

Section I: General Information

Project Title Lost Horse Creek Streamflow Enhancement

Project Sponsor Information

Sponsor Name <u>Clark Fork Coalition</u>	Tax Identification # <u>36-3428665</u>
County <u>Missoula</u> Website <u>www.clarkfork.org</u>	DUNS # <u>840737332</u>
Primary Contact <u>Andy Fischer</u>	Signatory <u>Karen Knudsen</u>
Title <u>Project Manager</u>	Title <u>Executive Director</u>
Address <u>140 S. 4th St. W. #1/ PO BOX 7593</u>	Address <u>140 S. 4th St. W. #1/ PO BOX 7593</u>
City <u>Missoula</u> State <u>Montana</u> Zip Code <u>59807</u>	City <u>Missoula</u> State <u>Montana</u> Zip Code <u>59807</u>
Phone Number <u>(406) 542-0539 x210</u>	Phone Number <u>(406) 542-0539</u>
Fax Number <u>None</u>	Fax Number <u>None</u>
E-mail Address <u>andy@clarkfork.org</u>	E-mail Address <u>karen@clarkfork.org</u>
Signature _____	Signature _____

Project Location

Statewide ☐ *If project is not statewide please complete the rest of this section.*

How is project related to a TMDL? Implementing a TMDL

Watershed Name or HUC # <u>Lost Horse Creek</u>	TMDL Planning Area <u>Bitterroot</u>
Project 1 Name <u>Ward Irrigation District Siphon</u>	Latitude (1) <u>46.114847</u> Longitude (1) <u>-114.174233</u>
Project 2 Name _____	Latitude (2) _____ Longitude (2) _____
Project 3 Name _____	Latitude (3) _____ Longitude (3) _____
Project 4 Name _____	Latitude (4) _____ Longitude (4) _____
Project 5 Name _____	Latitude (5) _____ Longitude (5) _____

Nonpoint Source (NPS) Information

319 Project Category <u>Watershed Restoration</u>	Waterbody Type <u>River/Stream</u>
Functional Category <u>Watershed Management</u>	Is waterbody on the 2010 Impaired Waters List? <u>Yes</u>
1st Pollution Category <u>Hydromodification (Flow Regulation/Modification)</u>	Percent of Total (%) <u>100</u>
2nd Pollution Category _____	Percent of Total (%) _____
3rd Pollution Category _____	Percent of Total (%) _____
4th Pollution Category _____	Percent of Total (%) _____

Project Funding

319 Funds Requested

Does the project sponsor have any open 319 contracts?

Matching Funds

State Match

State In-Kind Match

Local Funds

Other Match

Total Matching Funds

Other Federal Funds

Total Project Budget

Advance Requested* Administrative Fee

**Advances require additional justification and DEQ approval.*

Project Title Riparian and Flow Restoration Education

DEQ Contract Number 212064

319 Award \$20,000.00

Projected Closing Date December 31, 2013

Project Title _____

DEQ Contract Number _____

319 Award _____

Projected Closing Date _____

Project Description

Methods: Please describe the specific activities of this project.

This project will address nonpoint source pollution in Lost Horse Creek by improving streamflows and water quality. The Ward Irrigation District has agreed to restore up to 10 cfs of flow into the lower reaches of the creek in addition to upgrading its diversion infrastructure. The Coalition plans to sign an instream flow contract that restores instream flows for the life of the newly constructed irrigation siphon (50 to 100 years). This project will increase the flow of cool water, reduce sedimentation, keep Lost Horse Creek connected to the Bitterroot River, lower temperatures and improve water quality in this TMDL-listed stream.

Objectives: Please describe the specific/measurable objectives that will ensure the achievement of the project goal(s).

The goal of the project is to improve streamflow in Lost Horse Creek, which will result in water quality improvements and improved fish recruitment and survival. In order to achieve this goal, the following objectives will need to be met:

- Work with the Ward Irrigation District to reach a formal minimum flow agreement.
- Complete final engineering designs and construct an irrigation siphon underneath Lost Horse Creek.
- Monitor instream flows to ensure that Ward Irrigation District is meeting the terms of their agreement.
- Conduct outreach with surrounding landowners to seek new projects that address nonpoint source pollution by restoring streamflow.

Overview: Please provide a brief summary of the proposed project.

Ward Irrigation District is comprised of 99 members who irrigate 963 acres near Darby, Montana. The District relies on irrigation water from both the Bitterroot River and Lost Horse Creek. In order to convey water from its irrigation canal on the Bitterroot River, the District must create an earthen dam on Lost Horse Creek. This practice impedes all flow in Lost Horse Creek, and prevents it from joining the Bitterroot River. In addition, this dewatering impairs the creek and compounds other water quality problems, including high temperature and nutrient pollution. The Ward Irrigation District is interested in changing its irrigation practices to improve stream health, as well as its water management. The District plans to install a siphon to transport their Bitterroot River water underneath Lost Horse Creek in a pipe. As part of this project, the District is willing to leave up to 10 cfs flowing below their diversion on Lost Horse Creek, ensuring it is connected to the Bitterroot River year-round (refer to the attached letter of intent). Lost Horse Creek has documented populations of bull trout, which are listed as a threatened species under the ESA. The primary cause of impairment to this creek listed in the Bitterroot TMDL Plan is low flow alteration, which impacts recreational uses of the creek and also impacts the Bitterroot River.

