July 15, 2014 1420 East 6<sup>th</sup> 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
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

Lewis & Clark Conservation District, 790 Colleen Street, Helena, MT 59601

Montana River Action, 304 N 18<sup>th</sup> Ave., Bozeman, MT 59715

U.S. Army Corps of Engineers, Helena

U.S. Fish and Wildlife Service, Helena

State Historic Preservation Office, Helena

Big Blackfoot Chapter Trout Unlimited, P.O. Box 1, Ovando, MT 59854

Montana Dept. of Natural Resources & Conservation, Attn: Neil Simpson, P.O. Box 127, Lincoln MT 59639

#### Ladies and Gentlemen:

Please find enclosed an Environmental Assessment (EA) prepared for the Future Fisheries Improvement Program (FFIP). The Program tentatively plans to provide partial funding to a project that would improve stream habitat and address sources of stream impairment in Liverpool Creek, potentially increasing the survival of resident westslope cutthroat trout. The project involves replacing an undersized stream crossing, eliminating and upgrading diversion structures, and improving flow conditions. Liverpool Creek is a tributary to Keep Cool Creek, which feeds into the Blackfoot River located north of the town of Lincoln in Lewis and Clark County.

Please submit any comments that you have by 5:00 P.M., August 18, 2014 to Montana Fish, Wildlife & Parks at the address listed above. The funding for this project through the FFIP is contingent upon approval being granted by the Fish and Wildlife 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,

Michelle McGree, Program Officer Habitat Bureau Fisheries Division

e-mail: mmcgree@mt.gov

#### ENVIRONMENTAL ASSESSMENT

# Fisheries Division Montana Fish, Wildlife & Parks Liverpool Creek Fish Passage/Entrainment

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that direct Montana Fish, Wildlife & Parks (FWP) to administer a Future Fisheries Improvement Program (FFIP). 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. This legislation was amended again in 2013 to open the program to all native fish species (statute section 87-1-283). The program now calls for the enhancement of native fish through habitat restoration, natural reproduction and reductions in species competition by way of the FFIP.

The FFIP is proposing to provide partial funding to a project calling for the replacement of undersized culverts with a fish-friendly bridge, the elimination of an upper irrigation diversion structure, the upgrading of the lower diversion structure with a fish screen, and the development of a water lease to improve instream flow conditions. The intent of the project is to improve stream habitat and to eliminate the threats to the persistence of westslope cutthroat trout in Liverpool Creek.

### I. Location of Project:

The project site is located on Liverpool Creek, a tributary to Keep Cool Creek, within Township 14 North, Range 8 West, Section 6 in Lewis and Clark County, near the town of Lincoln (Attachment 1).

#### II. Need for the Project:

One goal within FWP's six-year operations plan for the fisheries program is to "protect, maintain, and restore native fish populations, their habitats, life cycles, and genetic diversity to ensure stewardship of native species." Implementing habitat restoration projects through the FFIP contributes to the achievement of this critical goal.

## III. Scope of the Project:

Liverpool Creek, a first-order stream, supports populations of genetically pure resident westslope cutthroat trout. Near stream mile 2.8, the fishery and stream flows are disrupted by two irrigation diversions that cause channel impairment, fish entrainment, and stream dewatering. Both diversions lack headgates, causing the majority of streamflow to be diverted to the ditch. Near stream mile 2.7, an undersized stream crossing creates a migration barrier for upstream trout movement.

This restoration project would involve the replacement of the undersized stream crossing, composed of paired culverts, with a bridge that accommodates the entire channel (Attachment 2). The upper irrigation diversion and associated in-channel infrastructure would be removed, and the lower diversion would be renovated (Attachment 3). The lower diversion would utilize a rock cross-vane diversion structure and wedge wire screen to prevent fish entrainment, restore fluvial connectivity, improve fish passage, and maintain instream flows for the benefit of aquatic organisms. Approximately 50 feet of the channel will be restored in the vicinity of the diversion point.

