

January 11, 2013  
1420 East 6th Ave.  
P.O. Box 200701  
Helena, MT 59620

Environmental Quality Council  
Montana Department of Environmental Quality  
Montana Department of Fish, Wildlife and Parks  
Fisheries Division  
Endangered Species Coordinator  
Native Species Coordinator - Fisheries  
Missoula 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  
Bitterroot Conservation District, 1709 North First Street, Hamilton, MT 59840  
U.S. Army Corp of Engineers, Helena  
U.S. Fish and Wildlife Service, Helena  
State Historic Preservation Office, Helena  
Clark Fork Coalition, 140 S. 4<sup>th</sup> Street W. #1, Missoula, MT 59807  
Ward Irrigation District, 220 Camas Creek Loop, Hamilton, MT 59840  
Bitter Root Water Forum, P.O. Box 1247, Hamilton, MT 59840  
Trout Unlimited, 111 N. Higgins, Suite 500, Missoula, MT 59802  
Al Pernicelle, 634 Quast Lane, Corvallis, MT 59828  
Daniel Dunagan, 125 Little Britches Drive, Hamilton, MT 59840

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 Lost Horse Creek. The stream is a tributary to the Bitterroot 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 Lost Horse Creek approximately 6 miles south of the town of Darby in Ravalli County.

Please submit any comments that you have by 5:00 P.M., February 15, 2013 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  
Lost Horse Creek 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. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program.

The Future Fisheries Improvement Program is proposing to provide partial funding for a project calling for the construction of a siphon where the Ward irrigation canal crosses Lost Horse Creek. The intent of this project is to restore connectivity between the Bitterroot River and Lost Horse Creek for migratory fish, especially westslope cutthroat trout, a species of special concern in Montana and potentially bull trout, a species listed as threatened under the Endangered Species Act. Additionally, the project would reduce a chronic source of sedimentation and enhance in-stream flow. The Ward Canal is a ditch that diverts water from the Bitterroot River. Currently, flow from the canal merges with Lost Horse Creek, allowing canal water to freely mix with Lost Horse Creek. In order to convey water across the stream, the irrigation district must create a gravel push-up dam that essentially disconnects the stream from the river. The installation of a siphon would maintain a separation of canal and creek water and would allow migrating fish to pass unimpeded in Lost Horse Creek. The project site is located approximately 6 miles south of the town of Darby in Ravalli County (Attachment 1).

I. Location of Project: This project will be conducted on Lost Horse Creek, a tributary to the Bitterroot River, located approximately 6 miles south of the town of Darby in Ravalli County within Township 4 North, Range 21 West, Section 11.

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.

Lost Horse Creek supports a mixed fish assemblage, including westslope cutthroat trout and bull trout. Presently, the Ward ditch intersects Lost Horse Creek about 0.25 miles upstream of the mouth, capturing and diverting the stream; resulting in the loss of migratory connectivity for fish between the Bitterroot River and the stream (Attachment 2). A Master’s Thesis by Bahn (2007) identified the Ward Canal as the largest source of entrainment in Lost Horse Creek, estimating an entrainment of 7,000 fish per year. Additionally, the annual need to create a gravel push-up dam to convey canal water creates a chronic source of sediment. This project calls for installing a

siphon that would pass canal water underneath Lost Horse Creek, resulting in the restoration of migratory connectivity, a reduction in fish entrainment, the enhancement of in-stream flows and the reduction of sediment loading into the stream.

III. Scope of the Project:

The project proposes to construct a siphon on the Ward ditch, sized to meet the capacity of the water rights, beneath Lost Horse Creek (Attachment 3). The siphon would be constructed using high density polyethylene pipe. As part of this project, the Ward Irrigation District would commit to pass any flow lower than 10 cubic feet per second (cfs) past their canal to ensure connectivity with the Bitterroot River. Because the Ward Irrigation district has water rights on Lost Horse Creek, a headgate on the stream would remain functional. However, the headgate would be shut off when stream flow dropped below 10 cfs. This project is expected to cost \$318,565.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$93,500.00. The remaining funds will come from other sources and from in-kind services, some of which remains unsecured:

Contributor	In-kind services	In-kind cash
Renewable Grant and Loan		\$100,000
DEQ 319 Program		\$106,000
Western Native Trout Initiative		\$10,000
Clark Fork Coalition	\$4,000.00	

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 all of Lost Horse Creek and will reduce a source of entrainment to downstream migrating fish. Installation of the siphon also is expected to improve in-stream flows downstream of the crossing and improve water quality in the stream. The project is expected to benefit fluvial westslope cutthroat trout, bull trout 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). Installation of the siphon would eliminate the need to annually construct a gravel push-up dam to convey canal water across the stream, resulting in improved water quality. Additionally, the agreement to pass up to 10 cubic feet per second of in-stream flow past the canal crossing would improve flow conditions and restore migratory connectivity to the Bitterroot River.

