

March 15, 2004

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
 Water Resources Program Manager
 Great Falls Office
Montana Department of Natural Resources and Conservation
MT Environmental Information Center
Montana Audubon Council
State Historic Preservation Office
Lewis and Clark County Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
Montana State Library, Helena
Pat Barnes Chapter, Trout Unlimited, 62 Last Chance Gulch, Helena, MT 59601
Zachary and Patricia Wirth, 2020 Sieben Canyon Road, Wolf Creek, MT 59648
Donald and Nancy Johnston, 2450 Sieben Canyon Road, Wolf Creek, MT 59648
Sieben Ranch, 1600 Sieben Canyon Road, Wolf Creek, MT 59648
Christian and Nora Hohenlohe, Ox Bow Ranch, P.O. Box 215, Wolf Creek, MT 59648
Josephine Lahti, 1350 Craig Frontage Road, Wolf Creek, MT 59648
Robert Wirth, P.O. Box 225, 1000 MT Highway 434, Wolf Creek, MT 59648

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 that would create salvaged water for the purpose of in-stream flow by converting an inefficient irrigation system to a more efficient sprinkler system in a reach of Little Prickly Pear and Big Sheep creeks located upstream of Wolf Creek Canyon. The intent of the project is to enhance fish and wildlife habitat on the two streams to improve recruitment of trout to both the streams and to the Missouri River.

Please submit any comments that you have by 5:00 P.M., April 15, 2004 to Montana Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this proposed project is contingent upon approval of a "Change" application by the Montana Department of Natural Resources and Conservation. The project also is contingent upon Fish, Wildlife and Parks Commission approval of

funding through the Future Fisheries Improvement Program. If you have any questions, feel free to contact me at (406) 444-2432.

Sincerely,

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

ENVIRONMENTAL ASSESSMENT

Fisheries Division

Montana Fish, Wildlife and Parks

Upper Little Prickly Pear Creek Irrigation Conversion and In-stream Flow 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 physical projects to restore degraded fish habitat in rivers and lakes for the purposes of improving wild fisheries. The legislature established a funding account to help accomplish this goal.

Montana's Water Use Act encourages "the water resources of the state...be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life" (85-1-101(5), MCA).

This project is being proposed to undertake a water conservation project with Zachary and Patricia Wirth and with Donald and Nancy Johnston on Little Prickly Pear and Big Sheep creeks. Big Sheep Creek is a tributary to Little Prickly Pear Creek that enters from the west. The Future Fisheries Improvement Program is proposing to provide partial funding to a project that would create "salvaged" water for the purpose of in-stream flow by converting an inefficient flood irrigation system to a more efficient sprinkler system in a reach of Little Prickly Pear and Big Sheep creeks located upstream of Wolf Creek Canyon. "Salvaged" water is defined as that portion of water made available for other use through the implementation of water savings methods.

I. Location of Project: This project will be conducted on Little Prickly Pear and Big Sheep creeks on properties owned by Zachary and Patricia Wirth and by Donald and Nancy Johnston located approximately 3 miles west of the Sieben Interchange on Interstate Highway 15 within Township 13 North, Range 5 West, Sections 24 and 25 and Township 13 North, Range 4 West, Sections 19 and 20 in Lewis and Clark County (see Attachment 1).

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks (MFWP) six-year operations plan for the fisheries program is to "restore and enhance degraded habitats" 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.

Little Prickly Pear Creek is an important tributary to the very popular Missouri River fishery, providing a recruitment source for brown trout and rainbow trout. Upstream of Wolf Creek Canyon, where this proposed project is located, Little Prickly Pear Creek becomes somewhat less important for the recruitment of river fish but continues to provide for a resident fishery. However, stream flow in Little Prickly Pear Creek has been diminished by irrigation diversions during the growing season, resulting in increased water temperatures and degraded aquatic habitat. Fish populations within this reach of stream historically have been limited by dewatering during the irrigation season. Also, the seven existing diversion headings located within the project reach act as sources of entrainment for fish and the channel configurations around these headings have been manipulated in the past to obtain adequate water into the ditches, leading to the loss of additional aquatic habitat.

