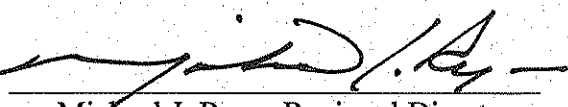
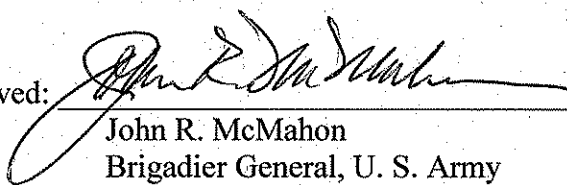


Finding of No Significant Impact Intake Diversion Dam Modification, Lower Yellowstone Project

Approved: 
Michael J. Ryan, Regional Director
Great Plains Region, Bureau of Reclamation

APRIL 22, 2010
Date

Approved: 
John R. McMahon
Brigadier General, U. S. Army
Division Commander

26 APR 2010
Date



U.S. Department of the Interior
Bureau of Reclamation



US Army Corps
of Engineers

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Finding

This finding of no significant impact (FONSI) describes the U.S. Department of the Interior, Bureau of Reclamation's (Reclamation) and the U.S. Army Corps of Engineers' (Corps) finding and decision regarding the proposed Intake Diversion Dam Modification, Lower Yellowstone Project (Intake Project). Environmental effects of the proposed Intake Project and public comments on the proposal were evaluated under the provisions of the National Environmental Policy Act (NEPA), and are described in the Final Intake Environmental Assessment (Final Intake EA) dated April 2010. The Draft Intake EA was distributed to the public for review and comment on February 12, 2010. The public comment period ended on March 16, 2010. All comments received were carefully considered, and responses have been prepared to the substantive comments. The comments received on the Draft Intake EA were posted on the internet at www.usbr.gov/gp/mtao/loweryellowstone

Reclamation and the Corps have determined, based upon the environmental analysis contained in the Final Intake EA that the Intake Project would not result in any significant impacts to the human environment and that preparation of an environmental impact statement is not required. This FONSI constitutes Reclamation's and the Corps' final decision with respect to the appropriate NEPA compliance for the proposed Intake Project.

Decision

Reclamation and the Corps, as joint lead agencies for this proposed project, have decided to select and implement the preferred alternative. That alternative includes construction of a new main canal headworks, canal extension and fish screens, and replacing Intake Diversion Dam with a concrete weir and rock ramp. Implementation of the preferred alternative may take place immediately.

The Corps' participation in the proposed Intake Project is authorized by the United States Congress in the 2007 Water Resources Development Act (Public Law 110-114)(Act). Section 3109 of that Act authorizes the Corps to use funding from the Missouri River Recovery and Mitigation Program to assist Reclamation with compliance with federal laws, design, and construction of modifications to the Lower Yellowstone Project for the purpose of contributing to ecosystem restoration. Funding for construction would be provided by the Corps subject to Congressional appropriation.

Purpose and Need for the Project

The purpose of the proposed action is to correct unsatisfactory passage conditions for endangered pallid sturgeon and other native fish in the lower Yellowstone River, and to reduce entrainment of fish into the Lower Yellowstone Project main canal.

The underlying need for the proposed action is for Reclamation and the Corps to comply with the Endangered Species Act (ESA). If Reclamation does not initiate and successfully complete ESA section 7 consultation, then the Lower Yellowstone Irrigation Project Board of Control's ability to operate the dam and headworks to deliver water to the Lower Yellowstone Project could be severely constrained or limited in the future. Reclamation has contractual obligations to deliver water needed to continue viable and effective operation of the Lower Yellowstone Project. The Corps needs to comply with the 2003 Missouri River Amended Biological Opinion, as amended by letters on October 23, 2009 and April 7, 2010. Fish passage and entrainment protection at Intake are now Corps requirements under the amended Biological Opinion.

