

July 12, 2012  
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  
    Bozeman Office  
Montana State Library, Helena  
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> Avenue, 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  
State Historic Preservation Office, Helena  
Jim Magee, USFWS, 420 Barrett Street, Dillon, MT 59725  
Fred Hirschy, General Delivery, Wisdom, MT 59725

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 construction of a siphon where an irrigation canal crosses Swamp Creek, a tributary to the Big Hole River. The intent of the project is to separate canal water from creek water, enhance upstream fish passage, reduce entrainment of downstream migrating juvenile fish and improve irrigation efficiency and management. This proposed project is located on Swamp Creek near the town of Wisdom in Beaverhead County.

Please submit any comments that you have by 5:00 P.M., August 10, 2012 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 Bureau  
Fisheries Division  
Email: [mlere@state.mt.us](mailto:mlere@state.mt.us)

ENVIRONMENTAL ASSESSMENT  
Fisheries Division  
Montana Fish, Wildlife and Parks  
Swamp Creek Canal Siphon 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 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 for a project calling for the construction of a siphon where the Spokane irrigation canal crosses Swamp Creek. The intent of this project is to restore connectivity between the Big Hole River and Swamp Creek for migratory fish, especially Arctic grayling, a species of special concern in Montana. Additionally, the project would improve irrigation efficiency and management, resulting in enhanced in-stream flow for approximately 6 miles downstream of the canal. The Spokane Canal is a large ditch (about 125 cubic feet per second) that diverts water from the Big Hole River. Currently, flow from the canal merges with Swamp Creek, allowing canal water to freely mix with Swamp Creek. A weir with check boards located on Swamp Creek is then used to allocate water down channel or down canal. The installation of a siphon would maintain a separation of canal and creek water and would allow migrating fish to pass unimpeded in Swamp Creek. The project site is located approximately 3 miles west of the town of Wisdom in Beaverhead County (Attachment 1).

I. Location of Project: This project will be conducted on Swamp Creek, a tributary to the Big Hole River, located approximately 3 miles west of the town of Wisdom in Beaverhead County within Township 2 South, Range 16 West, Section 36.

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 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 meet this goal.

Swamp Creek is one of the most productive tributaries for Arctic grayling in the Big Hole drainage. Presently, the Spokane ditch intersects Swamp Creek about six miles upstream of the mouth, capturing and diverting the stream; resulting in the loss of migratory connectivity for fish between the Big Hole River and the stream. Arctic grayling utilize reaches of Swamp Creek downstream of the canal crossing but cannot navigate the intersection during the irrigation season. Additionally, any fish moving downstream in Swamp Creek are highly likely to be entrained into the canal. This project calls for installing a siphon that would pass canal water underneath Swamp Creek, resulting in the restoration of migratory connectivity and the enhancement of in-stream flows.

III. Scope of the Project:

The project proposes to construct a siphon on the Spokane ditch, sized to meet the capacity of the water rights, beneath Swamp Creek (Attachment 2). The siphon would be constructed using high density polyethylene pipe (63 inches by 150 feet). The siphon construction will include an overflow weir to divert potential excess water back into Swamp Creek as a result of future flooding, overland flow, or precipitation. Canal banks will be heightened to accommodate a gain in water surface elevation as a result of the siphon and approximately 100 feet of new channel would be constructed at the site of siphon installation. Additionally, a pin and plank diversion, screw gate, flow measuring device and a Denil-style fish ladder would be installed into Swamp Creek to provide the infrastructure needed to allow the water user to obtain their Swamp Creek water right. This project is expected to cost \$385,556.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$30,000.00. The remaining funds will come from other sources and from in-kind services, a majority of which remains unsecured:

Contributor	In-kind services	In-kind cash
Renewable Grant and Loan		\$100,000
Wildlife Conservation Society		\$99,000
USFWS Partners Program		\$5,000
USFWS Fish Passage Program		96,000
FWP SWIG		\$55,566

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Removing the migration barrier at the canal crossing will provide fish upstream access to approximately six additional miles of Swamp Creek and six miles of Moose Creek. Additionally, placing the canal underneath Swamp Creek will eliminate a source of entrainment to downstream migrating fish. Installation of the siphon also is expected to improve in-stream flows downstream of the crossing. The project is expected to benefit fluvial Arctic grayling and other native and sport fish populations.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. Construction will be conducted during low flow when all of the stream discharge can be passed through a lined by-pass channel or pumped through a pipe. To minimize turbidity, 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 310 permit (Montana 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 for requirements to meet the federal Clean Water Act (404 permit). The capture of Swamp Creek water by the canal would be eliminated with the installation of the siphon. Downstream of the siphon, flow in Swamp Creek is expected to be improved.

3. Geology and soil quality, stability and moisture.

Soils within the project site would be disturbed during the construction, but would quickly stabilize following proposed re-vegetation efforts. Re-vegetation efforts would involve re-seeding disturbed areas with native grasses.

4. Vegetation cover, quantity and quality.

Vegetation and cover would be disturbed during the period of construction, primarily non-native grasses. The proposed re-vegetation efforts would act to mitigate these disturbances.

