

# RECLAMATION

*Managing Water in the West*

FONSI NO. 2015-01  
Project No. 2011-88

## Granby Lake Hydropower Project Environmental Assessment

**Finding of No Significant Impact**

Approved: Signed Jacklynn Gould Date: March 13, 2015



U.S. Department of the Interior  
Bureau of Reclamation  
Great Plains Region  
Eastern Colorado Area Office

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## **FINDING OF NO SIGNIFICANT IMPACT**

In accordance with the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Part 1500-1508), the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment for the Granby Hydropower Project of the Colorado-Big Thompson Project (C-BT Project). The Environmental Assessment analyzes a No Action and Proposed Action alternatives. Based on the following, Reclamation has determined that the Proposed Action will not result in a significant impact on the human environment.

### **Background**

Reclamation schedules CB-T Project West-Slope diversions and East Slope deliveries based on current hydrology. Reclamation operates and maintains six (6) power plants with a total of eleven (11) generator units associated with the C-BT Project.

On October 19, 2011, a Preliminary Permit for Lease of Power Privilege (Preliminary LOPP) between Reclamation and the Northern Colorado Water Conservancy District (Northern Water) was executed to formally recognize Northern Water's priority for a LOPP while Northern Water conducted investigations and secured data to determine the feasibility of the project. The Preliminary LOPP also provided for cost-reimbursement to Reclamation for the NEPA compliance, engineering review, and development of the LOPP. On June 26, 2012, the Preliminary LOPP was extended to October 19, 2015.

On August 3, 2013, Congress passed the Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act. This act requires that Reclamation first offer a Lease of Power Privilege (LOPP) to the irrigation district or water users association operating the federal project, or to the irrigation district or water users association receiving water from the federal project. Northern Water operates the collection and delivery system portions of the C-BT Project.

Northern Water and Grand County entered into an Intergovernmental Agreement dated December 16, 2014 regarding the Granby Hydropower Project. Promises and covenants included in the IGA have been incorporated as environmental commitments.

### **Purpose and Need**

A LOPP is needed to permit a non-federal entity to use a Reclamation facility for electric power generation. The LOPP would ensure that the development of hydropower will be implemented consistent with establish authorities, purposes, and water operations of the C-BT Project. Current Federal policy encourages non-Federal development of environmentally sustainable hydropower potential of Federal water resource related projects.

Northern Water Conservation District has requested approval to develop hydropower at the Reclamation-owned Granby Dam. The purpose of the Granby Hydropower Project is to develop a 1.2 megawatt (MW) hydropower plant at Granby Dam to provide clean, renewable energy

source that is locally controlled. The electricity generated by this project would provide Northern Water with an additional source of revenue.

## **Project Alternatives**

### No Action Alternative

Under the No Action Alternative, Reclamation would not issue a LOPP and the proposed hydropower development at Granby Dam would not be constructed at this time.

### Proposed Action

Under the Proposed Action, Reclamation would execute a LOPP to permit Northern Water to construct, operate, and maintain a 1.2 MW hydropower plant and associated facilities at Granby Dam as described in the EA. The hydropower project would use water discharged from Granby Dam and move the water downhill through a 36-inch diameter penstock transitioning from in-tunnel to a buried section to reach the newly constructed power plant. The power plant would then discharge water back to the Colorado River downstream of Granby Dam.

Under a separate but related action, the U.S. Forest Service would authorize the rebuild of an existing Mountain Parks Electric (Mountain Parks) three-phase power line under the Granby Dam Power Line Rebuild Project. The existing three-phase overhead power line runs from the Granby Substation to the top of Granby Dam. The U.S. Forest Service would also authorize connecting power and fiber-optic lines from the Granby Power Plant.

## **Findings**

In the attached Environmental Assessment, Reclamation evaluated the environmental consequences associated with implementing the Proposed Action. A brief summary of the environmental effects of the Proposed Action is listed below.

There would be no impacts to recreation, fisheries, water rights and supplies, water quality, and Indian trust assets.

Energy Production—The Proposed Action will produce about 5,000 megawatt-hours of clean, renewable energy per year to meet current and future energy demands within the Mountain Parks' service area.

Wetland and Riparian Resources—The Proposed Action will not result in significant impact to wetland and riparian resources. Approximately 0.05 acres of herbaceous wetlands associated with the Granby Dam outlet channel will be temporarily disturbed during construction. In addition, about 0.005 acres of herbaceous wetlands will be permanently removed during construction of the power plant. These impacts are considered insignificant, but construction activities will follow the conditions of Clean Water Act Section 404 Nationwide Permit No. 17 (Hydropower Projects) as permitted by the Army Corps of Engineers (ACOE). Northern Water has submitted a 404 permit application and will obtain authorization from the ACOE prior to any ground disturbing activities.