3. Geology and soil quality, stability and moisture.

Soils within the project site would be disturbed during the construction, but would be stabilize following 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. The proposed re-vegetation efforts in the form of re-seeding would help 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 Ward ditch over Lost Horse Creek currently creates an upstream migration barrier and creates a greater probability of entraining downstream migrating fish into the irrigation system, where they are lost to the population. Lost Horse Creek supports bull trout, a species listed as threatened under the Endangered Species Act and westslope cutthroat trout, species of special concern in Montana. Installation of the siphon is expected to benefit fish populations in Lost Horse Creek through improved upstream fish passage, reduction of a source of entrainment and improvements in in-stream flow. Because Lost Horse Creek supports bull trout, the project will be included in Montana Fish, Wildlife and Park's Section 6 conservation plan with the U.S. Fish and Wildlife Service.

9. Historic and archaeological sites

Installation of the siphon would require a slight re-alignment of the existing irrigation canal. Additionally, 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.

Future Fisheries funding will not be made available until a cultural clearance is granted.

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 Lost Horse Creek and the Bitterroot River and is expected to improve the recreational fishery that these water bodies provide.

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 Lost Horse Creek would continue to act as an upstream migration barrier and would continue to entrain downstream migrating fish. As a result, the potential for improvements to salmonid populations in Lost Horse Creek and to the Bitterroot River, especially bull trout and westslope cutthroat trout, would not be realized.

2. The Proposed Alternative

The proposed alternative calls for installing a siphon underneath Lost Horse Creek, where the Ward ditch crosses the stream. Installation of the siphon would eliminate the need to construct a seasonal in-channel dam, eliminate the presence of a seasonal migration barrier, reduce a source of entrainment and improve in-stream flow. The intent of the project is to enhance populations of bull trout and westslope cutthroat trout, as well as other species of fish found there.

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 February 15, 2013.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer  
Habitat Protection Section  
Fisheries Bureau  
Montana Department of Fish, Wildlife and Parks  
1420 East 6th Avenue  
Helena, MT 59620  
Telephone: (406) 444-2432  
e-mail: [mlere@mt.gov](mailto:mlere@mt.gov)

**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 Lost Horse Creek 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 Ward irrigation canal crosses Lost Horse Creek. The intent of the project is to restore connectivity between the Bitterroot River and Lost Horse Creek for migratory fish, especially bull trout and westslope cutthroat trout. The project site is located on Lost Horse Creek approximately 6 miles south of the town of Darby in Ravalli 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

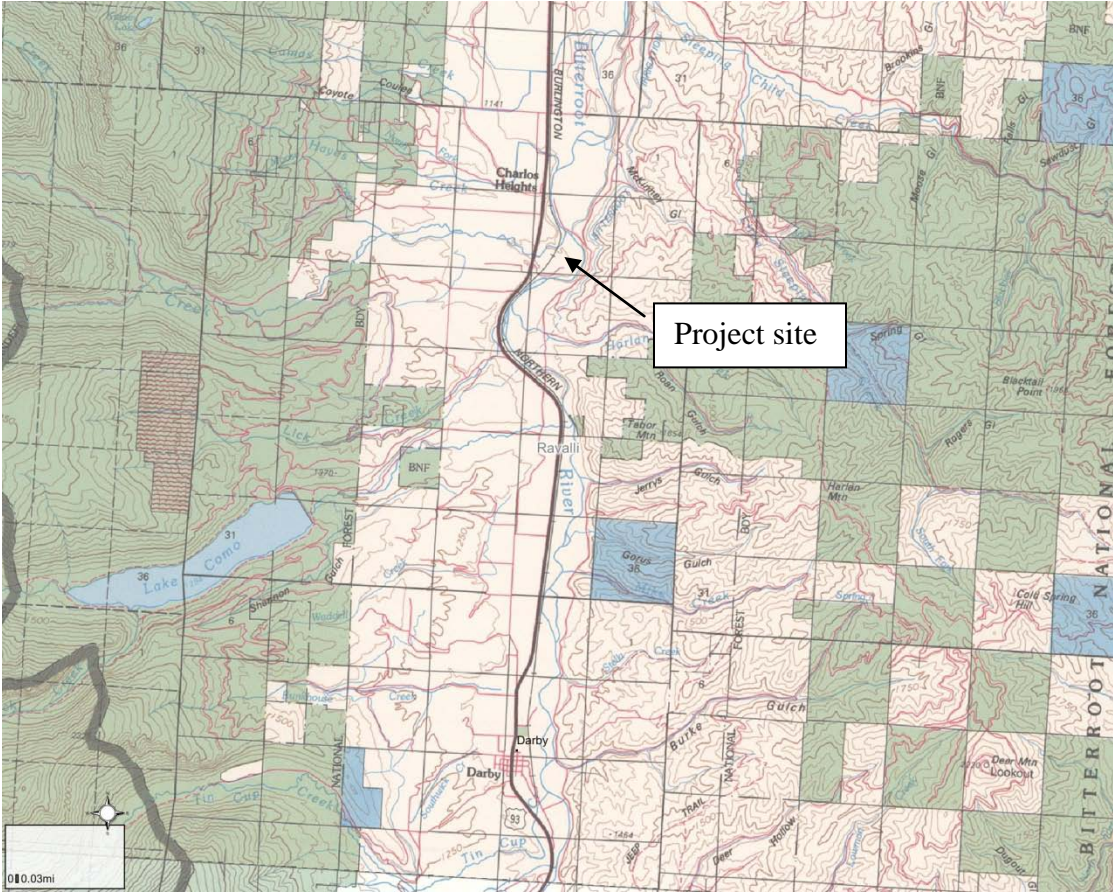
	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal 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 Bitterroot Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

