

**Finding of No Significant Impact  
Cartersville Irrigation Dam Fish Passage  
Forsyth, Montana**

The Department of Montana Fish, Wildlife, & Parks (FWP), in cooperation with the United States Army Corps of Engineers (USACE), Omaha District; Montana Department of Environmental Quality (DEQ); and Montana Department of Natural Resources and Conservation (DNRC), is planning to modify the Cartersville irrigation dam to allow proper passage of fish, specifically, the shovelnose sturgeon.

A report titled "Draft Cartersville Irrigation Dam Fish Passage Alternative Analysis and Environmental Assessment", dated April 2010, was prepared for FWP by DOWL HKM.

The Corps' Regulations Implementing NEPA (33 CFR 230), paragraph 21 states, "A District Commander may adopt another agency's EA/FONSI."

State agencies may also adopt an EA completed by co-lead or complete further documentation as they see fit to comply with the Montana Environmental Policy Act (MEPA) process.

Initial alternatives were developed for this project as part of a 2-day meeting in February 2009. The participants generated 60 ideas for various alternatives. The Cartersville Irrigation District supported the rock ramp alternative, with several options, and the controlled notch (inflatable bladder) alternative. The rock ramp alternative consists primarily of a rock ramp in the north channel of the Yellowstone River below the diversion dam, a berm from the south abutment of the diversion dam to the south edge of the north channel (north side of island) to control the split of river flows to the north and south channel, and bank protection/apron downstream of the rock ramp. The controlled notch (inflatable bladder) alternative consists of installing an inflatable bladder across the entire Yellowstone River at the location of the existing diversion dam. The rock ramp alternative with a constant slope of 0.5% was selected as the proposed action for meeting the goals/objectives of the project.

The proposed action would improve fish passage in the vicinity of the Cartersville Irrigation Dam. Additionally, a migration barrier would be removed and connectivity to upstream habitat would be improved for fish and other aquatic animals; as a result, there may be more food available for fish-dependent species. Angling opportunities may also be improved. The no-action alternative would not modify the existing dam.

The proposed work would affect waters of the United States regulated by Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act; therefore a Section 404/10 Department of the Army (DA) permit and a Montana State Water Quality Certification Permit (Section 401) would be needed for the project.

Compliance with the following additional laws, regulations, and policies was evaluated as part of the EA:

- The Farmland Protection Policy Act of 1995;
- Fish and Wildlife Coordination Act of 1958;
- Migratory Bird Treaty Act and Executive Order 13186;
- National Historic Preservation Act of 1966;
- Rivers and Harbors Appropriation Act of 1899;
- Executive Order 13112 (Invasive Species);
- Executive Order 11988 (Floodplain Management);
- Executive Order 11990 (Protection of Wetlands);
- Executive Order 13007 (Indian Sacred Sites);
- Executive Order 12898 (Environmental Justice);
- State Water Rights;
- Stream Protection Act;
- Short Term Water Quality Standards for Turbidity (318);
- Montana Land-Use License of Easement on Navigable Waters;
- Stormwater Discharge General Permits; and
- Section 401 Water Quality Certification.

FWP will coordinate with the responsible agencies to obtain all necessary permits and approvals, and ensure compliance with these laws, regulations, and policies during design and construction.

### **Beneficial Impacts, Adverse Impacts, Cumulative Effects, and Proposed Mitigation**

The beneficial impacts, adverse impacts, cumulative effects, and proposed mitigation related to the proposed action are summarized below.

#### Ecological Resources

- Hydrology
  - No changes to hydrology are anticipated as a result of the proposed action.

- Geomorphology
  - Beneficial impacts
    - The steep drop created by the current dam would be removed and extended over a longer channel distance, improving conditions for overall connectivity and fish passage.
    - Scour potential of the river bed downstream of the dam structure would be reduced.
  - Adverse impacts
    - Scour potential of the river bed and island downstream of the dam structure may be increased when the berm is overtopped.
  - Cumulative Effects
    - Total bank armor length would be increased by 2,100 linear feet, increasing the length of armored bank from 22% to 25% of the reach. This increase would be offset by the net benefit of the project to the Yellowstone River fishery.
  - Proposed mitigation
    - Bank armor would be designed to minimize the impact to fishing access.
- Federally-Listed Species and State Species of Special Concern
  - Beneficial impacts
    - Fish may concentrate at the toe of the dam, increasing food availability for bald eagles.
    - A potential migration barrier to spiny softshell turtles, blue sucker, sturgeon chub, paddlefish, and sauger would be removed.
  - Adverse impacts
    - Some great blue heron feeding habitat may be reduced.
  - Cumulative Effects
    - Fish passage would be improved as a result of the proposed action and modification of other dams on the Yellowstone River.
  - Proposed mitigation
    - No mitigation measures are proposed.
- Lands and Vegetation
  - Beneficial impacts
  - Adverse impacts
    - Natural bank vegetation may be displaced by bank armor; however, the existing vegetation is sparse, so the effect would be minimal.
    - Approximately 22 acres of waters of the US are estimated to be filled.

