

United States Department of the Interior  
Bureau of Reclamation  
Western Colorado Area Office  
Grand Junction, Colorado

**FINDING OF NO SIGNIFICANT IMPACT**

**LEASE OF POWER PRIVILEGE FOR THE SHAVANO FALLS HYDROPOWER PROJECT, UNCOMPAHGRE PROJECT, MONTROSE COUNTY, COLORADO**

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 Shavano Falls Hydropower Project of the Uncompahgre Project (Project) near Montrose, Colorado. The EA assesses a No Action and Proposed Action alternatives. Based on the following, Reclamation has determined that the proposed action with implemented environmental commitments will not result in a significant impact on the human environment.

**Background**

The Uncompahgre Project is a Bureau of Reclamation (Reclamation) project located in west-central Colorado, which is operated by the Uncompahgre Valley Water Users Association (UVWUA). The Montrose & Delta (M&D) Canal, originally known as the private Uncompahgre Canal, began delivering water to the area west of the Uncompahgre River in 1883. Negotiations to purchase the canal for use in the Uncompahgre Project were finalized in 1908. On Franklin Mesa, the M&D Canal spills water into a man-made watercourse that cascades over the sandstone cliffs into Shavano Valley, forming what is known as Shavano Falls.

A Lease of Power Privilege (LOPP) is a contract between a non-Federal entity and the United States to use federal project facilities for electric power generation consistent with Reclamation project purposes. A LOPP must not impair the efficiency of Reclamation generated power or water deliveries, jeopardize public safety, or negatively affect any other Reclamation project purposes. The Uncompahgre Project includes the development of hydropower as an authorized project purpose.

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 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. The UVWUA is the water users association which operates the Uncompahgre Project.

In January 2014, a Preliminary Lease of Power Privilege (Contract No. 2014-0031-CF-0001) was entered into by Reclamation and the UVWUA to permit cost-recovery for the construction and operation of a hydropower facility at Shavano Falls. The LOPP on Shavano Falls must

accommodate existing contractual, water delivery, and environmental commitments related to operation and maintenance of the M&D Canal and the Uncompahgre Project.

### **Purpose and Need**

The purpose of the proposed action is to develop clean hydropower facilities consistent with federal regulations. A LOPP is needed for private development of a 2.8 megawatt (MW) hydropower plant on the M&D Canal at Shavano Falls. Current Federal policy encourages non-Federal development of environmentally sustainable hydropower potential on Federal water resource related projects. The LOPP would ensure that the development of hydropower would be implemented consistent with established authorities, purposes, and water operations for the Uncompahgre Project. The electricity generated by the Project would provide the UVWUA with an additional source of revenue that can be used to defray annual operative expenses associated with the Uncompahgre Project while assisting local utilities in meeting regional requirements and demands for renewable energy.

### **Scoping/Public Involvement**

Reclamation's scoping was primarily limited to the Uncompahgre Valley Water Users Association and the Colorado Historic Preservation Officer. Reclamation had previously issued similar LOPPs for the Uncompahgre Project, and previous EAs were also used as a source to identify potential issues and concerns. A Draft EA was prepared and distributed on April 29, 2014 to 24 local, state, and federal agencies and organizations, and 10 property owners adjacent to Shavano Falls. The Draft EA was also distributed on the Bureau of Reclamation website, along with a Press Release announcing its distribution and request for comments. Comments were requested by May 13, 2014.

One comment on the draft EA was received by Reclamation.

### **No Action Alternative**

Under the No Action Alternative, a LOPP would not be executed between Reclamation and UVWUA for the construction, operation, and maintenance of a hydropower facility at Shavano Falls along the M&D Canal.

### **Proposed Action Alternative**

Under the Proposed Action Alternative, Reclamation would execute a LOPP to permit UVWUA to construct, operate, and maintain a 2.8 MW hydropower plant and associated facilities adjacent to the M&D Canal. The existing CP Lateral diversion will be moved, and a new structure would serve as a diversion for the CP Lateral and divert M&D Canal and CQ Lateral flows into a penstock for the hydroelectric facility.