Visual Resources—The Proposed Action will result in minor impacts to visual resources during construction. Northern Water has committed to coordinate activities with the U.S. Forest Service and Grand County to minimize the effect and duration of construction related activities. The proposed action is consistent with the Arapaho National Recreation Area’s visual management system included in the U.S. Forest Service’s updated Resource Management Plan.

Fisheries Resources—The Proposed Action is predicted to have no effect on fisheries resources. The volume and pattern of releases from Granby Dam will not change. The change to releases through the power plant is also predicted to not change water temperatures in the Colorado River. The IGA between Northern Water and Grand County ensures that any elevation of water temperature in the Colorado River downstream of Granby Dam will not exceed applicable standards for cold water aquatic species. Environmental commitments also include coordination and review between Northern Water and Colorado Parks and Wildlife of power plant designs. This will ensure sufficient connection between the power plant, outlet channel and the Colorado River is maintained to prevent fish entrainment or standing.

Threatened and Endangered Species—The Proposed Action will have no effect on Threatened and Endangered Species. C-BT Project depletions were previously included in consultations and programmatic biological opinions for both West- and East-Slope C-BT features. C-BT Project depletions will not change and no additional Section 7 consultation is required.

Wildlife and Vegetation Resources—The Proposed Action would result in temporary and minor impacts to wildlife and vegetation. A majority of the Granby Hydropower Project area has been previously disturbed during construction and operation of Granby Dam and other C-BT Project features. Granby Dam was constructed in the 1940s. Approximately 1.5 acre of land will be temporarily disturbed during construction of the hydropower facilities and 0.05 acres permanently displaced by the power plant. Construction activity restrictions between May 1 and September 1 have been incorporated as environmental commitment to avoid impacts to active osprey nesting within a ¼ mile of the project area. There are existing power lines within the project area and new connecting lines will be authorized by the U.S. Forest Service and constructed in a manner to reduce electrocution risk to raptors. Other local wildlife may avoid the project area during construction; however these effects will be temporary and localized and not significant.

Cultural Resources—Reclamation conducted inventories and identified the Granby Dam as the only cultural resource within the Granby Hydropower Project footprint. The dam was previously determined eligible to the National Register of Historic Places and Reclamation completed consultation with the Colorado State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act. The Proposed Action will have no adverse effect to Granby Dam or other cultural resources.

The U.S. Forest Service may require Mountain Parks to conduct additional cultural resource inventories to identify and avoid any cultural resources that may be associated with the power and fiber-optic lines.

Air Quality—Minor changes in air quality associated with fugitive dust during construction may occur, but an active dust abatement program will be implemented to keep any changes to insignificant levels. The offset emissions associated with the reduction of carbon dioxide from and other greenhouse gases for hydropower power production are estimated between 10,400,000 and 10,900,000 pounds per year.

Noise—A temporary increase in noise levels associated with construction is anticipated. However; the distance from any nearby structures and recreation facilities combined with enclosure of project equipment will result in no significant long-term effects.

Socio-economics Conditions—The Proposed Action will result in providing an additional source of renewable energy for Mountain Parks Electric, provide an increase in temporary construction jobs, and provide long-term benefit to Northern Water resulting from the sale of approximately 5,000 MWH of power per year generated by the Granby Hydropower Project.

## **Environmental Commitments**

The following measures would be implemented and followed by Northern Water and its contractors. The LOPP will require that these commitments be followed and met. An environmental commitment plan will be prepared by Reclamation to document how environmental commitments and mitigation measures will be implemented during design, construction, and operation of the Granby Hydropower Project.

1. The construction and operation of the Granby Hydropower Project is required to be operated in a manner that does not interfere with the irrigation supplies or maintenance of the C-BT Project.
2. Additional Class III cultural resource inventories for the Granby Hydropower Project not previously inventoried at a Class II level under current Colorado Office of Archaeology and Historic Preservation standards will be completed in the spring of 2015 once the ground is clear of snow if required by the U.S. Forest Service. Inventories may include the parallel fiber-optic line alignment ascending the canyon to the existing power line, as well as, any other changes in the U.S. Forest Service's Granby Dam Power Line Rebuild Project. Any additional NHPA Section 106 consultation regarding inventory results and additional NEPA compliance requirements will be determined by the U.S. Forest Service.
3. No ground-disturbing activities associated with the power line rebuild and fiber-optic line will begin until any additional NHPA Section 106 inventories and consultations, as described above, are completed. Reclamation will notify Northern Water in writing when NHPA compliance is completed.
4. Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land, must provide immediate telephone notification of the discovery to Reclamation's Eastern Colorado Area Office archaeologist. Work will stop until the proper authorities are able to assess the situation onsite. This action would promptly be followed by written confirmation to the responsible Federal agency official, with respect to Federal lands. The Colorado SHPO and interested Native American tribal representatives would be promptly notified. Consultation would begin immediately. This requirement is prescribed under the Native American Graves