Selected Alternative – The Rock Ramp Alternative

The selected alternative would replace Intake Diversion Dam with a concrete weir and rock ramp. This would maintain the existing surface elevation of the river above the weir for diversion into the main canal, while improving fish passage and contributing to ecosystem restoration. A new main canal headworks structure with removable rotating drum screens or other screens that meet the criteria to minimize entrainment also would be constructed.

The selected alternative was identified as the preferred alternative in the Draft Intake EA. It is also the least cost alternative. Unlike the No Action Alternative, the Rock Ramp Alternative would meet the purpose and need of the proposed action. In comparison to the no action alternative, the preferred alternative would improve fish passage. Hydraulic modeling indicates that the Rock Ramp Alternative would be easier for pallid sturgeon to navigate than the other alternatives. Recreational resources would be less affected than with the other action alternative, because the river would remain adjacent to the campground and day use area, and access would be improved to Joe's Island. Because the construction footprint is in the same location but smaller than the other action alternative, there would be fewer impacts to natural resources and wildlife, and fewer actions to minimize effects would be required. Finally, it would cost about \$30.1 million less to construct than the other action alternative, would have lower annual operation and maintenance costs, and would take less time to build.

Actions to Minimize Effects from the Selected Alternative

During the environmental compliance process, potential environmental effects of the Rock Ramp Alternative were identified, either by members of the general public, other agencies, or Reclamation or Corps staff. Reclamation and the Corps used potential effects to focus the environmental compliance process, to structure the content of the Final Intake EA, and to identify opportunities for avoiding, minimizing, or mitigating adverse effects from construction of the Intake Project.

The Final Intake EA identifies a number of Intake Project design features, best management practices, and environmental commitments that will avoid, reduce, or eliminate adverse environmental effects which may otherwise result from construction and operation of the proposed Intake Project. Reclamation and the Corps are committed to implementing such measures as described below. These are organized by the principal environmental concern or resource that would be addressed by each commitment; however, many measures would benefit multiple environmental resources and values.

Additional information regarding environmental effects, benefits, and environmental commitments can be found in the Final Intake EA. In the Final Intake EA, the preferred alternative was compared to the No Action Alternative (Continue Present Operation) to determine the effects on each resource. With implementation of the environmental commitments outlined in this FONSI, the anticipated effects of the proposed project will not significantly impact the human environment.

To ensure that Intake Project activities are completed concurrently and in full compliance with all environmental commitments, an Environmental Review Team will be formed. Members of the team, as identified below, will review and assist Reclamation and the Corps on Intake Project actions during implementation of the project and the environmental commitments. This team also will address other relevant state and federal environmental rules and regulations, such as the Endangered Species Act, Clean Water Act and the National Historic Preservation Act. Any changes in the construction program warranting additional NEPA review or other environmental compliance will be addressed by the Environmental Review Team. In addition, an Adaptive Management Plan is being developed in accordance with the Adaptive Management Strategy described in Appendix J of the Final Intake EA.

The Environmental Review Team could include technical representatives of the following entities:

- Bureau of Reclamation
- U.S. Army Corps of Engineers
- Lower Yellowstone Irrigation Project Board of Control
- Montana Department of Environmental Quality
- Montana Department of Natural Resources and Conservation
- Montana Fish, Wildlife & Parks (FWP)
- U.S. Fish and Wildlife Service
- The Nature Conservancy
- Montana State Historic Preservation Officer
- Other technical entities as deemed important to the process

When construction affects private lands or lands administered by agencies other than those listed above, landowners or specialists representing those interests will be invited to participate on the team for the components that potentially affect their lands.

Environmental Commitments

The following actions to minimize effects will be implemented as part of the selected alternative. Additional information regarding the selected alternative can be found in the Final Intake EA. Many of the environmental commitments will be required in the construction specifications.

