

U.S. Department of the Interior
Bureau of Reclamation
Provo Area Office
Provo, Utah

FINDING OF NO SIGNIFICANT IMPACT

Final Environmental Assessment Hyrum Dam Spillway
Replacement Project in Hyrum, Utah

Recommended by:



Rick Baxter
Water, Environmental, and Lands
Division Manager

12 Aug 2016

Date

Concur:

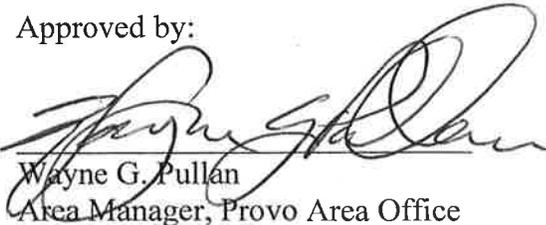


Kent Kofford
Deputy Area Manager

8/12/16

Date

Approved by:



Wayne G. Pullan
Area Manager, Provo Area Office

16 AUG 2016

Date

Introduction

In compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation - Provo Area Office has conducted an Environmental Assessment (EA) to determine the impacts of the Proposed Action on the human environment and to decide whether to authorize the South Cache Water Users Association to modify, replace, or do nothing to the existing spillway at Hyrum Reservoir.

The Proposed Action is needed in order to reduce the risk of failure (static, seismic, and hydrologic modes) of the dam and spillway. After thoroughly assessing each failure mode and calculating an annual failure probability (AFP) for each risk, a total baseline risk was calculated. The total baseline AFP for Hyrum Dam was 4.4E-03, which exceeds guidelines and therefore provides a sound justification and rationale to pursue action to reduce risk.

Alternatives

The EA analyzed the No Action Alternative and three Proposed Action Alternatives. Each alternative was developed as a result of the Value Planning and Baseline Risk Analysis for this project. Based on costs and the screening-level risk reduction analysis, three of the alternatives were carried forward to feasibility-level development. They include the following:

- **Alternative 1** – Construct a new straight spillway alignment skewed to the existing alignment. There are two proposed gate configurations (1a and 1b) on this alternative.
- **Alternative 2** – Construct a new shorter spillway on an alignment that drops off the slope that is connected to a rip rap channel, connecting it to the existing spillway. There are two proposed gate configurations (2a and 2b) on this alternative.
- **Alternative 3** – Replace the chute of the existing spillway only. The existing crest structure would remain in place.

The decision is to implement Alternative 1 to reduce risk of hydrologic and seismic failure of the spillway at Hyrum Dam. Environmental commitments that are integral to the Proposed Action are as follows:

1. **Additional Analysis.** If the Proposed Action were to change significantly from what is described in this document, additional environmental analyses will be undertaken as necessary.
2. **Cultural Resources.** Per Utah State Historic Preservation Office, if any cultural materials are discovered during construction, work in the area shall halt immediately, the lead Federal agency must be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 22716, Sept. 1983).
3. **Paleontological Resources.** Monitoring will be conducted during construction activities that impact a previously undisturbed bedrock layer. If any mineralized bones or other potentially significant fossils are discovered by project personnel

during construction activities, fossils will be left in place untouched and Reclamation will be notified.

4. **Construction Activities Confined to Surveyed Corridor.** All construction activities will be confined to areas previously surveyed for cultural, paleontological, and biological resources.
5. **Roads.** Existing and/or approved access roads will be used for project activities. Access will also be required along the aqueduct during construction.
6. **Disturbed Areas.** Topsoil in areas to be excavated will be stripped, stockpiled, and replaced in order to provide a seed bed during Reclamation activities. Reclaimed areas will be shaped and contoured to blend with the surrounding area. Seeding activities will utilize weed-free seed mixes of native plants and agricultural grasses approved by a Reclamation biologist and will occur at appropriate times.
7. **Air Quality.** Best Management Practice's (BMP's) will be utilized to control dust caused by construction activities.
8. To comply with the Migratory Bird Treaty Act, and if applicable to the area of construction, vegetation (i.e., trees, shrubs, and herbaceous plants) will not be removed during the bird breeding season (March through August, depending on the species of concern and weather in a given year). If construction will occur during this time period, bird nest clearance surveys will be done by a qualified biologist to verify the absence of nests prior to vegetation removal. If nests are found, further coordination with Reclamation will be required. Construction activities occurring completely outside the nesting season do not necessitate surveys.
9. Although no known raptors nests have been documented in the project area, if signs of raptors constructing a nest are noticed before or during construction, a Reclamation biologist will be notified and the appropriate measures taken in conjunction with consultation with the United States Fish and Wildlife Service. If a raptor is found actively nesting during the raptor nesting season (January 1 through September 30) and the nest is occupied, the nesting species will be determined by a qualified biologist, and the appropriate seasonal and spatial buffer will be applied.
10. Although no infestations of noxious or invasive weeds were identified in the EA, ground disturbance will often result in the establishment of invasive plants. The BMP's, such as weed treatment prior to construction and equipment cleaning, as well as spraying or pulling of new weed infestations, will be implemented as part of this project.

