RECLAMATION

Managing Water in the West

Finding of No Significant Impact

Repairs to Deadwood Dam Access Bridge and Operational Changes to Support Research Activities in the Deadwood River

PN-FONSI 10-10

Boise Project, Arrowrock Division,
Snake River Area Office, Boise, Idaho

U.S. Department of the Interior
Bureau of Reclamation

August 2010

FINDING OF NO SIGNIFICANT IMPACT

Repairs to Deadwood Dam Access Bridge and Operational Changes to Support Research Activities in the Deadwood River

PN-FONSI 10-10
August 2010

Introduction

In accordance with the National Environmental Policy Act (NEPA), the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) has prepared a Draft Environmental Assessment (EA) that evaluates the environmental effects of Reclamation's proposed Repairs to Deadwood Dam Access Bridge and Operational Changes to Support Research Activities in the Deadwood River.

The purpose of the project is twofold: First, underwater inspections have revealed active erosion and undermining of the access bridge abutment retaining wall immediately downstream of Deadwood Dam. The proposed project would permanently stabilize the area and prevent future erosion.

A secondary purpose is to take advantage of the reduced releases from Deadwood Dam required for access bridge repair to conduct bull trout research activities in the Deadwood River downstream from the dam. The research activities would be in support of terms and conditions for bull trout Reclamation received in its Biological Opinion from the U.S. Fish and Wildlife Service (FWS) for future operations and routine maintenance at 12 Federal projects in the upper Snake River basin above Brownlee Reservoir.

Proposed Action

The proposed project consist of two related and overlapping actions: (1) making repairs to the bridge foundation which requires dewatering a portion of the river channel and (2) taking advantage of the low flows during construction and extending the low flow period to conduct bull trout research activities.

Dewatering of the River Channel

Bull trout research activities would begin prior to repair of the bridge foundation. Releases from Deadwood Dam would be ramped down from approximately 800 cfs to 5 cfs (the amount passing through the dam's small hydro generator) over a 24-hour period beginning on August 22, 2010. Releases would remain at 5 cfs until the beginning of the construction phase on September 7, at which time releases would be reduced to zero and the construction area dewatered. Releases would remain at zero throughout the construction phase, however seepage from the dam would contribute about 2-3 cfs flow.

Bull Trout Research Activities

Research activities associated with the drawdown would include: fish salvage in the stilling basin and any stranding pools downstream, estimate frequency of stranding pools and loss of fish biomass associated with stranding pools, estimate available habitat in main channel, macro invertebrate biomass and distribution, validate the mass balance equation (flow), fish sampling for bull trout density and movement, ground validation of green LiDAR data, and R1/R4 type habitat surveys. Research activities are expected to last throughout the time flows are reduced – approximately 52 days.

Construction Activities

In order for equipment to gain access to the foot of the bridge abutment, a ramp would be constructed downstream of the bridge on the right side of the river channel by pushing over excess bank material and filling the recessed area. A small track hoe would gain access to the channel bottom via the ramp and be used to remove loose material near the eroded area of the abutment foundation.

Forms would be constructed and concrete would be placed well under the foundation in the eroded area. After the concrete cures and forms are removed, the large riprap material that was pulled away from the work area would be replaced upstream of the new concrete to offer further protection from wave action. Rock in the channel bottom that was moved aside to promote lowering of the stilling basin would be replaced. The access ramp on the right side of the channel would be restored to original grade and as much of the fine material would be removed from the river channel as possible.

Mitigation

Direct Impacts to fish, including bull trout would be reduced by salvaging fish from the stilling basin and isolated pools downstream. Reclamation would fully comply with terms and conditions and conservation measures in the FWS Biological Opinion (BO) for the proposed action to avoid or minimize take on bull trout.

Consultation, Coordination, and Public Involvement

Through internal scoping Reclamation determined that the effects of the project were primarily localized and confined to the Deadwood River from Deadwood Dam downstream. Issues related to changes in hydrology, aquatic species, water based recreation, and potential construction-related impacts to water quality were known to be of concern.

The proposed project was discussed with FWS and Idaho Department of Fish and Game (IDFG) to identify potential issues to threatened bull trout and other aquatic species. Reclamation also presented the proposed project to the Payette River Watershed Council, including representatives from commercial whitewater boating, local and state government representatives and irrigation interests.

The Draft EA was distributed for a 27-day public comment period on July 16, 2010. Reclamation received one comment letter on the Draft EA from the Idaho Conservation League. A summary of the comments and Reclamation's response is included as Attachment 1 to this FONSI.

Reclamation formally consulted with FWS under Section 7 of the Endangered Species Act for impacts to bull trout. FWS issued a BO for the proposed action on August 13, 2010. The BO concluded the proposed action is not likely to jeopardize the bull trout's continued existence. The BO prescribes terms and conditions to implement the reasonable and prudent measures to avoid or minimize take of bull trout. These terms and conditions are included as Attachment Reclamation agrees to implement these terms and conditions.

Summary of Environmental Effects

Reservoir Operations and Hydrology – Flows from Deadwood Dam would be reduced from normal fall releases of 50 cfs to 5 cfs from August 22 to September 7, 2010 and 0 cfs from September 7 to approximately October 15. Hydrologic effects would be greatest in the first 1.9 miles of the Deadwood River until tributaries contribute inflow.