The Ward Irrigation District secured a project development grant through the DNRC in 2011 to complete initial designs for this project. The Clark Fork Coalition has held several meetings with members of the District to discuss potential instream flow agreements. An initial commitment was reached through a letter of intent, which states that the District will provide 10 cfs below their diversion if grant funds can be secured to build the siphon. Once grant commitments are secured, the Coalition and District plan to enter into a formal long-term water right diversion reduction agreement. This will require meetings and outreach with the District members to secure their support of the project. In addition, the Coalition will monitor flows in Lost Horse Creek 2013-2014 before and after the siphon is constructed to better delineate the amount of instream flow that will accrue from the project. The project is scheduled for construction during the winter of 2013/2014.

A: Statement of Need and Intent

Lost Horse Creek is identified in the 'Bitterroot Temperature and Tributary Sediment TMDL and Framework Water Quality Improvement Plan' as having impairments caused by low flow alterations. The creek suffers from the most severe dewatering below the Ward Irrigation District diversion, which results in water quality conditions that cannot sustain aquatic life. Dewatering below the District's diversion elevates water temperatures and reduces dissolved oxygen levels to the point that no fish or aquatic species can exist within this section of the creek from August to October each year. In addition, the annual practice of excavating an earthen dam across the creek contributes to elevated turbidity and sedimentation, creates a fish passage barrier in the creek, and increases the risk of fish entrainment in the District's canal system. Providing more clean, cold water during the late summer and fall will likely result in improved water quality, healthier fish populations, and enhanced recreation within Lost Horse Creek and the Bitterroot River.

The Ward Irrigation District has been damming Lost Horse Creek for over 100 years. Recently, the District has explored more efficient technologies that can better convey their irrigation water, improve the management of their canal system, and also improve water quality conditions in the creek. The District is under no legal or financial obligation to change its management practices in Lost Horse Creek. Instead, the members recognize the value of acting as good stewards of this water resource. The District signed a written commitment with the Clark Fork Coalition to provide instream flow in Lost Horse Creek if grant funds can be secured to pay for its siphon project. The preliminary agreement stipulates that the District will maintain flows of 10 cfs below their diversion on the creek. If inflows above the diversion drop below 10 cfs, then the District will not divert any water from the creek and pass all remaining flow below their diversion to the Bitterroot River. When CFC monitored the creek, flows in Lost Horse Creek dropped below 10 cfs in September and have been as low as 2.5 cfs. However, even at the lowest recorded flows of 2.5 cfs, pools within the creek remained connected, and fish were visibly recorded as surviving during these conditions.

Based on CFC's streamflow monitoring during 2011 and 2012 and discussions with water right holders and professionals in the field, 10 cfs of flow is typically available in the creek through August, and at least 5 cfs of flow would be available to the creek below the District's diversion during September and October. During drought years, the flows will likely remain at least 2-3 cfs during the driest month of September. If CFC observes flows below 2 cfs after the project is completed, we will work with upstream water right holders to seek voluntary diversion reductions to sustain the flows and water quality. While there is the slim chance that flows could temporarily become low or that the creek could go dry in extreme conditions, we don't expect that to occur. The flows restored as a result of this project will be a dramatic improvement to water quality conditions in the creek compared to the current bone-dry conditions. The Coalition will enforce and monitor the instream flow agreement with the District to ensure the contracted flows are maintained.

B: Collaborative Effort

Partner	Role
Ward Irrigation District	Work with the Clark Fork Coalition to manage flows in the creek. Responsible for owning and maintaining the siphon.
Engineer (currently Morrison Maierle)	Complete final siphon designs, secure permits and oversee construction.
Clark Fork Coalition	Complete instream flow agreement, manage grants, monitor streamflow and temperature. Conduct project outreach to inform other water users and community members of the benefits.
Trout Unlimited	Project advisor and assistance in outreach efforts.
Montana Fish Wildlife and Parks	Monitor aquatic life in the creek.

Additional Information (Collaborative Effort)

The project has widespread support within the community, as evidenced by over 20 letters of support and multiple project tours. Local state legislators have also toured the project and have provided letters of support.

Funding Organization	Award Amount	Project Description	Project Status	Contact Information
DNRC Renewable Resource Grant and Loan Program, Project Development Grant	\$10,000	The Ward Irrigation District secured a project development grant from the DNRC in 2012 to complete a preliminary engineering study and prepare an RRGL application.	Complete	Pam Smith DNRC (406) 444-6668
DNRC Renewable Resource Grant and Loan Program, Implementation Grant	\$100,000	An implementation grant was submitted to the DNRC RRGL for funding consideration. The project ranked highly and will be considered for funding during the spring of 2013 legislative session.	Pending	Pam Smith DNRC (406) 444-6668
FWP Future Fisheries Grant Program	\$100,000	The Clark Fork Coalition and Trout Unlimited plan to submit an application during the fall of 2012 to the FWP Future Fisheries Program. Local FWP biologists have toured the project and are supportive of seeing it move forward.	Pending	TBD

Additional Information (Planning and Management)

The Clark Fork Coalition began formal streamflow monitoring of Lost Horse Creek in 2012, and plans to continue flow monitoring throughout 2013 to better inform the applicant and our funders of the water quality benefits associated with the project. We installed a Trutrack monitoring device in the creek, which continually measures temperature and flow. We have also been visiting the project site on a monthly basis to take manual flow measurements and photo points of the creek.

Section III: Project Components

A: Education and Outreach: Please briefly describe the education and outreach component of this proposal and the target audience.

We aim to secure broad support for this project from both the water users and the larger community, which will entail substantial education and outreach efforts that inform people of the benefits to both agriculture and the fishery. In order to build off the partnerships and success of this project, the Coalition will meet with other water users along Lost Horse Creek to make sure they are aware of the project, as well as share opportunities for other landowners to participate in water quality improvements. We also plan to engage landowners and nearby citizens on the role and mechanics of an instream flow project via brochures, public meetings, one-on-one meetings, letters, news media, and our website. The goal of the education and outreach surrounding flow restoration is to generate more interest in its benefits for landowners and the creek, and to ultimately generate more instream flow agreements that improve the health of Lost Horse Creek and the dozens of similarly impaired creeks in the Bitterroot River watershed.