- Protection and Repatriation Act (43 CFR Part 10); and the Archaeological Resources Protection Act of 1979 (16 U.S. C. 470).
5. Additional sensitive plant surveys may be required for proposed Mountain Parks' power line rebuild and new fiber optic line, as determined by the U.S. Forest Service.
  6. Existing access roads will be used to access the construction areas. No new access roads will be constructed. No heavy construction access will be allowed from the top of the dam from May 1<sup>st</sup> to September 1<sup>st</sup>. However, the existing gate house may be used by personnel to manually access the outlet tunnel.
  7. Erosion-control BMPs for drainage and sediment control will be implemented to prevent or reduce nonpoint source pollution during and following construction. Examples are included in Attachment I.
  8. All construction equipment shall be power-washed and free of soil and debris prior to entering the construction site to reduce the spread of noxious and unwanted weeds.
  9. Topsoil, where available, will be stockpiled during construction for later use in re-vegetation. Disturbed areas will be contoured to reduce erosion and facilitate re-vegetation. Disturbed areas will be re-seeded. The plan for re-vegetation and related erosion control/re-contouring will be coordinated with the U.S. Forest Service and require approval by Reclamation.
  10. Dust abatement BMPs will be undertaken in all areas disturbed during construction.
  11. Fuel storage, equipment maintenance, and fueling procedures will be developed to minimize the risk of spills and the impacts from these incidents. No fuel storage, equipment maintenance, or fueling will occur within 100 feet of wetlands or waters of the U.S. A Spill Prevention Control and Countermeasure Plan will be prepared prior to construction.
  12. Northern Water will be responsible for obtaining any required Federal, state, or local permits to construct and operate the project, including permits under the Clean Water Act (Section 402 and 404 permits) which may be needed for dewatering or other activities.
  13. In the event of discovery of threatened or endangered species, Northern Water will immediately cease all ground-disturbing activities in the vicinity and notify Reclamation. Work will not be resumed until approved by Reclamation.
  14. All new power lines and power poles will follow the recommended standards as outlined in the *Avian Protection Plan Guidelines* developed by the U.S. Fish and Wildlife Service and Industry (Edison Electric Institute 2005).
  15. If the power and fiber option line construction is delayed until after September 1<sup>st</sup>, the nearby osprey nest should be revisited. If active, all construction activities within 1/4 mile of the nest should be avoided until after the nest fledges as determine by the U.S. Forest Service.
  16. In the event that evidence of possible cultural or paleontological resources is discovered during construction activities, Northern Water will immediately cease all ground-disturbing activities in the vicinity and notify Reclamation. Work will not resume until approved by Reclamation.
  17. If any additional areas of impact (for example: access roads, borrow pits, or waste areas) are identified during the course of the Proposed Action, Class III cultural resource and any other appropriate resource inventories and consultations will be completed prior to approving any additional ground-disturbing activities.

18. Powerhouses and substations will be non-reflective and painted to blend with the project area background and meet Grand County and U.S. Forest Service requirements.
19. There will be no changes in releases from the Granby Dam solely for hydropower uses permitted under the LOPP. The hydropower facility will be operated based on existing release requirements and dam operations.
20. Irrigation supplies, dam releases and dam maintenance access will be maintained during construction at all times.
21. Northern Water will be responsible for noxious weed control within the limits of the facility for the life of the project. Northern Water is responsible for consultation with Reclamation for acceptable weed control methods, including pesticides/herbicides approved for use on public land. Use of herbicides will comply with the applicable Federal and state laws. Herbicides will be used only in accordance with their registered uses and within limitations imposed by the Secretaries of the Interior and Agriculture. Disturbance to nearby shrubs and other ground cover will be kept to a minimum, with disturbance occurring only in those areas which are absolutely necessary for project construction.
22. In the event that the U.S. Forest Service does not approve the proposed fiber-optic line route associated with U.S. Forest Service's Granby Dam Power Line Rebuild Project, Northern Water would operate the power plant manually or provide for communications between power plant and substation through other means mutually approved by Reclamation, U.S. Forest Service and Mountain Parks.
23. Promises and covenants detailed in the Intergovernmental Agreement between Northern Water and Grand County dated December 16, 2014 are incorporated as environmental commitments. These commitments include:
  - a) Professional engineer certification that the final Granby hydropower plant building design meets all applicable provisions of the Grand County Building Code.
  - b) Outlet releases will not be altered for benefit of power production.
  - c) The power plant's tailrace will discharge upstream of the flume downstream of Granby Dam.
  - d) The power plant will not cause any elevation of water temperature in the Colorado River downstream of Granby Dam that will exceed applicable standards for cold water aquatic species.
24. Northern Water will request and receive permission from Reclamation a minimum of five working days prior to any earth disturbing activities to insure that all environmental commitments have been met or are in compliance.