Threatened and Endangered Species - Minor adverse effects to bull trout would be related to fish handling, habitat reduction due to decreased flows, reduced prey base, and potential for increased sediment. A beneficial effect may result from an improvement of instream water temperatures. The greatest likelihood of impacts to bull trout would be expected in the .3-mile reach immediately below the dam.

Effects to bull trout would be lessened through fish salvage and implementation of reasonable and prudent measures related to erosion and sediment control and prevention of chemical (fuel) spills.

Aquatic Resources - Minor short-term impacts from reduction of flow (habitat disconnect, predation, minor loss of prey base) would occur fishes other than bull trout. Minor impacts to benthic, immobile aquatic organisms are anticipated within the first 0.3 miles of the Deadwood River due to dewatering of portions of the channel. Fish salvage would mitigate direct impacts to fish.

Recreation – The whitewater boating season on the South Fork Payette River would be shortened by two weeks. Fishing below the dam would be lost for the duration of the project. Fish salvage efforts would remove most catchable fish in this reach.

Cultural Resources - There would be no effect to historical or archeological resources.

Indian Trust Assets - The project would not affect any tribal rights to hunt and fish. Impacts on water quality, fish and wildlife would be minimal.

Environmental Justice - The proposed action would not result in any adverse impacts to minority or low-income populations.

Finding

Based on the analysis of the environmental impacts presented in the Draft EA, consultation with FWS and review of the Draft EA by potentially affected agencies, tribes, organizations, and the general public, the effects of the proposed action will be minor, short term, and confined to a short reach of the Deadwood River. Reclamation concludes that implementation of the proposed action, proposed mitigation measures, and terms and conditions of the FWS BO will not have a significant effect on the quality of the human environment or natural and cultural resources. Therefore, preparation of an environmental impact statement (EIS) is not required.

Recommended:

Steve Dunn — 8/18/2010

Area Office Environmental Specialist
Snake River Area Office, Boise, Idaho

Date

Approved:

8/18/2010

Area Manager
Snake River Area Office, Boise, Idaho

Date

ATTACHMENT 1 – Responses to Idaho Conservation League letter of August 13, 2010

Comment 1: Due to the position of the bridge in relation to flows from the dam, additional repairs in the future would be needed which would require shutting off flows from the dam. These impacts should be disclosed.

Response: Reclamation shares the concern of recurring need to repair erosion damage to the bridge foundation. The repairs currently proposed are much more extensive than those conducted in 1993 and are designed to be permanent. The massive concrete block will extend nearly the full length of the bridge abutment foundation to the bedrock below, unlike the "concrete "patch" that was done in 1993. Reclamation does not believe that future repair work to the bridge foundation is reasonably foreseeable

Comment 2: Reclamation, in consultation with FWS should consider the alternative of gradually reducing flows from irrigation releases to 5 cfs so that bull trout can better acclimate to flow changes.

Response: Reclamation is currently collecting data on bull trout at Deadwood Reservoir and the river below the dam as part of its efforts to implement the terms and conditions for the 2005 BO. One of the Terms and Conditions directs Reclamation to determine and implement ramping rates for both increases and decreases of flows that reduce harassment and harm of bull trout in the Deadwood River below Deadwood Dam. Reclamation will evaluate bull trout response to reduction of flow in the river under two scenarios. Under the proposed action flows will be decreased over a 24 hr period. Next fall, flows will be reduced from irrigation releases to 50 cfs over a more gradual period.

Comment 3: Another alternative that should be considered is pumping water from the reservoir to increase flows below the dam.

Response: As stated in the Draft EA and the FWS BO, Deadwood Reservoir is known to discharge warmer temperature water than unregulated tributaries when reservoir levels are low in late summer. Based on current water forecasts for 2010, discharge water temperatures would likely exceed 15° C compared to an average of 10.5° C in the tributaries. Because of the warmer reservoir temperatures pumping water to the river below the access bridge would potentially adversely affect bull trout.

Comment 4: If erosion of the bridge foundation continues to be a chronic problem requiring periodic repairs, is there an alternate way to provide access to the base of the dam?

Response: Reclamation does not agree that the repairs to the bridge abutment will be a chronic problem. (See response no. 1.) Constructing alternative access road to the valve house from the existing public bridge further downstream and along the west bank of the river would be difficult and expensive due to the steep topography in the area.

Comment 5: Reclamation needs to consider whether or not this project warrants preparation of an EIS. Bull trout impacts constitute irreversible and irretrievable commitment of resources.

Response: The adverse effects to bull trout and bull trout habitat are expected to be relatively minor and temporary. FWS has concurred with this assessment in their biological opinion (BO) for the proposed action, and the project would not jeopardize the continued existence of bull trout. The rationale for not preparing an environmental impact statement is explained in the Finding of No Significant Impact for the project.

Comment 6: Given the likely impacts to bull trout, a BO should be prepared.

Response: The FWS has issued a BO, and Reclamation will implement the reasonable and prudent measures and abide by the terms and conditions in the BO.