C: Operation and Maintenance

The agreement with the Ward Irrigation District will stipulate their responsibility to provide the 10 cfs of instream flow below their diversion. The Clark Fork Coalition will work with the District to monitor flows below their diversion and ensure that they are meeting their flow obligations for the first 10 years of the project. After this point the District will be responsible for managing the flows. In addition, the District will be required to operate and maintain the facility for its useful life. The new siphon is expected to last from 50-100 years. When an engineer determines that the siphon has exceeded its intended life and no longer performs the needed functions, the District will no longer be obligated to provide flows below their diversion.

D: Monitoring: Please briefly describe the monitoring component of this proposal.

In order to ensure the District is complying with the terms of the diversion reduction agreement, the Coalition will monitor flows in Lost Horse Creek during the summer and fall irrigation season. This can be accomplished through the installation of a staff gage, automated gage and flow measurements below the diversion. The Clark Fork Coalition is experienced in measuring creek flows using USGS protocols and using a variety of devices. By monitoring streamflow, the Coalition would be able to inform Ward Irrigation District when it needs to reduce the amount of water the District is diverting out of Lost Horse Creek. The Coalition also conducts site visits at least monthly to and often bi-weekly to take manual flow measurements, test water temperature, and observe habitat conditions. We also partner with Montana Fish Wildlife and Parks to conduct fish counts in order to measure impacts of improved streamflow on the creek's fishery. The flow and temperature measurements will be summarized into an annual report that will inform the Coalition and our funders of the improvements to water quality conditions in the creek.

Section IV: Scope of Work

Task 1 Title Develop and Execute Instream Flow Agreement with Ward Irrigation District

Description

An initial letter of intent to provide minimum flows of 10 cfs has been executed between the Coalition and the District (see attached). Further negotiations regarding the terms will occur before a formal long-term diversion reduction agreement can be reached. It is anticipated that this flow agreement will be for the life of the project, and we plan to negotiate a contract that restores instream flows for 50 to 100 years. This task entails dozens of meetings with the Ward Irrigation District Board to ensure the members' understanding of the terms of agreement. In addition, pre-project flow measurements will be analyzed to better understand the hydrology of the system and the projected water quality benefits of the project.

Deliverables

1. Signed Instream Flow Agreement with Ward Irrigation District.

Task 1 Funding

319 Funds	<input type="text" value="\$2,000.00"/>
Non-Federal Match	<input type="text" value="\$1,000.00"/>
Other Federal Funds	<input type="text"/>
Total Cost	<input type="text" value="\$3,000.00"/>
Is Match Secured?	<input type="text" value="Yes"/>

Timeline January-October 2013

Match Source Private In-Kind

Task 2 Title Final Engineering and Construction of Irrigation Siphon

Description

Once funding has been secured, the siphon construction project will go out to bid and proceed to final design and construction. We anticipate that the project could be constructed during one winter (2013/2014). An additional funding application has been submitted to the DNRC RRGL grant program for \$100,000 to support the construction and final engineering effort. We also plan to work with the District and Trout Unlimited to submit a \$100,000 FWP Future Fisheries grant application to support this construction effort.

Deliverables

1. Final Engineering Design
2. Siphon Construction

Task 2 Funding

319 Funds	<input type="text" value="\$80,000.00"/>
Non-Federal Match	<input type="text" value="\$200,000.00"/>
Other Federal Funds	<input type="text"/>
Total Cost	<input type="text" value="\$280,000.00"/>
Is Match Secured?	<input type="text" value="No"/>

Timeline July 2013- May 2014

Match Source State/Non-Federal: DNRC RRGL and FWP Future Fisheries

Description

The instream flow benefit is anticipated to accrue for the useful life of the siphon project (50-100 years). The Clark Fork Coalition proposes to monitor instream flows for the first 10 years of the project to set up the necessary flow monitoring triggers and protocols. At this point, the granting agency could choose to have either Ward Irrigation District monitor flow or another third party. In order to effectively monitor instream flow, the Coalition will need to purchase and install staff gages above and below the Ward diversion and purchase an automated flow gage (\$700). The automated flow gage will also record stream temperature. The Clark Fork Coalition will use our Marsh McBirney flow meter to manually measure streamflows at least 4 times per year (\$200/measurement) for the purpose of developing an annual rating curve for the staff and automated flow gages. The Coalition will work closely with the ditch rider for the District to ensure the necessary flows are provided to the creek. During the fall of each year, the Coalition will download, process the automated flow data (develop rating curves/graphs) and summarize it in a short report (which is will be made available to DEQ). We expect that 10 years of active flow monitoring will be enough time to set up the necessary monitoring and flow management protocols to ensure the water quality benefits are being realized and measured correctly. After 10 years, it would be the responsibility of the District and or other interested agencies to oversee management of the instream flow.

Deliverables

1. 10 years of instream flow monitoring.
2. Annual report summarizing flows and temperatures in the creek.
3. Annual coordination with the District to ensure compliance with the terms of the instream flow agreement.

