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
Great Falls Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Wayne Hadley, 1016 Eastside Road, Deer Lodge, MT 59722
Montana River Action, 304 N 18th Ave., Bozeman, MT 59715
Cascade County Conservation District, 12 3rd Street NW, Upper Level, Great Falls, MT 59404
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Leland Wilson, 29 Rocky Reef Road, Fort Shaw, MT 59443
Missouri River Flyfishers, P.O. Box 1885, Great Falls, MT 59403
Pat Barnes Missouri River Chapter TU, P.O. Box 275, Helena, MT 59604
Ducks Unlimited, P.O. Box 183, Elliston, MT 59728

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment (EA) prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding to a stream restoration project on Rocky Reef Spring Creek (formally unnamed), a tributary to the Sun River located near the community of Fort Shaw. The intent of the project is to enhance spawning, rearing and adult habitat for salmonids in this spring creek and increase recruitment of fish to the Sun River. This proposed project is located on property owned by Leland Wilson approximately 1 mile north of the community of Fort Shaw in Cascade County.

Please submit any comments that you have by 5:00 P.M., March 3, 2010 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project 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 Section
Fisheries Bureau
e-mail: mlere@mt.gov

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Rocky Reef Spring Creek Channel Restoration Project

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 providing funding for 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 to a project calling for the restoration of approximately 3.9 miles of Rocky Reef Spring Creek (formally unnamed), a tributary to the Sun River. Restoration would involve increasing channel sinuosity, narrowing and deepening over-widened portions of the channel, creating riffle-pool habitat, transplanting sods on newly constructed stream banks and replacing a series of undersized culverts with larger sized pipes. A vegetative buffer of a minimum of 50 feet would be established on each side of the newly restored channel. The intent of the project is to enhance fish habitat in this spring creek and provide for additional recruitment of fish to the Sun River. The project site is located approximately one mile north of the community of Fort Shaw in Cascade County (Attachment 1).

I. Location of Project: This project will be conducted on Rocky Reef Spring Creek (formally unnamed), a tributary to Sun River, located approximately one mile north of the community of Fort Shaw within Township 20 North, Range 2 West, Section 3 and Township 21 North, Range 2 West, Sections 34, 35 and 36 in Cascade County.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year operations plan for the fisheries program is to "restore and enhance degraded fisheries habitats" by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on private and public lands. This proposed project would help meet this goal.

Rocky Reef Spring Creek emerges approximately ¼ mile east of the Rocky Reef geologic dike on the north side of the Sun River and flows approximately 3.9 miles to its confluence with the river. Stream flow gradually increases throughout its length and ultimately discharges approximately 12 to 13 cubic feet per second into the Sun River. Although there are a few anecdotal reports of limited spawning activity in the spring creek, only a few trout currently reside in the stream. Agricultural practices in the past century have severely degraded the aquatic and riparian habitat of the stream, including channelization, livestock overgrazing, inadequate road crossings, dewatering and sedimentation from irrigation return flows. A majority of the upper 2.2 miles of the stream were dredged for use as an irrigation delivery system in the past. Currently, fine sediment covers most of the underlying stream gravel, with few areas remaining narrow enough to maintain cleansing flow velocities. Several existing road crossing currently act as barriers to upstream migrating fish. No riparian shrubs are found on the banks of the existing channel. This proposed project intends to create hydraulic conditions that

would provide for the transport of fine sediment, improve habitat conditions to enhance the fisheries, remove all the migration barriers and improve wetland habitat adjacent to the spring creek.