5. Aesthetics.

Aesthetics would be adversely impacted during construction due to ground disturbance and the presence of heavy equipment. In the long term, aesthetics would not be adversely affected.

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

The crossing of the Spokane ditch over Swamp Creek currently creates an upstream migration barrier and entrains downstream migrating fish into the irrigation system where they are lost to the population. Lower Swamp Creek currently supports fluvial Arctic grayling. Installation of the siphon is expected to substantial benefit Arctic grayling conservation through improved upstream fish passage, elimination of a source of entrainment and improvements in in-stream flow.

9. Historic and archaeological sites

The existing diversion structure; based on photographs, the presence of green treated wood and standard pin and plank design typical of the Natural Resource and Conservation Service; implies the structure is relatively new (Attachment 3). As a result, there is a very low likelihood that cultural properties will be impacted by the proposed project. 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.

7. Access to & quality of recreational activities.

This siphon project is expected to increase the recruitment of salmonids to Swamp Creek and the Big Hole River and is expected to improve the recreational fishery that these water bodies provide.

13. Locally adopted environmental plans and goals.

This project is part of the programmatic Big Hole Arctic Grayling Candidate Conservation Agreement with Assurances Program (CCAA). The CCAA is a unique grassroots collaboration that benefits the local community and the renewable resources of southwest Montana. The proposed project has a broad range of support.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no funding is provided, the applicant would have to either seek additional sources of funding to complete the project or the canal crossing on Swamp Creek would continue to act as an upstream migration barrier and would continue to entrain downstream migrating fish. As a result, the potential for recruitment of salmonids from the Swamp Creek drainage, especially fluvial Arctic grayling, will not be fully realized.

2. The Proposed Alternative

The proposed alternative calls for installing a siphon on Swamp Creek, where the Spokane ditch crosses the stream. The intent of the project is to enhance upstream fish passage, decrease entrainment of downstream migrating juvenile fish into the canal system and improve overall in-stream flows in the stream. This project is part of the CCAA Program in the upper Big Hole River drainage. This project is expected to benefit fluvial Arctic grayling and enhance recruitment of native and sport fishes to the stream and to the Big Hole 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 project application to the Future fisheries Improvement Program has been posted on the Montana Fish, Wildlife and Parks webpage for public comment. No comments have been received to date. 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 will be published on Montana Fish, Wildlife and Parks webpage: [fwp.mt.gov](http://fwp.mt.gov)

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on August 10, 2012.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer  
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Fisheries Bureau  
Montana Department of Fish, Wildlife and Parks  
1420 East 6th Avenue  
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 Swamp Creek Canal Siphon 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 construction of a siphon where the Spokane irrigation canal crosses Swamp Creek. The intent of the project is to restore connectivity between the Big Hole River and Swamp Creek for migratory fish, especially fluvial Arctic grayling. The project site is located on Swamp Creek approximately 3 miles west of the town of Wisdom in Beaverhead County.

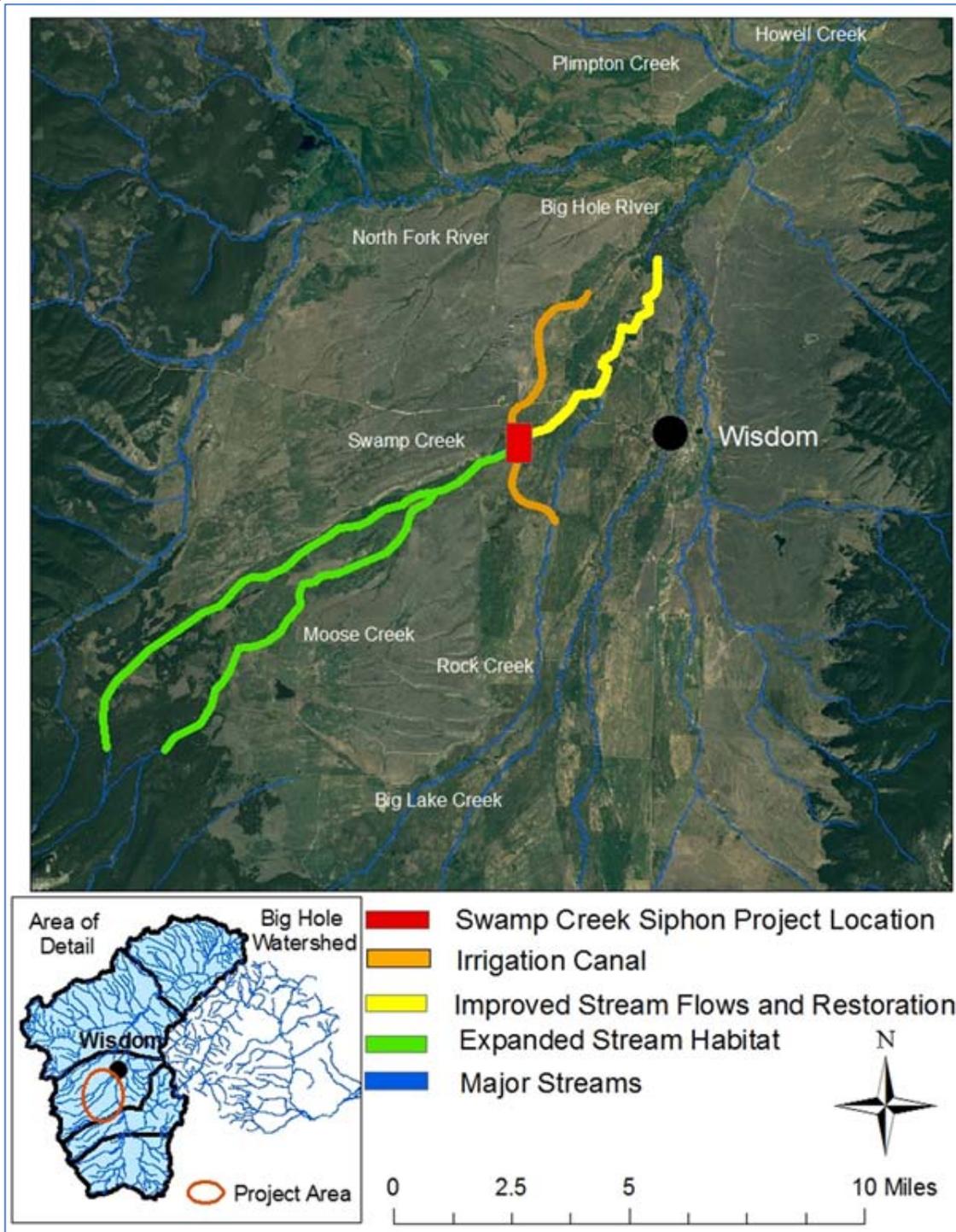
POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