Task 3 Funding

319 Funds	\$8,000.00
Non-Federal Match	\$2,000.00
Other Federal Funds	
Total Cost	\$10,000.00
Is Match Secured?	No

Timeline 2014-2024

Match Source FWP Future Fisheries

Task 4 Title Project Outreach and Education

Description

We plan to work closely with landowners, the irrigation district, conservation district, state and government agencies to communicate the water quality and fishery benefits associated with this instream flow project. This will be accomplished through posting information about the project and our water quality findings on the Clark Fork Coalition website and Facebook, as well as in our written and email newsletters and at large-group and individual meetings. During the project, we will also develop press releases and submit them for publication in local newspapers and other media. The Clark Fork Coalition has 2,700 members that follow our restoration work in the basin. We also plan to engage and educate landowners and other citizens in the Lost Horse drainage and in nearby dewatered tributaries to the Bitterroot River on the importance, role and mechanics of instream flow projects. This will occur through individual and group meetings with other water right holders on the creek and other community forums. Our intention is that these informal discussions with landowners and members of the public may result in further restoration work in Lost Horse Creek, and that this project can serve as a model for additional collaborative restoration projects that improve impaired waterways in the Bitterroot TMDL Planning Area.

Deliverables

1. Project description and annual monitoring updates to the CFC website.
2. At least one press release for publication in local newspapers.
3. Article highlighting the project in our quarterly newsletter.
4. Meet with at least 20 landowners in the Darby area to update them on the project and the water quality progress in Lost Horse Creek.

Task 4 Funding

319 Funds	\$4,000.00
Non-Federal Match	\$1,000.00
Other Federal Funds	
Total Cost	\$5,000.00
Is Match Secured?	Yes

Timeline 2013-2015

Match Source Private In-Kind: Clark Fork Coalition

Description

Proper budgeting for administration costs will ensure that we have the necessary support to meet the terms of the grant and maintain proper accounting and reporting for the DEQ 319 program.

Deliverables

1. Adhere to the terms of the grant agreement.
2. Proper accounting for expenditures and match.
3. Project and grant reports.

Task 5 Funding

319 Funds	<input type="text" value="\$10,000.00"/>
Non-Federal Match	<input type="text" value="\$2,000.00"/>
Other Federal Funds	<input type="text"/>
Total Cost	<input type="text" value="\$12,000.00"/>
Is Match Secured?	<input type="text" value="Yes"/>

Timeline2013-2015

Match SourcePrivate In-Kind: Clark Fork Coalition

Task 6 Title

Description

Deliverables

Task 6 Funding

319 Funds	<input type="text"/>
Non-Federal Match	<input type="text"/>
Other Federal Funds	<input type="text"/>
Total Cost	<input type="text"/>
Is Match Secured?	<input type="text"/>

Timeline

Match Source

Section V: Supporting Documents

A: Detailed Project Budget

	Cash Match			In-Kind Match				
Task Number and Specific Action	Private	State	Federal	Private	State	Federal	319 Funds	Total Costs
1. Flow Agreement				\$1,000			\$2,000	\$3,000
2. Engineering/Construction		\$200,000					\$80,000	\$280,000
3. Monitoring				\$2,000			\$8,000	\$10,000
4. Education and Outreach				\$1,000			\$4,000	\$5,000
5. Administration				\$2,000			\$10,000	\$12,000
TOTAL		\$200,000		\$6,000			\$104,000	\$310,000

B: Project Milestone Table: Please complete the following Project Milestone Table by entering task numbers and titles in the left hand column, then check the box(es) for the appropriate quarter(s) and year(s) in which the task will take place.

Milestone	2QT 2013	3QT 2013	4QT 2013	1QT 2014	2QT 2014	3QT 2014	4QT 2014	1QT 2015	2QT 2015	3QT 2015	4QT 2015	1QT 2016
1. Flow Agreement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Engineering and Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Education and Outreach	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5. Administration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Please ensure that you submit a project map(s) and letters of support along with this Final Application form. If design drawings are available please provide those as well. For on-the-ground work please include copies of the applicable permits.