The total estimated cost for this project is \$44,442. Of this total, the FFIP would be contributing up to \$11,255. The remaining funds will come from other sources and from in-kind services:

Contributor	In-kind services	In-kind cash					
Chutney Foundation		\$10,000					
MT Trout Unlimited (TU)		\$6,000					
U.S. Fish and Wildlife Service		\$5,000					
Big Blackfoot Chapter of TU	\$8,532	\$3,655					
TOTAL = \$33,187							

## IV. <u>Environmental Impact Checklist</u>:

Please see attached checklist.

### V. Explanation of Potential Impacts on the Physical Environment

### 1. Terrestrial and aquatic life habitats.

Impacts to aquatic life would be associated with the repair and removal of the existing irrigation diversions and replacement of an undersized stream crossing with a fish-friendly bridge. Construction impacts will be temporary; long term, this effort is expected to improve fish passage in Liverpool Creek, reduce fish entrainment, and increase the amount of water retained in the stream. Westslope cutthroat trout are expected to benefit from the project over the long term.

### 2. Water quantity, quality and distribution.

This project increases the amount of water retained in the stream by improving the diversion structures and developing a long-term water lease with the irrigator. Short term, turbidity will increase during project construction. To minimize turbidity, operation of equipment in the stream channel will be limited to the extent practicable. A temporary coffer dam will direct flow away from the construction of the new cross-vane diversion structure and screen (Attachment 3). The Montana Department of Environmental Quality (DEQ) 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 Corps of

Engineers (ACOE) will be contacted for requirements to meet the federal Clean Water Act (404 permit).

#### 5. Aesthetics.

In the short term, aesthetics would be adversely impacted during construction due to ground disturbance and the presence of heavy equipment. Long term, the proposed project would enhance aesthetics in Liverpool Creek by replacing the undersized culverts with a bridge and removing and/or replacing the irrigation diversions. By improving the irrigation structures and developing a lease agreement, additional water would be kept in the stream.

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

Westslope cutthroat trout use Liverpool Creek and are known to be genetically pure, native to Montana, and a Species of Concern because of their shrinking distribution and declining numbers. The intent of this project is to eliminate entrainment of fish into the irrigation system, improve fish passage, and improve instream flow. The project is expected to benefit westslope cutthroat trout using the stream.

### 9. Historical and archeological sites.

The proposed project may require an ACOE 404 permit. Therefore, the State Historic Preservation Office (SHPO) will be contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

## VI. Explanation of Impacts on the Human Environment.

### 4. Agricultural or industrial production.

The proposed diversion removal and renovations will not interfere with water or property rights. Irrigators have the senior water right and the furthest upstream point of diversion. The project will not adversely affect agricultural production.

### 7. Access to & quality of recreational activities.

Improving stream function and connectivity is expected to improve habitat for westslope cutthroat trout, eliminating significant threats to their persistence. Angling opportunities will increase on Liverpool Creek.

#### VII. Discussion and Evaluation of Reasonable Alternatives.

#### 1. No Action Alternative

If no funding is provided through the FFIP, the applicant would have to either seek

additional sources of funding to complete the project, or the project would not be accomplished. The irrigation diversions would remain in place, leading to entrainment and reduced streamflow. The undersized stream crossing would continue to act as a barrier at high flows.

## 2. <u>The Proposed Alternative</u>

The proposed alternative intends to provide partial funding through the FFIP to expand suitable westslope cutthroat habitat and reduce threats to the persistence of this native species. This project would address the problems associated with an undersized stream crossing and irrigation diversions that were causing entrainment, blocking fish movement, and dewatering the stream.

### 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 FFIP has been posted on the FWP 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 FFIP. One letter of support was attached to the application. The proposed project also will be reviewed by the Fish and Wildlife Commission, and <u>funding will be contingent upon their approval</u>. The EA will be distributed to all individuals and groups listed on the cover letter and will be published on the FWP webpage: <a href="https://www.fwp.mt.gov">www.fwp.mt.gov</a>

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on August 18, 2014.