III. Scope of the Project: The proposed project calls for converting an existing flood irrigation system servicing about 130 acres of hay land to a more efficient sprinkler system (Attachment 2). The proposed sprinkler system will consolidate seven points of diversion into two diesel powered pumping stations that will provide water to three traveling hard hose reels. Approximately 7 miles of ditch would be replaced with 1.9 miles of pipeline. The 130 acres of cropland are broken into 10 narrow irregularly shaped fields making standard pivot sprinkler systems impractical. The existing flood irrigation system utilizes approximately 13 cubic feet of water per second (cfs) while the proposed sprinkler system would utilize about 1.5 cfs, resulting in a water savings of up to 11.5 cfs. For the Future Fisheries contribution made toward the project, this salvaged water would be leased for in-stream flow to MFWP or would be converted to in-stream flow by the holders of the water rights for the maximum time allowed by law. Quantification of the actual water savings will be made by the Montana Department of Natural Resources and Conservation (DNRC) during the formal change of use process. The water savings created by this project are expected to benefit aquatic habitat within the lower 18 miles of Little Prickly Pear Creek. Although there are three or four points of diversion located downstream of the proposed project site, only one of these takes a significant quantity of water. Fortunately, this diversion also is undertaking a conversion from flood to sprinkler irrigation with the salvaged water being dedicated to in-stream flow. The relative priority dates for the Wirth water rights are 26th, 31st, and 61st of approximately 71 total water rights claimed. The relative priority dates for the Johnston water rights are 62nd and 68th in ranking. The water rights involved on Big Sheep Creek are the only claims made in the drainage. The estimated cost of this proposal is \$155,607.00. Of this total, MFWP would contribute up to \$26,454.00 through the Future Fisheries Improvement Program with the stipulation that all of the salvaged water created from the project be leased or converted to in-stream flow purposes for the maximum time allowed by law.

Although the parties have reached general agreement over this water salvage project, the conversion of the created salvaged water to in-stream flow purposes cannot be implemented until a “Change in Appropriation Water Rights” application is approved by DNRC. Any water user who feels they would be affected by this lease has an opportunity to object to the “Change” application. This project cannot be implemented until all objections have been resolved if, in fact, any objections are received.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment:

1. Terrestrial and aquatic life and habitats.

There will be no adverse impacts to fish or wildlife as a result of the proposed project. Implementation of this project would provide up to 11.5 cfs of additional flow in Little Prickly Pear Creek during the irrigation season. This additional flow is expected to benefit the lower 18 miles of the stream by enhancing aquatic habitat and reducing water temperature. The project also would consolidate the existing seven ditch headings to two pumping stations, greatly reducing the potential for entrainment of fish into the irrigation system. Converting to pumping stations also will result in the abandonment of five of the seven existing ditch headings, eliminating the need to physically manipulate the channel in order to obtain adequate water in these ditches.

2. Water quantity, quality and distribution.

No changes in drainage pattern or natural surface run-off would occur as a result of the proposed project. However, there would be an increase in the amount of in-stream flow found in the lower 18 miles of Little Prickly Pear Creek during the irrigation season.

Short-term increases in turbidity may occur during the installation of the two irrigation pumps and a pipeline crossing. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the active 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. 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).

3. Geology and soil quality, stability and moisture.

Soils will be disturbed by the installation of approximately 5,200 feet of 6-inch pipeline but would be stabilized by re-seeding. Conversion from flood to sprinkler irrigation would provide for a more even distribution of water onto the fields.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover, primarily grasses, will be disturbed by the installation of about 5,200 feet of buried pipeline. Areas disturbed by construction will be re-seeded.

5. Aesthetics.

Aesthetics would be negatively impacted during project construction due to ground disturbance and the presence of heavy equipment. In the long term, aesthetics would be enhanced by augmenting stream flow in Little Prickly Pear and Big Sheep creeks and by consolidating seven ditch headings into two pumping stations.