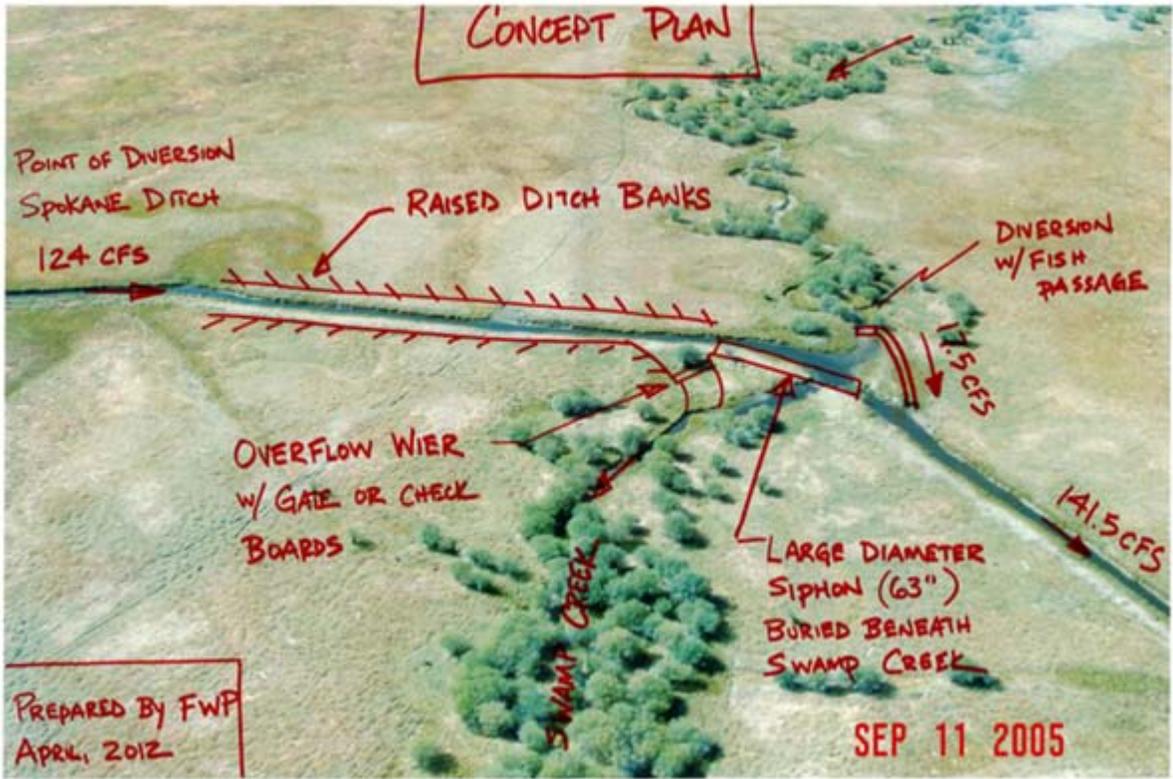
	MODERATE	MAJOR	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				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		
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			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 Jim Magee, US Fish and Wildlife Service  
 Recommendation concerning preparation of EIS No EIS required.





ATTACHMENT 2



ATTACHMENT 3