Adaptive Management

- Reclamation and the Corps recognize that there is uncertainty in addressing natural resource issues. To manage this uncertainty Reclamation and the Corps will develop an adaptive management plan. The plan will be developed in accordance with the Department of the Interior Policy guidance (Order 3270) and the report *Adaptive Management, The U.S. Department of Interior Technical Guide* (Williams et al. 2007).
- Reclamation and the Corps will follow the Adaptive Management Strategy outlined in appendix J of the Intake Final EA. Prior to completing construction, a specific Adaptive Management Plan for the Rock Ramp Alternative will be completed.
- All constructed features will be monitored for at least 8 years in accordance with an adaptive management plan to ensure they are operating as designed to improve fish passage and reduce entrainment.

Air Quality

- Dust suppression techniques, such as sprinkling problem sites with water, will be used during construction activities.

Geomorphology

- River morphology will be monitored to assess changes to the stream channel resulting from construction of the Rock Ramp Alternative. The Environmental Review Team will be consulted regarding specific measures to mitigate impacts if substantive changes are determined to have been caused by the Intake Project.

Surface Water Quality

- A water quality monitoring program will be established for ensuring that water quality standards are not violated during construction activities.
- Equipment for handling and conveying materials during construction shall be operated to prevent dumping or spilling the materials into wetlands and waterways.
- Discharges of dredged or fill material into waters of the U.S. will be carried out in compliance with provisions of Section 404 of the Clean Water Act, the permit requirements of the Corps, and requirements contained in the Section 401 water quality certification issued by the Montana Department of Environmental Quality.
- Erosion control measures will be employed where necessary to reduce wind and water erosion. Erosion and sediment controls will be monitored daily during construction for effectiveness, particularly after storm events, and the most effective techniques will be used.
- Silt barriers, fabric mats, or other effective means will be placed on slopes or other eroding areas where necessary to reduce sediment runoff into stream channels and wetlands until vegetation is re-established. This will be accomplished either before or as soon as practical after, disturbance activities.
- Contamination of water at construction sites from spills of fuel, lubricants, and chemicals will be prevented by following safe storage and handling procedures in accordance with state laws and regulations.

- Hazardous materials will be handled and disposed of in accordance with a hazardous waste plan.

Aquatic Communities

General

- All work in the river will be performed in a manner to minimize increased suspended solids and turbidity, which may degrade water quality and damage aquatic life outside the immediate area of operation.
- All areas along the bank disturbed by construction will be seeded with native vegetation to minimize erosion.

Fish

- To avoid potential impacts, coffer dam construction and in-stream heavy equipment activity will be coordinated with fishery experts from the Service, FWP, Reclamation, and the Corps to avoid and or minimize potential impacts.
- All pumps will have intakes screened with no greater than ¼" mesh when dewatering cofferdam areas in the river channel. Pumping will continue until water levels within the contained areas are suitable for salvage of juvenile or adult fish occupying these areas. Fish will be removed by methods approved by the Service and FWP prior to final dewatering.
- Reclamation will consult with FWP to ensure that flows comparable to environmental baseline are maintained during construction to support the fishery during low-flow periods (late summer/early autumn).

Federally-Listed Species and State Species of Special Concern

Whooping Crane

- Reclamation will monitor the Service's whooping crane sighting reports to ensure that whooping cranes are not in the Intake Project area during construction. If any are sighted within the Intake Project area, Reclamation will consult with the Service regarding appropriate actions.

Interior Least Tern

- Visual surveys will be conducted weekly from May 15 to August 15 at all potential least tern nesting areas (sparsely vegetated sandbars) within line-of-site of the construction area.
- All surface-disturbing and construction activities will be restricted from May 15 to August 15 within 0.25 mile or the line-of-site of any active interior least tern nest.