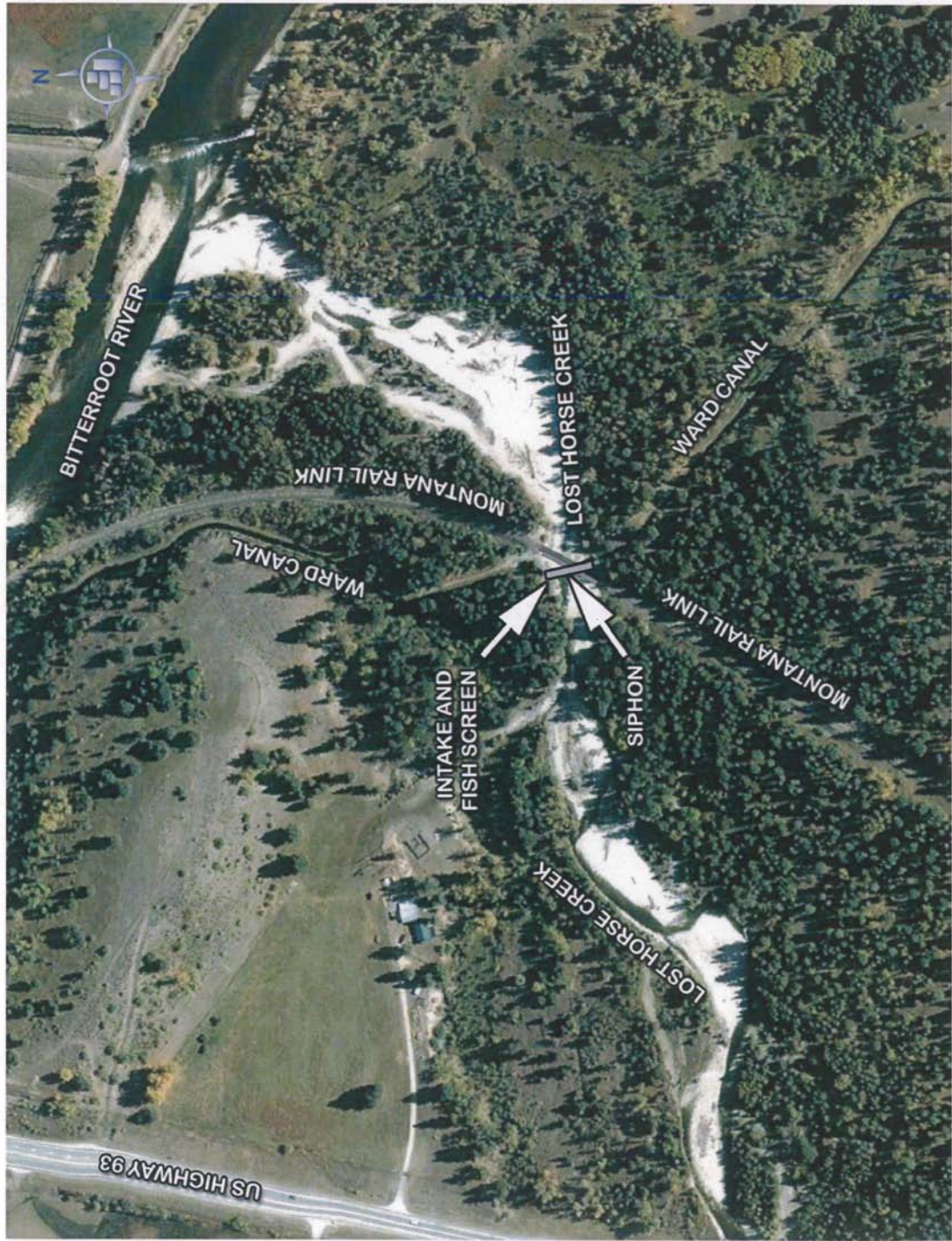
Individuals or groups contributing to this EA Andy Fischer, Clark Fork Coalition; Morrison Maierle, Inc.  
 Recommendation concerning preparation of EIS No EIS required.