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

The ditch system presently used for flood irrigation requires no energy resources. Conversion to a sprinkler pivot system will require the use of two diesel-powered pumps, creating a greater demand for diesel fuel. Conversion to a sprinkler system is expected to result in a more efficient use of water.

7. Historic and archaeological sites

Because of the minimal ground disturbance associated with the proposed project in areas that have been previously leveled and cultivated, there is a very low likelihood that cultural properties could be impacted. Should cultural materials be inadvertently discovered during the project, the State Historic Preservation Office will be contacted and the site will be investigated.

VI. Explanation of Impacts on the Human Environment.

1. Agricultural or industrial production.

There are no anticipated adverse impacts to agricultural production as a result of the proposed project. The proposed conversion from flood to sprinkler irrigation will not significantly change the area of land under irrigation. Conversion to a sprinkler system will make more efficient use of water and is expected to provide for a higher yielding crop.

2. Access to & quality of recreational activities.

It is anticipated that augmenting in-stream flow in Little Prickly Pear and Big Sheep creeks would improve overall aquatic habitat and, as a result, would improve recruitment of trout to the streams and to the Missouri River.

3. Demands for energy.

Additional diesel fuel will be needed to run the pumps for the new sprinkler irrigation system.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, the landowner's will continue to flood irrigate their cropland. The use of flood irrigation will remain inefficient and crop yield will not be improved. Little Prickly Pear and Big Sheep creeks will continue to suffer from dewatering and higher water temperatures during the irrigation season. Additionally, fish will continue to be entrained into the ditch system and the recruitment of juvenile trout and other fish will remain suppressed.

2. The Proposed Alternative

The proposed alternative is designed to augment in-stream flows and reduce the potential for entrainment of fish by converting to a more water efficient irrigation system. This alternative is expected to improve fish and wildlife habitat in Little Prickly Pear and Big Sheep creeks and increase trout populations in the streams and in the Missouri River.

3. Alternatives considered but not recommended

Other means of increasing in-stream flows in Little Prickly Pear Creek are not feasible at this time for the following reasons:

- There are no existing or planned water storage projects within the Little Prickly Pear Creek drainage.
- Montana Law prevents the purchase of water rights for in-stream flows.
- To our knowledge, there are no other water rights in the Little Prickly Pear Creek drainage upstream of Wolf Creek Canyon available for leasing or conversion to in-stream flow.

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 is contingent upon approval by the Fish, Wildlife and Parks Commission.

Before this project can be implemented, the lease or conversion of salvaged water to in-stream flow must be approved by DNRC. A "Change" application will be submitted to DNRC that will be publicly noticed in local newspapers. Any objections to the "Change" must be resolved before approval by DNRC. This application will be denied by DNRC if the proposed lease or conversion is found to adversely affect the water rights of other users in the basin.

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.state.mt.us.

3. Duration of comment period?

Public comment will be accepted through 5:00 P.M. on April 15, 2004.

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 Upper Little Prickly Pear Creek Irrigation Conversion and In-stream Flow Project

Division/Bureau Fisheries Division-Future Fisheries Improvement

Description of Project This project is being proposed to undertake a water conservation project on Little Prickly Pear and Big Sheep creeks with Zachary and Patricia Wirth and with Donald and Nancy Johnston. The Future Fisheries Improvement Program is proposing to provide partial funding to a project that would create "salvage" water for the purposes of in-stream flow by converting an inefficient flood irrigation system to a more efficient sprinkler system in a reach of Little Prickly Pear and Big Sheep creeks located upstream of Wolf Creek Canyon. The proposed project is located approximately 3 miles west of the Sieben Interchange on Interstate Highway 15 in Lewis and Clark 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			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			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 Montana Department of Natural Resources and Conservation, Lewis and Clark County Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historical Preservation Office
 Individuals or groups contributing to this EA: None
 Recommendation concerning preparation of EIS: No EIS required.
 EA prepared by: Mark Lere
 Date: February 27, 2004