Related NEPA Documents

There are no other Environmental Assessments or Environmental Impact Statements that are related to, but not part of the scope of this EA.

Decision and Finding of No Significant Impact

Based upon a review of the EA and supporting documents, I have determined that implementing Alternative 1 will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the area. No environmental effects meet the definition of significance in context or intensity as defined at 40 CFR 1508.27. Therefore, an environmental impact statement is not required for this proposed action. This finding is based on consideration of the context and intensity as summarized here from the EA.

Context

The affected locality is Hyrum, Cache County, Utah. Affected interests include the State Park, local farms and businesses, and private land and homeowners on either side of the spillway construction area.

Intensity

The following discussion is organized around the 10 significance criteria described in 40 CFR 1508.27. These criteria were incorporated into the resource analysis and issues considered in the EA.

1. **Impacts may be both beneficial and adverse.** The Proposed Action will impact resources as described in the EA. Environmental commitments to reduce impacts to cultural, wetland, and biological resources were incorporated into the design of the Proposed Action. The following short-term effects of the Proposed Action are predicted: increased water share assessments, road closures, noise, dust, and ground disturbance around the project area. In the long-term, all affected property owners and residents below and around the spillway will benefit from the reduced risk of dam and spillway failure. Additionally, the eroded area within the basin will likely be improved due to construction of a new spillway apron. Indirectly the road across the dam and spillway as well as the Operations and Maintenance roads will be improved for safety, traffic flow, and accessibility.

None of the environmental effects discussed in detail in the EA are considered significant.

2. **The degree to which the selected alternative will affect public health or safety or a minority or low-income population.** The Proposed Action will have no significant impacts on public health or safety. No minority or low income community will be disproportionately affected by the Proposed Action.

3. **Unique characteristics of the geographic area.** There are few if any unique characteristics associated with the project area. Any wetlands or perennial water sources will be protected and

restored to original condition or better. There are no park lands, wild and scenic rivers, or other ecologically critical areas that will be affected by the proposal.

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** Reclamation contacted representatives of other federal agencies, state and local governments, Indian tribes, public and private organizations, and individuals regarding the Proposed Action and its effects on resources. Based on the responses received, the effects from the Proposed Action on the quality of the human environment are not highly controversial.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** When uncertainty about impacts to the human environment was identified in the EA, mitigation and monitoring measures were identified and included in the formulation of the alternatives. There are no predicted effects on the human environment that are considered highly uncertain or that involve unique or unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** The Proposed Action will not establish a precedent for future actions with significant effects.

7. **Whether the action is related to other actions which are individually insignificant but cumulatively significant.** Cumulative impacts are possible when the effects of the Proposed Action are added to other past, present, and reasonably foreseeable future actions as described under Related NEPA Documents above; however, significant cumulative effects are not predicted, as described in the EA.

8. **The degree to which the action may adversely affect sites, districts, buildings, structures, and objects listed in or eligible for listing in the National Register of Historic Places.** The State Historic Preservation Officer and has concurred with our determination of effect and an Memorandum of Agreement is in place to mitigate any negative effect.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** No threatened or endangered species are found within project area; therefore, Reclamation's finding was No Effect.

10. **Whether the action threatens a violation of Federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment.** The project does not violate any federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, this project is consistent with applicable land management plans, policies, and programs.