, but would be stabilized with re-vegetation efforts. Overall, the project is expected to reduce bank

erosion and improve channel stability by returning the stream to a natural dimension, pattern and profile and by providing access to the floodplain.

4. Vegetation cover, quantity and quality.

Riparian vegetation would be disturbed during the period of construction. However, proposed re-vegetation efforts, in conjunction with implementing a livestock grazing enclosure, would result in a significant overall improvement to the riparian vegetative community.

5. Aesthetics.

During the period of construction, estimated to be about 25 working days in length, aesthetics would be adversely impacted due to on-site construction activities, including ground disturbance and the presence of heavy equipment. In the long term, aesthetics would be enhanced by restoring a straightened reach of Willow Creek to a healthier and more natural stream environment. Additionally, the riparian vegetative community would be enhanced by fencing the riparian corridor to exclude livestock.

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

The upper Ruby River drainage has been utilized as a site for re-founding a fluvial arctic grayling population. Fluvial arctic grayling have been designated as a species of special concern in Montana due to their diminishing numbers and limited distribution. The proposed restoration project on lower Willow Creek is designed to assist in the recovery of fluvial arctic grayling in the upper Ruby River drainage by significantly enhancing spawning and recruitment habitat.

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 will improve the flexibility for grazing management by creating two separate pastures.

2. Access to & quality of recreational activities.

Although lower Willow Creek is located on private land that is closed public access, the proposed project is expected increase recruitment of fish into the Ruby River thereby providing enhanced opportunities for anglers fishing the river

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, the lower reach of Willow Creek will remain straightened and entrenched, resulting in continued bank erosion, accelerated sediment delivery to the Ruby River and simplified aquatic habitat. This reach of altered stream will continue to provide only minimal recruitment of fish to the Ruby River and likely will not be used to any extent by fluvial arctic grayling. Additionally, habitat for riparian dependent wildlife will remain in a degraded condition. Recreational opportunities associated with fish and wildlife resources will remain reduced and aesthetics will continue to be impaired.

2. Conduct habitat restoration within the existing channelized stream reach

This alternative would not resolve the entrenched nature of the existing channel nor would the alternative create additional stream length. Restoration efforts commonly fail when attempted in an entrenched channel due to the inability of the stream to access its floodplain. Confined flows in an entrenched channel commonly create excessive shear stresses that wash out installed habitat structures. Overall, entrenched channels tend to be unstable.

3. The Proposed Alternative

The proposed alternative is designed to restore a straightened reach of lower Willow Creek into a 6,350-foot meandering reach that would provide for more diverse aquatic habitat and a more functional channel and floodplain. This alternative would lengthen the existing channel and is expected to greatly improve the diversity of aquatic habitat in the stream. The intent of the project is to improve spawning and rearing habitat for resident and migratory fish, especially fluvial arctic grayling. The proposed alternative also would improve the vegetation within the riparian corridor. This alternative would improve fish and wildlife habitat, aesthetics and water quality within the project area and would be expected to increase fish populations both in the creek and in the Ruby River.

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 Ruby Watershed Council also strongly supports the project. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter.

The EA will be published on Montana Fish, Wildlife and Park's web page.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on April 18, 2005.

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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Helena, MT 59620
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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 Willow Creek Channel Restoration Project

Division/Bureau Fisheries Division -Future Fisheries Improvement
 Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding for a project calling for the restoration of a straightened reach of lower Willow Creek, a tributary to the Ruby River, by returning the altered reach back to its original location. The new meandering channel would be lengthened nearly five-fold in comparison to the existing straightened reach. The intent is to restore proper channel function and improve aquatic habitat, thereby enhancing recruitment of fish to the Ruby River, especially fluvial arctic grayling. The project site is located on the Snowcrest Ranch approximately 18 miles south of the community of Alder in Madison 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 Ruby Valley 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 Jim Magee, Montana Fish, Wildlife and Parks; Piedmont Engineering, Inc.
 Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere
Date: March 18, 2005