☒ **C: Project Map**

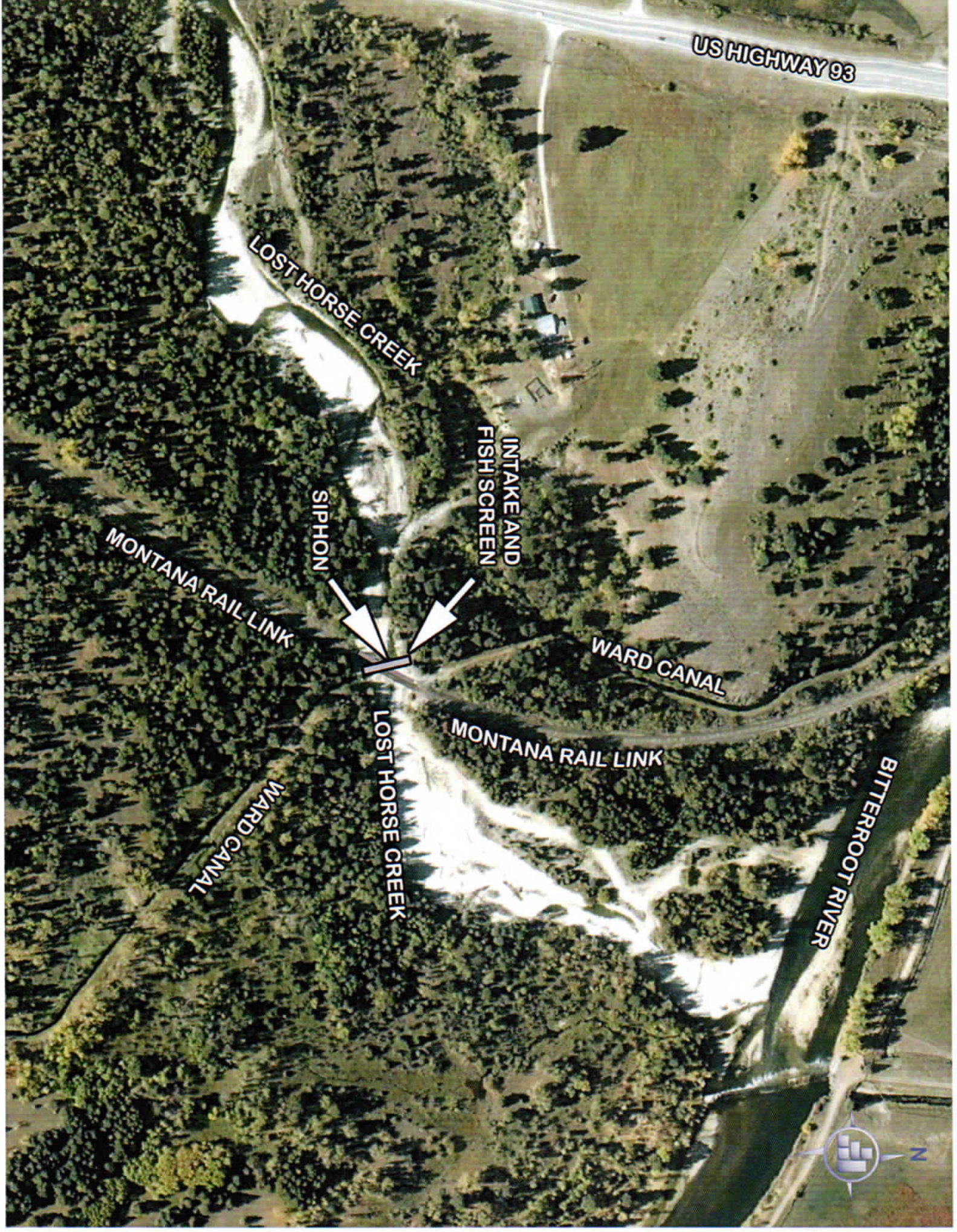
☒ **D: Letters of Support**

☒ **E: Design Drawings**

☒ **F: Applicable Permits**

G: Comments: Please use the space provided for any additional information that may not have been captured by this application form.

Attachment C: Project Map



US HIGHWAY 93

LOST HORSE CREEK

INTAKE AND
FISH SCREEN

SIPHON

MONTANA RAIL LINK

WARD CANAL

MONTANA RAIL LINK

LOST HORSE CREEK

WARD CANAL

BITTERROOT RIVER



Lost Horse Creek Pre-Project Photos

Photo: Upstream of the Diversion



Photo: Dam across Creek



Photo: Downstream of the Diversion looking towards the Bitterroot River (entirely dewatered)



Attachment D: Letters of Support

July 16, 2012

Clark Fork Coalition
PO Box 7593
Missoula, MT 59807

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

LETTER OF INTENT

Lost Horse Creek Siphon Project and Diversion Reduction

This letter of intent is executed by Clark Fork Coalition (the "Coalition") and Ward Irrigation District ("the District") (collectively referred to herein as the "Parties"). The Parties are working together to fund and implement an irrigation efficiency project. It is the intent of the Parties to execute this letter to memorialize their intention to jointly pursue the Project (as defined below). In furtherance of the Project, the Parties intend to conduct the following activities:

(1) Grant Funding. Proceed with jointly applying for grant funds to pay for 100% of the up-front capital investment in a siphon underneath Lost Horse Creek (the "Project"). The purpose of the Project is to eliminate the need for the District to dam Lost Horse Creek for conveying their Bitterroot River irrigation water into their canal system. The project will also allow Ward to reduce their diversion of Lost Horse Creek during times when flows are 10 cubic feet per second or less. The parties intend to have the Clark Fork Coalition prepare and submit grant applications to pay for this system improvement.

(2) Diversion Reduction Agreement. If grant funds are secured for the Project and the Project proves to be technically feasible, the Parties will enter into a superseding diversion reduction agreement to dedicate the irrigation water savings from the Project to instream flow in Lost Horse Creek that includes the general elements described in this Letter of Intent and any additional elements negotiated between the Parties. As part of this superseding agreement, the District will agree to reduce their diversion from Lost Horse Creek in order to provide a minimum flow of 10 cubic feet per second in the creek below their diversion. This diversion reduction agreement will not be a formal change or lease of the water rights through the Montana Department of Natural Resources and Conservation (DNRC), but instead a private agreement between the District and the Coalition (or others) to maintain a minimum flow. This agreement will be in place for the useful life of the siphon project. In the event that the siphon fails or during other emergency circumstances, the District would be able to resume their full use of Lost Horse Creek.

(4) Cooperation with the Clark Fork Coalition. Coordinate and provide access to representatives from the Coalition for the purposes of applying for grant funds, conducting field visits to document and measure water use, drafting agreements and monitoring instream flow.

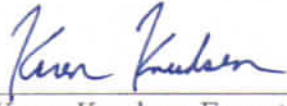
(5) Timeline. The activities in paragraphs 1 through 4 above are anticipated to occur according to the following timeline:

Activity:	<u>Summer – Fall 2012</u>	<u>Winter 2013</u>	<u>Spring 2013</u>	<u>Summer 2013</u>	<u>Fall 2013-Winter 2014</u>
Funding:	Apply for any addl. grants	Receive Grants	Enter into formal grant agreement		Close out grant(s)
Siphon Construction:		Proceed to final design	Solicit bids and select contractor	Purchase materials	Construct Siphon
Diversion Reduction Agreement:	Sign Letter of Intent	Draft Agreement	Sign Agreement		
Monitoring:	Pre-Project Flow Monitoring			Pre-Project Flow Monitoring	Flow Monitoring/Reporting

The Parties understand that the timeline above is a best estimate of the process. The main variable in this timeline is the approval of grant funds.