Pallid Sturgeon

- A physical model of the rock ramp will be constructed to provide additional velocity and turbulence data needed for final design of an effective ramp.
- Reclamation and the Corps will consult with the Biological Review Team during the design of the Rock Ramp, including but not limited to reviewing results and making recommendations on the physical model, hydraulic modeling, and final alternative design.
- The construction activities within the wetted perimeter of the active channel will be observed and monitored by a qualified fisheries biologist to avoid direct impacts to adult or juvenile pallid sturgeon. In-stream construction activities will cease if the fisheries

monitor determines there is potential for direct harm or harassment of pallid sturgeon, until the potential for direct harm or harassment has passed. This will include coordination with FWP to make sure radio-tagged pallid sturgeon and other monitored native fish continue to be monitored, especially during the construction season.

- Any in-stream construction activity will be conducted during periods most likely to minimize the potential impact to the pallid sturgeon. The months to avoid and/or minimize impacts to pallid sturgeon are June and July.

Species of Special Concern

These are special species not covered by the ESA, but are include species identified by the states of Montana and North Dakota as worthy of conservation.

- Before every construction season, the Environmental Review Team will meet with FWP to determine procedures to minimize impacts to species of special concern. Surveys for species likely to occur in the Intake Project area may be required as some of these species could be potentially harmed by construction activities. Survey requirements will be coordinated with Montana Natural Heritage Program and FWP prior to any construction activities. These species could require surveys: bald eagle, grasshopper sparrow, red-headed woodpecker, Townsend's big-eared bat, nine-anther clover, pale-spiked lobelia, and silky-prairie clover.

Lower Yellowstone Irrigation Project

Modification of the original engineering design to incorporate an additional screen and phasing construction would avoid interruptions in water deliveries to the irrigation districts during the irrigation season.

- Construction of the north half of the concrete weir and rock ramp will start after completing the headworks and canal extension to continue diversion of flows for uninterrupted operation of the irrigation districts.
- Flows will continue to be diverted into the main canal through the existing headworks while building the new headworks.

Recreation

- In order to minimize impacts to recreationists, the construction contractor will implement dust abatement activities on all dirt or gravel roads within or leading to the construction zone, on both sides of the river.
- To allow access to recreation areas, the construction contractor will grade, on an as-needed basis, all dirt or gravel roads within or leading to the construction zone, on both sides of the river, except in areas with historic properties.
- The construction contractor will use "flaggers" during periods of time when large volumes of vehicles cross the entrance road to the campground and picnic/day use area.
- The construction contractor, Reclamation, and the FWP will meet to evaluate and coordinate closures at the FAS and Joe's Island to recreational use, including closure of construction zones to swimming, fishing, boating, hiking, camping, hunting, etc. within or on both sides of the river.
- The construction contractor, Reclamation, and the FWP will identify a "portage" route around or through the construction zone to allow boaters to hand-carry or drag their boats past the construction zone.
- The construction contractor will clearly post and sign any areas within any designated construction zones. Signs will include warnings limiting or prohibiting certain

recreational uses within the zone, such as swimming, fishing, boating, hiking, camping, etc. Signs will be posted upstream and downstream of the Intake Diversion Dam to warn boaters of construction activity.

- The FWP will designate access corridors through the existing Intake FAS campground and picnic/day use area that could be used to access the river by foot or to launch boats under "primitive" conditions.
- To the extent possible, construction activities will cease during the paddlefish season or until the paddlefish season is closed at Intake FAS.

Reclamation and the FWP will evaluate, and the Corps will construct, either:

- A new boat ramp at the existing Intake FAS, or
- A new boat ramp immediately adjacent to the existing Intake FAS, or
- A new boat ramp at a site near the existing Intake FAS on the west side of the Yellowstone River and accessible by Highway 16

Reclamation and the FWP will develop a public notification plan to include:

- Signs on the road leading to the FAS or Joe's Island advising the public of closures or restrictions
- Signs indicating the location of other recreation sites including campgrounds, picnic/day use areas and boat ramps