- Approximately 1.45 acres wetlands are estimated to be lost. A wetland delineation would be completed during final design to confirm the wetland boundaries and impacts to wetlands and other waters of the US.
    - Cumulative Effects
      - The proposed rock ramp would add to the cumulative loss of wetlands in Montana.
    - Proposed mitigation
      - Placement of fill within the river channel is expected to be self mitigating as it will result in transforming slower moving, deep water riverine habitat to fast-moving, shallower water rapid habitat.
      - Mitigation for fill, if necessary, would be coordinated with the USACE, Montana Department of Environmental Quality, and other responsible agencies following final design of the rock ramp.
      - Mitigation wetlands would be constructed, in coordination with USACE, to offset the loss of wetlands resulting from this project.
  - Aquatic Assemblages
    - Beneficial impacts
      - Fish passage would be improved for juvenile sauger, shovelnose sturgeon, endangered pallid sturgeon, and other species.
      - Previously unavailable spawning, rearing, and foraging areas upstream of the dam may become accessible for fish.
      - Genetic diversity and populations of fish may increase.
      - Recreational fishing opportunities may improve upstream of the dam.
    - Adverse impacts
      - Transport for unwanted or invasive fish would be improved.
      - Larval fish, macroinvertebrates, and freshwater mussels may be killed as a result of construction activities; the loss is expected to be short-term, localized, and minimal.
    - Cumulative Effects
      - Fish passage would be improved as a result of the proposed action and modification of other dams on the Yellowstone River.
    - Proposed mitigation
      - No mitigation measures are proposed.
  - Recreation
    - Beneficial impacts
      - Recreational fishing opportunities may improve.

- Adverse impacts
  - Boat passage may be impacted in the vicinity of the existing boat ramp and island.
- Cumulative Effects
  - The Yellowstone River fishery would benefit as a result of the proposed action and modification of other dams on the Yellowstone River.
- Proposed mitigation
  - A new boat ramp may be constructed downstream of the existing state park on the south bank of the river, downstream of the dam.

#### Cultural Resources

- Beneficial impacts
  - The risk of dam failure would be minimized.
- Adverse impacts
  - Based on the potential disturbance to the diversion dam, the Montana State Historic Preservation Office (SHPO) believes that the project has the potential to impact cultural properties.
- Cumulative Effects
  - The Yellowstone River fishery would benefit as a result of the proposed action and modification of other dams on the Yellowstone River.
- Proposed mitigation
  - Future design and construction work would be coordinated with the State Historic Preservation Office to minimize effects to cultural resources.

#### Aesthetic Resources

- Beneficial impacts
  - The risk of dam failure would be minimized.
  - The rock ramp would provide aesthetic values similar to natural rapids.
  - The south channel of the Yellowstone River would stay in its current configuration.
- Adverse impacts
  - No adverse impacts are expected.
- Cumulative Effects
  - No cumulative effects are expected.
- Proposed mitigation
  - No mitigation measures are proposed.

### Surface Water Quality

- Beneficial impacts
  - No beneficial impacts are anticipated.
- Adverse impacts
  - Turbidity and concentrations of other chemicals may increase temporarily in a localized area during construction.
- Cumulative Effects
  - The existing water quality impairment listing for the river upstream of the dam would be addressed by removing the warm water fish passage barrier.
- Proposed mitigation
  - Best Management Practices (BMPs) would be employed during construction to minimize adverse effects.
  - A sediment management plan would be prepared by the contractor and implemented during construction to monitor, control, and minimize turbidity.
  - Material handling, erosion control, and spill control protocols would also be developed and implemented during construction.
  - Disturbance to river bank vegetation during construction would be mitigated by revegetation with species native to the area.

### Air Quality

- Beneficial impacts
  - No beneficial impacts are expected.
- Adverse impacts
  - Dust and exhaust fumes would increase temporarily, on a localized basis, during construction.
- Cumulative Effects
  - No cumulative effects are expected.
- Proposed mitigation
  - BMPs would be employed during construction to minimize dust and exhaust.

**Conclusion**

The proposed action has been and will continue to be fully coordinated with federal, state, tribal, and local agencies with jurisdiction over the biological, ecological, cultural, and hydrological resources of the project area. Based upon these factors and others discussed in detail in the Environmental Assessment, the planned action would not have a significant effect on the human environment. Therefore, an Environmental Impact Statement will not be prepared for the proposed Cartersville Irrigation Dam Fish Passage Project.

**Agency Approval**

Montana Department of Fish, Wildlife, & Parks

  
Name and Title *(ACTING CHIEF)*

11/17/10  
Date

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The Montana Department of Natural Resources and Conservation (DNRC) is a cooperating agency for the preparation of the Draft Cartersville Irrigation Dam Fish Passage Alternative Analysis and Environmental Assessment (EA).

On the basis of a thorough review of the analysis of environmental impacts as presented in the final EA, and implementation of all environmental commitments identified in the final EA, DNRC has determined that the proposed action would have no significant impact on the quality of the human environment of the study area. Therefore, an environmental impact statement (EIS) will not be prepared for this project.

Montana Department of Natural Resources and Conservation

Melt - DNRC Director  
Name and Title

11/5/10  
Date