(6) Termination. The Parties may elect to terminate their participation under this Letter of Intent in writing if unforeseen complications arise, such as unfavorable water rights interpretations by DNRC or the siphon becomes technically infeasible.

[Signatures]

 Date 7/23/12
 Karen Knudsen, Executive Director
 Clark Fork Coalition
 140 S 4th Street West, Unit 1
 PO Box 7593
 Missoula, MT 59807

Ward Irrigation District Board of Directors (on behalf of the water users)
 220 Camas Creek Loop
 Hamilton, MT 59840

CODY LEE  Date 7/17/2012
 Board Member Name (Printed) (Signature)

RONALD PORTER  Date 7/17/12
 Board Member Name (Printed) (Signature)

DANIEL DUNAGAN  Date 7-17-2012
 Board Member Name (Printed) (Signature)



**Montana Fish,
Wildlife & Parks**

5/9/12

Molly Skorpik
Morrison-Maierle, Inc
3011 Palmer Street
Missoula, MT 59808

Dear Molly:

I am familiar with the situation on Lost Horse Creek, where the Ward Irrigation District builds a cobble/gravel dike across the streamchannel to convey ditch water across the creek to their headgate.

The construction of the dike and subsequent blockage of the channel during midsummer and early fall is likely a fish barrier and also diverts fish from Lost Horse Creek into the ditch. I support the project to siphon the ditch water under Lost Horse Creek. Additionally, if commitments were made to replace some of the late summer water diverted out of Lost Horse Creek with river water once this project is completed, the benefits to the fishery would likely be greater. Leaving more water in Lost Horse Creek would benefit the migratory and resident fish in the creek.

If you have any questions please contact me at (406) 363-7169.

Sincerely,

Chris Clancy

Chris Clancy
Fisheries Biologist



PO Box 1247
Hamilton, MT 59840

(406) 375-2272
brwaterforum@
bitterroot.net

www.brwaterforum.org

Executive Director
Heather Mullee

AmeriCorps Member
Kalena Gravina

Board of Directors
Dave Schultz,
President
Rob Johnson,
Vice President
Travis Martinez,
Treasurer
Ed Snook,
Secretary
Al Pernichele
Chris Clancy
Eddie Olwell

May 10, 2012

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

To Whom It May Concern.

The Bitter Root Water Forum (BRWF) is a community driven non-profit organization dedicated to supporting the traditions of agriculture, community and recreation by protecting, enhancing and restoring the Bitterroot Watershed through on the ground restoration projects and watershed education. We are contacting you in support of the proposed Ward Ditch/Lost Horse Creek siphon project.

The existing structures are likely fish barriers that potentially divert fish from Lost Horse Creek into the Ward Ditch as well as de-water the creek during irrigation season. BRWF supports the proposed project as a siphon diverting water under the creek will begin to address existing fish barriers in Lost Horse Creek. BRWF will further support the proposed project if it goes beyond siphon installation and commits to a solution that will leave more water instream in Lost Horse Creek during the traditionally low flows that affect on the creek during irrigation season.

Please do not hesitate to call me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Heather Mullee".

Heather Mullee
Executive Director



April 11th, 2012

Trout Unlimited
111 N. Higgins Ste.500
Missoula, MT 59802

Ward Irrigation District
220 Camas Creek Loop
Hamilton, MT 59840

Dear Board Members,

I am writing in support of the Ward Ditch/Lost Horse Creek Crossing project. This project addresses an irrigation conveyance practice that is outdated and inefficient. The current practice creates a barrier to fish passage and de-waters lower Lost Horse Creek during a time that is critical for fish migration.

Recent data shows that rare populations of Bull Trout have been identified in the Ward Ditch and Lost Horse Creek during 2005 and 2006. Lost Horse Creek is considered critical habitat for Bull Trout by the US Fish and Wildlife Service indicating that a few changes to the current irrigation practices will immediately improve conditions for Bull, Westslope Cutthroat Trout and other wild fish species requiring spawning habitat during the irrigation season.

Trout Unlimited will be in further support of this project when the Ward Irrigation District proposes a solution that leaves the required cfs for fish passage in Lost Horse Creek during the low flows of the irrigation season. The proposed project allows Ward Irrigation ditch to convey most of its water from the Bitterroot rather than both Lost Horse Creek and the Bitterroot. This is the preferred solution from Trout Unlimited's perspective.

I strongly recommend granting funds for these projects for several reasons: 1) this site is recognized as high priority for restoration, 2) the technical people involved in the work are experience and capable, and 3) project partners have demonstrated their commitment in following through with meaningful work on the ground.

Feel free to call me with any questions at (406) 541-8614.

Sincerely,

Heather Whiteley
Project Manager
Trout Unlimited

MAY 11 2012

To: Department of Natural Resources and Conservation

Helena, Montana

From: Al Pernichele

634 Quast Lane

Corvallis, Montana

Subject: Ward Ditch Siphon

May 8, 2012

To Whom It May Concern:

As water commissioner for the Bitterroot River, I strongly recommend approval of the request for funds to install a siphon to prevent the Ward Ditch from mingling with water in Lost Horse Creek. This will greatly improve our ability to manage water being diverted from the Bitterroot River. It presently is not possible to measure the volume of water being diverted from the river from that diverted from Lost Horse Creek. As a result, it is not possible to ensure that water rights from these two sources are being administered in accordance with provisions of these rights. The only reliable measuring device in the ditch is located downstream from Lost Horse Creek.

The siphon will also greatly reduce entrainment of Westslope Cutthroat Trout and possibly Bull Trout in the Ward Ditch. Studies supported by Fish Wildlife and Parks indicate substantial losses from Lost Horse Creek and the Bitterroot River. The proposed siphon will eliminate entrainment of fish from Lost Horse. Plans to install a fish screen to prevent entrainment of fish from the river will eliminate losses from this source. Ward Ditch management must be commended for taking the initiative in eliminating loss of fish in their irrigation system.