Lands and Vegetation

General

- The Environmental Review Team will play a role in oversight of actions to minimize effects for land and vegetation.
- Before every construction season, Reclamation and Corps will meet with the Service and the appropriate state wildlife agencies to determine a procedure to minimize impacts to lands and vegetation. A reconnaissance survey of construction easements will be conducted to identify and verify wetlands, grasslands, woodlands, and riparian areas subject to disturbance and/or destruction in the Intake Project area during construction activities. The Environmental Review Team will be consulted, as necessary, to determine appropriate avoidance and/or protection measures. If adverse impacts cannot be avoided, appropriate procedures and requirements for minimizing or mitigating effects will be discussed with the Environmental Review Team.
- Disturbance of native vegetation will be minimized through construction site management (e.g., using previously disturbed areas and existing easements when feasible and designating limited equipment/materials storage yards and staging areas.) It will be limited to that which is absolutely necessary for construction of the Intake Project.
- All areas disturbed or newly created by the construction activity will be seeded with vegetation indigenous to the area for protection against subsequent erosion and noxious weed establishment.
- All equipment tracks and tires working on Joe's Island or other noxious weed infested areas will be cleaned prior to transportation to an uninfested site.
- An integrated weed plan will be developed and approved by the Environmental Review Team. It will identify best management practices to control the spread or introduction of any noxious weeds or plants. The weed plan will be implemented during and subsequent to construction.

- Erosion control measures will be employed where necessary to reduce wind and water erosion. Erosion and sediment controls will be monitored daily during construction for effectiveness and only effective techniques will be used.
- No permanent or temporary structures will be located in any floodplain, riparian area, wetland or stream that would interfere with floodwater movement, except for those described in chapter two of the Intake Final EA.

Wetlands

- Prior to beginning construction through Conservation Reserve Program lands or program wetlands, the Natural Resource Conservation Service, Consolidated Farm Services Agency, and respective landowners will be consulted to ensure that landowner eligibility in farm subsidy programs (if applicable) will not be jeopardized and that Sodbuster or Swampbuster requirements will not be violated by construction.
- Waste material, topsoil, equipment, debris, excavated material, or other construction related materials will not be disposed of within 50 feet of any wetland, drainage channel, irrigation ditch, stream, or other aquatic systems.
- If wetland mitigation is necessary wetland soils would be stockpiled for use when constructing new areas.
- Discharges of fill material associated with unavoidable crossings of wetlands or intermittent streams will be carried out in compliance with provisions of Sections 401 and 404 of the Clean Water Act and the nationwide and/or Intake Project-specific permit requirements of the Corps. The Natural Resource Conservation Service may evaluate isolated, non-navigable wetlands outside the jurisdiction of the Corps for jurisdiction and impacts.
- Rock quarry materials will come from sites with no potential to impact wetlands or other protected resources.
- The Environmental Review Team will play a role in oversight of actions to ensure compliance with Sections 401 and 404 of the Clean Water Act and will suggest actions to minimize effects to wetlands.

Grasslands

- Whenever possible, grasslands affected during Intake Project construction will be restored. Where existing native prairie cannot be re-seeded in its current location, procedures will be reviewed by the Environmental Review Team.
- Disturbed native grassland will be reseeded with native species with the seed mix being determined during final design and reviewed by the Environmental Review Team. Planted grassland will be reseeded with a seed mixture appropriate for the site and watered, if necessary, during establishment. Reseeding may require mulching in order to be successful.
- Areas requiring re-vegetation will be seeded and mulched during the first appropriate season after redistribution of topsoil. If reseeded cannot be accomplished within 10 days of topsoil replacement, erosion control measures will be implemented to limit soil loss. Local native grass species would be used (mixture to be reviewed by the Environmental Review Team).
- Grassland seeding will be completed prior to May 15, where feasible. If spring seeding is not feasible, fall seeding will be performed between August 15 and October 15 prior to ground freezing.