4. Person responsible for preparing the EA.

Michelle McGree, Program Officer Habitat Bureau Fisheries Division Montana Fish, Wildlife & Parks 1420 East 6th Avenue PO Box 200701 Helena, MT 59620

Telephone: (406) 444-2432 e-mail: mmcgree@mt.gov

### MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701 (406) 444-2432

## **ENVIRONMENTAL ASSESSMENT**

Project Title: <u>Liverpool Creek Fish Passage/Entrainment</u> Division/Bureau: Fisheries Division / Habitat Bureau (FFIP)

Description of Project: The FFIP tentatively plans to provide partial funding to a project calling for the replacement of an undersized stream crossing with a fish-friendly bridge, the elimination of the upper irrigation diversion structure, the upgrading of the lower diversion structure with a fish screen, and the acquisition of leased water to improve instream flow conditions. The intent of the project is to improve stream habitat and to eliminate threats to the persistence of westslope cutthroat trout in Liverpool Creek.

### POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture				X		
4. Vegetation cover, quantity & quality				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		X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction: <u>Lewis & Clark Conservation District</u>, <u>Montana Department of Natural Resources and Conservation</u>, <u>US Fish and Wildlife Service</u>, <u>ACOE</u>, <u>DEQ</u>, <u>SHPO</u>

Individuals or groups contributing to this EA <u>Big Blackfoot Chapter of Trout Unlimited, River Design Group, Inc.</u>

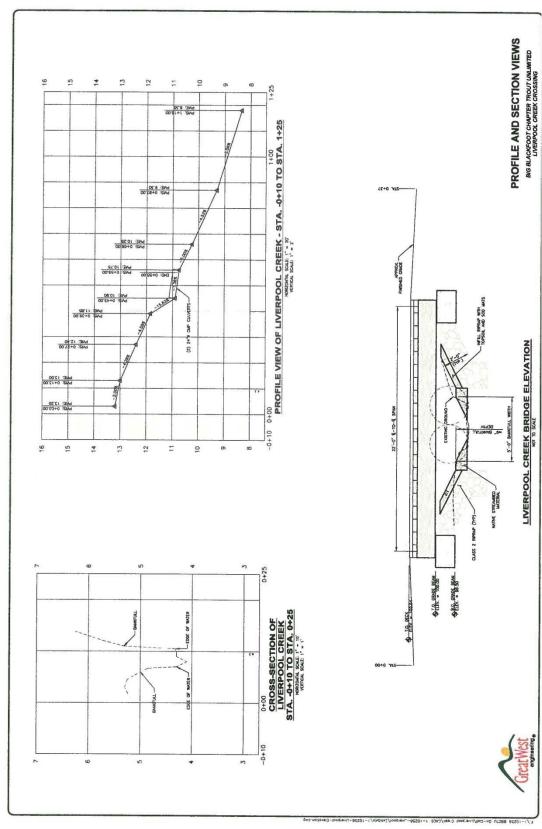
Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Michelle McGree

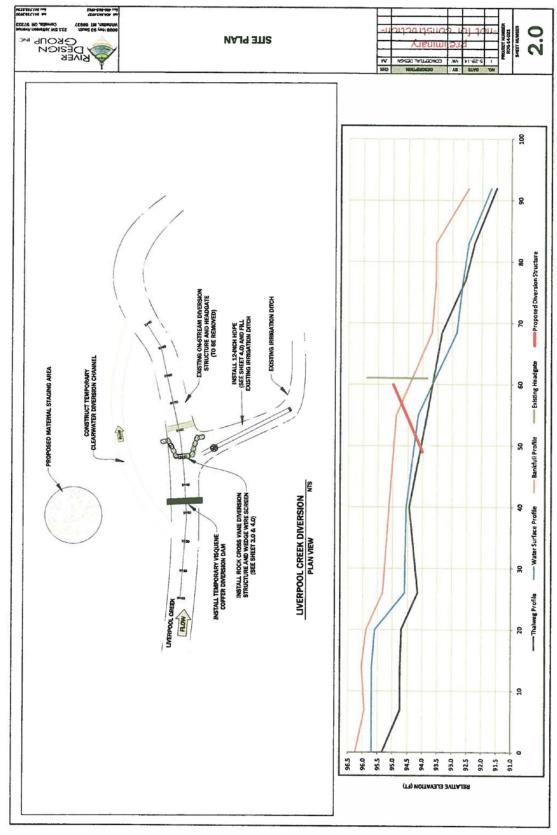
Date: July 15, 2014



ATTACHMENT 1



ATTACHMENT 2



ATTACHMENT 3