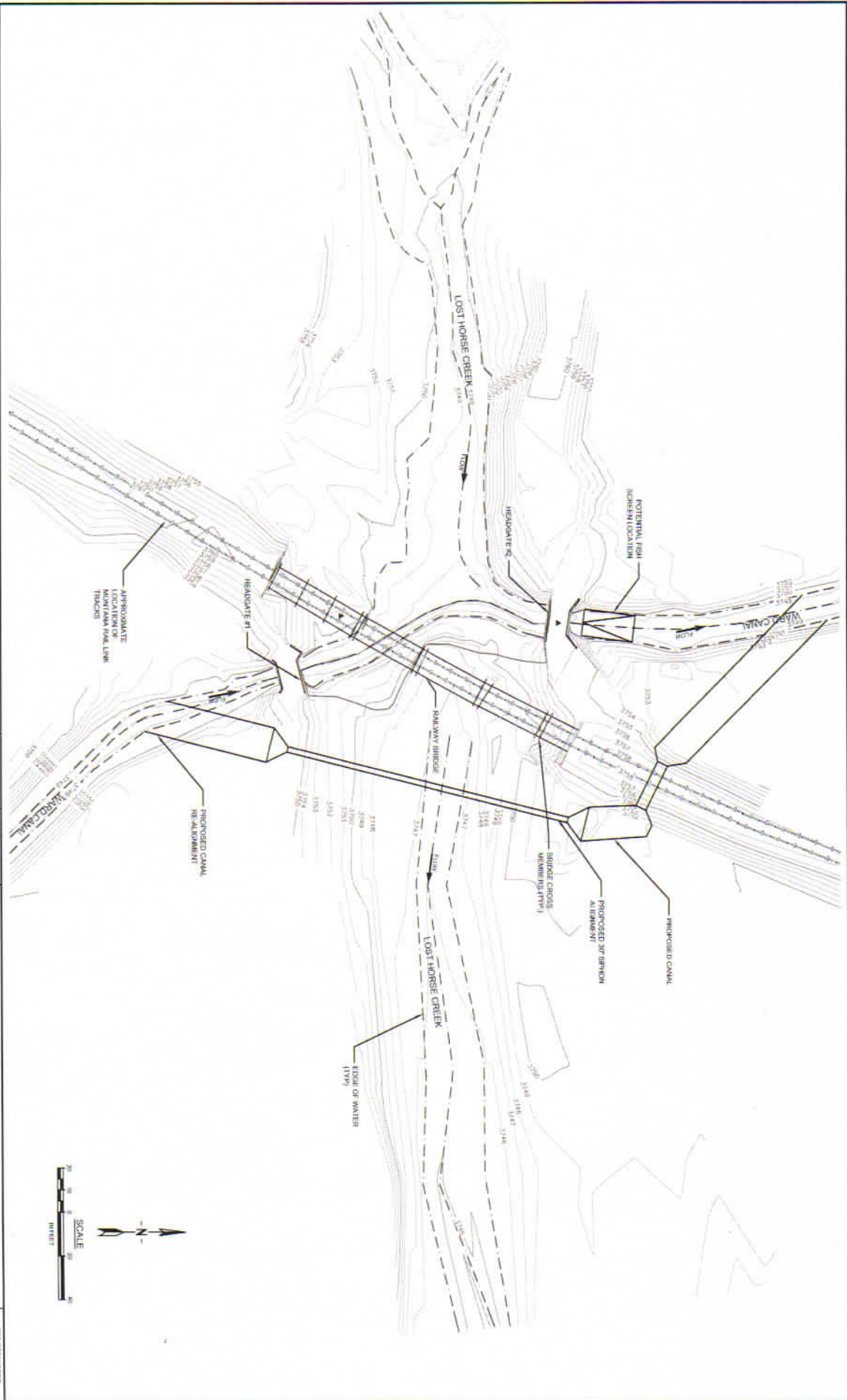
Al Pernichele

Water Commissioner

Bitterroot River

Attachment E: Design Drawings

SHEET 2 OF 2 1/16" = 10' HORIZONTAL SCALE 1/8" = 10' VERTICAL SCALE PROJECT: WARD CANAL PER SHEET NUMBER: 0000 DRAWING NUMBER: 0000		PROJECT NUMBER: SHEET NUMBER: DRAWING NUMBER:	
DESIGNER: MORRISON MAIERLE, INC. PROJECT: WARD CANAL PER SHEET: 0000 DRAWING: 0000		PROJECT: WARD CANAL PER SHEET: 0000 DRAWING: 0000	
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MORRISON MAIERLE, INC.

3011 Palmer Street
Missoula, Montana 59808

Ph: (406) 542-8880
Fax: (406)-542-4801

ENGINEER'S OPINION OF PROBABLE COST

Date: 2/15/2012
Project #: 4761.001
Project Name: Ward Irrigation District PER
Engineer: M. Barnes, M. Skorpik