- To reduce erosion, water bars will be installed at specified intervals, depending upon soil type, grade, and terrain on disturbed slopes with grades of 6% or greater. Vegetation and soil removal will be accomplished in a manner that will prevent erosion and sedimentation.
- Noxious weeds will be controlled, as specified under state law, within the construction footprint during and following construction. Herbicides will be applied in accordance with labeled instructions and state, federal, and local regulations.
- Grass-seeding plantings will be monitored for at least three years. Where grasses do not become adequately established, areas will be reseeded with appropriate species.

Woodlands and Riparian Areas

- No disposal of waste material, topsoil, equipment, debris, excavated material, or other construction related materials will be done within 50 feet of any riparian area.
- Woodland and riparian areas will be avoided where practical when constructing permanent facilities.
- Whenever possible, woodland and riparian areas impacted by the Intake Project will be restored with native species. Where existing woodland and riparian areas cannot be restored in original locations, then off-site mitigation will be considered by the Environmental Review Team.
- Native trees and shrubs will be replaced with similar native species at a ratio of two trees or shrubs planted for each tree or shrub removed, when shelterbelts, riparian woodlands, or woodland vegetation cannot be avoided. Long-term success of plantings will be reviewed and approved by the Environmental Review Team.
- Weed growth in tree plantings will be controlled, and tree plantings will be monitored for three years. Where plantings do not adequately succeed, they will be replanted with appropriate species.
- Where practicable, replanted riparian areas will be watered to ensure survival of planted vegetation. Long-term success of plantings will be reviewed and approved by the Environmental Review Team.

Wildlife

Mammals and Migratory Birds

- Before each construction season, the Environmental Review Team will meet with FWP to determine procedures for avoiding and minimizing impacts to nesting or migrating birds.
- Areas potentially hazardous to wildlife will be adequately protected (e.g., fenced, netted) to prevent access to wildlife.
- To protect wildlife and their habitats, Intake Project-related travel will be restricted to existing roads and Intake Project easements. No off-road travel will be allowed, except when approved through the Environmental Review Team.
- Wildlife-proof fencing will be used on reclaimed areas, if it is determined that wildlife species and/or livestock are impeding successful vegetation establishment.

Amphibian and Reptiles

- All riverbank disturbance areas will be inventoried for potential turtle nesting habitat. If turtle nesting habitat or evidence of turtle nesting is found in construction areas, construction in these areas will be restricted during June and July, or mitigation measures approved by the Environmental Review Team will be implemented.

Historic Properties

Reclamation proposes to implement the following actions to offset any adverse effects to historic properties:

- Engineering drawings and photographs of affected buildings and structures, if available, will be filed with the State Historic Preservation Office and the National Archives.
- If engineering drawings and photographs are not available, the buildings and structures will be recorded in accordance with the Historic American Buildings Survey and the Historic American Engineering Record, as appropriate.
- If practicable, historic buildings or structures that must be moved for construction will be returned to their original locations after construction of the Intake Project is completed. If that is not feasible, Reclamation will seek a party willing and able to adopt the historic structure or building with appropriate preservation covenants.
- Reclamation will develop and implement a data recovery plan in consultation with the Montana SHPO, Advisory Council on Historic Preservation, and other interested parties, as appropriate, for mitigation of the Headworks Camp (24DW447).
- One or more signs will be installed at or near the Intake FAS to summarize the history of the Lower Yellowstone Irrigation Project.
- A fence will be installed around the Old Cameron and Brailey Sub-Camp (24DW298) to protect it from disturbance by unloading and storage of rock or other construction activities.
- All construction activities will avoid using the road through the late plains archaic campsite (24DW430).
- All gravel, fill, and rock materials will be obtained from a source determined by Reclamation to comply with Section 106 of the NHPA.
- Reclamation will continue consultation with the Montana State Historic Preservation Office on the preparation of a formal memorandum of agreement stipulating the mitigation and treatment plan.

Indian Trust Assets

- Reclamation will continue to consult with the Bureau of Indian Affairs and tribes to identify potential Indian trust assets and any adverse effects to them.