III. Scope of the Project:

This proposed project calls for restoring the spring creek to a viable and proper functioning stream channel with migratory connectivity from its initial upwelling to its confluence with the Sun River (Attachment 2). Sinuosity would be added where gradient conditions allow, achieving greater stream length and diversity. In reaches where gradients are too flat, the stream would be shortened somewhat to return it to its historic channel and enhance fine sediment routing. Overall, total stream length would be increased from 3.9 miles to approximately 4.5 miles. Over-widened and shallow portions of the channel would be narrowed and deepened to create conditions where riffles could maintain gravel substrates (Attachment 3). Pool habitat would be enhanced by excavating lateral scour pools from 2 to 3 feet deep in the upper stream reaches and up to 5 feet deep in the lower reaches. Design widths and depths for the channel would gradually increase as the stream progresses down valley based on increasing discharge. Reaches where the old channel becomes abandoned would remain as off-channel ponds to enhance habitat for waterfowl. Sod transplants and willow clumps would be planted to create stable banks immediately following channel construction. All disturbed areas not covered by sod transplants would be seeded with a native grass mixture and planted with native shrubs. Plant survival would be enhanced using an existing pivot irrigation system to water newly planted vegetation. A vegetative buffer of at least 50 feet would be established to protect the riparian corridor. Four undersized culverts would be replaced with larger, properly sized pipes and a fifth undersized culvert would be replaced with a bridge. Recent changes in land use activities surrounding this spring creek include the removal of all livestock from the farm and the conversion of all irrigation to pivot sprinklers that now use water diverted from the Sun River. No water is being, or will be diverted from the spring creek. This project is expected to cost $445,206.00. Of this total, the Future Fisheries Improvement Program would be contributing up to $70,530.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Improving overall aquatic habitat conditions within this spring creek and restoring migratory connectivity with the Sun River is expected to enhance the resident fisheries, including rainbow trout and brown trout. Additionally, restoration of the stream is expected to enhance recruitment of fish to the Sun River. Habitat for riparian dependent wildlife also would be improved by enhancing the riparian vegetative community along the stream margin.

2. Water quantity, quality and distribution.

Presently, this spring creek displays elevated water temperatures and excessive fine sediment accumulations due to the over-widened and shallow nature of the channel and to the lack of woody riparian vegetation. The proposed restoration project is expected to reduce water temperatures and increase the sediment transport capability of the channel. Short-term increases in turbidity will occur during project construction. To minimize turbidity, the operation of equipment in the active stream channel will be minimized to the extent practicable. Work would be conducted in the dry on reaches where new channel construction is proposed. 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 (Natural Streambed and Land Preservation Act) will be obtained from the local conservation district and the U.S. Army Corp of Engineers will be contacted to determine the need to meet 404 provisions of the Clean Water Act.

3. Geology and soil quality, stability and moisture.

Soils along the stream margin and in areas of new channel construction would be disturbed during restoration activities, but would be stabilized following proposed sod transplanting and re-vegetation efforts. Re-vegetation efforts would involve placement of salvaged sod and seeding with native sedges and grasses, as well as planting native riparian shrubs. Soils would be further stabilized with the establishment of a 50-foot vegetative buffer along both sides of the stream.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be disturbed during the period of construction. However, proposed re-vegetation efforts, in conjunction with a riparian vegetative buffer, would result in an overall improvement to the riparian vegetative community.

5. Aesthetics.

In the short term, aesthetics would be adversely impacted due to ground disturbance and the presence of heavy construction equipment. In the long term, returning this degraded spring creek back to a more natural configuration would enhance aesthetics. In addition, the riparian vegetative community would be enhanced by riparian plantings and by the establishment of a vegetative buffer within the streamside corridor.

9. Historic and archaeological sites

The proposed project may 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.

7. Access to & quality of recreational activities.

Presently, this spring creek contributes no appreciable recruitment of salmonids to Sun River. The proposed project is expected to increase recruitment to downstream waters and enhance the recreational fisheries found there.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this spring creek will remain degraded and the fisheries potential for the stream, as well as for recruitment to the Sun River, will remain below potential. The riparian habitat also will remain degraded. Recreational opportunities associated with fish and wildlife resources will remain reduced and aesthetics will continue to be impaired.

2. The Proposed Alternative

The proposed alternative is designed to restore approximately 3.9 miles of degraded channel on a spring creek tributary to the Sun River. The project would improve overall aquatic habitat for salmonids and improve the vegetative community within the riparian corridor. This alternative is expected to improve fish and wildlife habitat and aesthetics within the project area and would enhance recruitment of fish to downstream waters.

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 webpage: fwp.mt.gov.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on March 3, 2010.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Section
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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 Rocky Reef Spring Creek Channel Restoration Project

Division/Bureau Fisheries Bureau -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 approximately 3.9 miles of Rocky Reef Spring Creek (formally unnamed), a tributary to the Sun River. The intent of the project is to enhance fish habitat in the spring creek and provide for additional recruitment of juvenile fish to Sun River. The project site is located approximately one mile north of the community of Fort Shaw in Cascade 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		
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		
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 Cascade County 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 Allen McNeal, McNeal Resources, George Liknes, MFWP
Recommendation concerning preparation of EIS No EIS required.
EA prepared by: Mark Lere
Date: January 20, 2009