LOST HORSE CREEK/WARD DITCH SIPHON

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Cost
101	Mob/Demob	1	LS	\$5,500	\$5,500
102	Concrete Inlet Structure	6	CY	\$1,000	\$6,000
103	HDPE Pipe - 42 inch (DR 32.5)	210	LF	\$200	\$42,000
104	HDPE Long Radius Bend - 42 inch	1	EA	\$12,000	\$12,000
105	HDPE Tee - 42 inch	1	EA	\$9,500	\$9,500
106	Bore and Jack - 48 inch (steel)	50	LF	\$1,500	\$75,000
107	Tie-downs	6	EA	\$900	\$5,400
108	6" Gate Valve	1	EA	\$1,200	\$1,200
109	HDPE Pipe - 6 inch (DR 32.5)	100	LF	\$40	\$4,000
110	Concrete Outlet Structure	6	CY	\$1,000	\$6,000
111	Demolition	1	LS	\$8,000	\$8,000
112	Excavation/Embankment	300	CY	\$30	\$9,000
113	Dewatering/Bypass Pumping	1	LS	\$20,000	\$20,000
114	Air Testing	1	LS	\$4,000	\$4,000

CONSTRUCTION SUB-TOTAL		\$207,600
CONTINGENCY	25%	\$51,900
CONSTRUCTION TOTAL		\$259,500
GRANT ADMINISTRATION	1%	\$2,600
ENGINEERING DESIGN	10%	\$26,000
PERMITTING	2%	\$5,200
BIDDING	1%	\$2,600
CONSTRUCTION ADMINISTRATION	9%	\$23,400
PROJECT TOTAL		\$319,300

* This draft estimate is for planning and informational use only and is not intended for bidding or construction.

Attachment F: Applicable Permits



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
MISSOULA REGULATORY OFFICE
1600 NORTH AVENUE WEST, SUITE 105
MISSOULA, MONTANA 59801-5500

MAR 05 2012

March 1, 2012

Regulatory Branch
Montana State Program
Corps No. **NWO-2012-00492-MTM**

Subject: Ward Irrigation District Canal Crossing – Lost Horse Creek - Ravalli County

Morrison-Maierle, Inc.
Attn: Molly Skorpik
3011 Palmer Street
Missoula, Montana 59808-1672

Dear Ms. Skorpik:

We have reviewed the Montana pre-application consultation submitted for Department of the Army (DA) authorization to install an irrigation canal crossing near Charlo Heights. The proposed work is located at latitude: 46.11473, longitude: -114.17400, Section 11, Township 4 North, Range 21 West, in Ravalli County, Montana.

Using the information you provided, the project involves installation of an irrigation siphon and fish screen which is appurtenant and functionally related to an existing irrigation structure. We have determined that no DA authorization is required for this project based on the exemption found at 33 CFR 323.4(a)(3), which reads:

"(3) Construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance (but not construction) of drainage ditches. Discharges associated with siphons, pumps, headgates, wingwalls, weirs, diversion structures and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption."

Although this office has determined that no DA permit is required for this project, this does not eliminate the requirement to obtain other applicable federal, state, tribal and local permits. Be advised that this exemption is not valid if the work you are proposing will convert an area into a use to which it was not previously subject, and if the creek channel will be significantly altered.

I am forwarding a copy of this letter to Betty Frost, Ward Irrigation District, 220 Camas Creek Loop, Hamilton, Montana 59840-9722. Please contact Amelia Gucker at (406) 541-4845, extension 325, if you have questions and reference Corps File Number NWO-2012-00492-MTM.

Sincerely,

Todd N. Tillinger
Montana Program Manager



Montana Rail Link

Montana Rail Link, Inc.
101 International Drive
Post Office Box 16390
Missoula, Montana
USA 59808

(406) 523-1500
(406) 523-1493 fax
www.montanarail.com

Attached to email message, original will follow in US Mail

FILE COPY

May 11, 2012

Molly Skorpik, P.E.
Morrison-Maierle, Inc.
3011 Palmer Street
Missoula, MT 59808

Re: Proposed Ward Irrigation District Inverted Siphon and Railroad Track Crossing
Near Railroad Bridge 57, 9th Subdivision, Darby

Dear Molly,

This letter confirms that Montana Rail Link (MRL) has no objections to the preliminary plans (sheet plotted on April 24, 2012) for changes to the Ward Irrigation ditch provided for our review. MRL appreciates the coordination done so far with this project, and we will work with the Ward Irrigation District for obtaining their permits on railroad right-of-way.

With current status of traffic on that segment of railroad, MRL would likely be amenable to the Ward Irrigation District using open cut construction for the inverted siphon longitudinal pipeline as well as the pipeline crossing of the railroad tracks. It would be expected that the open cut trench be restored to previous grade using compacted soil lifts.

Sincerely,

James J. Bieber
Director Engineering

NWB:tjm

JB/C-9....Bridge 57/9th Sub

Big Sky. Big Land. Big History.

Montana
Historical Society

February 22, 2012

Molly Skorpik
Morrison Maierle, Inc.
3011 Palmer Street
Missoula MT 59808

*Historic Preservation
Museum
Outreach & Interpretation
Publications
Research Center*

FEB 23 2012

RE: WARD IRRIGATION DISTRICT, LOST HORSE CREEK/WARD CANAL CROSSING PROJECT.
SHPO Project #: 2012022205

Dear Molly:

I have conducted a cultural resource file search for the above-cited project located in Section 11, T4N R21W. According to our records there have been a few previously recorded sites within the designated search locale. In addition to the sites there have been a few previously conducted cultural resource inventories done in the area. I've attached a list of these sites and reports. If you would like any further information regarding these sites or reports you may contact me at the number listed below.

It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. The Ward Ditch has not been formally recorded as a historic property. We would ask that this ditch be recorded and a determination of their eligibility be made prior to any new disturbance.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov. I have attached an invoice for the file search. Thank you for consulting with us.

Sincerely,



Damon Murdo
Cultural Records Manager
State Historic Preservation Office

File: MISC/FILE SEARCH/2012

225 North Roberts Street
P.O. Box 201201
Helena, MT 59620-1201
(406) 444-2694
(406) 444-2696 FAX
montanahistoricalsociety.org