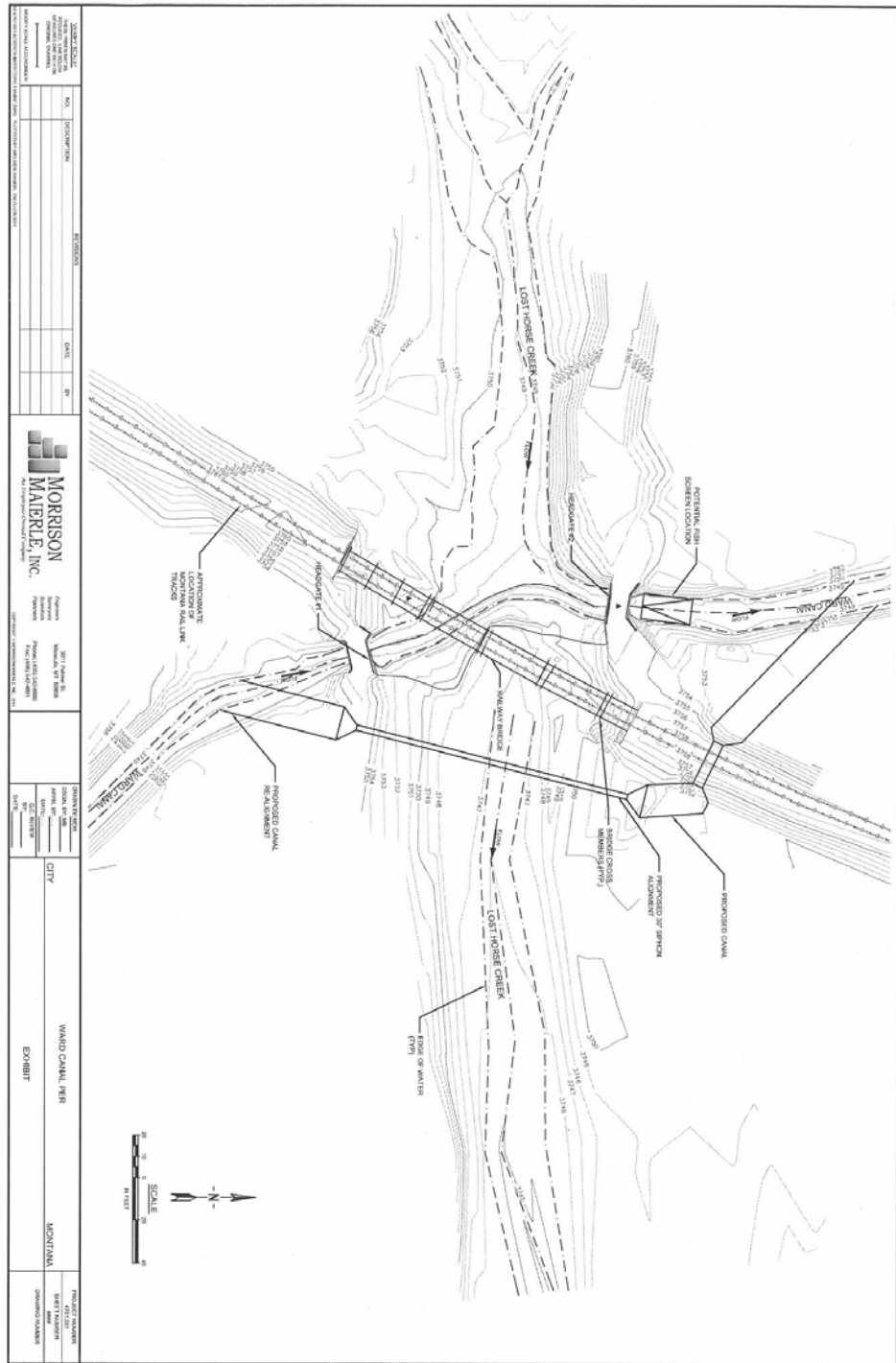
EA prepared by: Mark Lere  
Date: January 4, 2013



ATTACHMENT 1



ATTACHMENT 2



NO.	DESCRIPTION	DATE	BY



**MORRISON MATHERLE, INC.**  
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 Registered Professional Engineers  
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 Nashville, TN 37215  
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**PROPOSED CANAL RE-ALIGNMENT**  
 2012  
 3/27/12  
 3/27/12

WARD CANAL PER  
 MONTANA  
 EXHIBIT

PROJECT NUMBER: 12112  
 SHEET NUMBER: 1000  
 DRAWING COLUMN

ATTACHMENT 3