### **Summary of Findings**

Reclamation conducted an analysis on a wide range of environmental criteria for the No Action and Proposed Action alternatives. Below is a summary of the analysis as discussed in the EA.

The No Action Alternative does not meet the purpose and need as described above.

Under the Proposed Action, Under the Proposed Action Alternative, Reclamation would execute a LOPP to permit UVWUA to construct, operate, and maintain a 2.8 MW hydropower plant and associated facilities adjacent to the M&D Canal. The Proposed Action is predicted to have no effect on recreation use, fisheries, and water supply for irrigation and municipal uses. Details of predicted impacts (both beneficial and negative) for other resources are discussed in greater detail below.

Energy and Socioeconomic Conditions – The new hydropower project would produce an estimated 12,973 megawatt-hours (MWh) or energy per year based on run of the canal flows, and would help meet regional power demands in the future. Power from the proposed project would be distributed through Municipal Energy Agency of Nebraska's (MEAN) facilities in Colorado, Nebraska, and Wyoming.

The life of the project is expected to extend well beyond 50 years, and could thus provide UVWUA a long-term, reliable revenue stream. After the project debt is paid, the long-term life for which the project will be designed results in revenues to the UVWUA to help pay for Uncompahgre Project operation and maintenance costs. The would also be a short-term employment and spending on goods, services, and materials during the construction period, benefitting local communities and businesses as well as increasing tax revenues from taxes collected on these purchases.

Wildlife and Vegetation – Construction of one of the piers to support the Penstock crossing over Coal Creek would require a small discharge of concrete into a wetland to support the pier, resulting in a permanent loss of about 0.04 acres of wetland. In addition, approximately 166 yd<sup>3</sup> of soil would be removed to construct a ditch to discharge the 90 cfs back to Coal Creek and meet irrigation demands. The UVWUA would request authorization from the Army Corps of Engineers for these activities under Nationwide Permit No. 17 Hydropower Projects, and any permit restrictions included in the ACOE authorization would be incorporated as environmental commitments.

Temporary impacts to wildlife and vegetation would occur due to the construction of the hydropower facilities. Approximately 10 acres would be disturbed during construction of the facilities. Surface flows in a portion of the M&D Canal directly below the CP Diversion will be reduced as a result of project implementation. In addition, approximately 1,000 feet of Coal Creek below the falls will no longer be used to carry irrigation flows when the power plant is operating. It is expected that there may be a minor reduction in the existing riparian and wetland footprint. It is estimated that some surface flows will continue to reach the M&D Canal between the CP Diversion and the falls and the reach of Coal Creek between the falls and the power plant discharge. Residual irrigation flows from the BN lateral, seepage from the upstream canals and laterals, drainage and irrigation return flows from adjacent irrigated lands, and excess runoff

from local rainfall will continue to contribute flows to these reaches. It is estimated that flows in these reaches will range from 4 to 10 cfs during the irrigation season. After project implementation, there may be a minor reduction of riparian and wetland vegetation, however there should be enough subsurface flows to support cottonwoods and other riparian species.

Threatened and Endangered Species – No federally threatened, endangered, or candidate species were documented within the project area. Threatened and Endangered Plant Species inventories conducted by Bio-Logic, Inc. On September 18-19 and October 9, 2013 and by Reclamation on February 25, 2014 found no occurrence of Clay-Loving Wild Buckwheat (*Eriogonum pelinophilum*) or Colorado Hookless Cactus (*Sclerocactus glaucus*). A large sandstone outcrop adjacent to the rim of the mesa provides superficially suitable, but atypical habitat for Colorado Hookless Cactus. No suitable habitat for Clay-Loving Wild Buckwheat was detected.

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the Fish and Wildlife Service issued a Programmatic Biological Opinion (PBO) for the Gunnison River and effects on the endangered Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and their critical habitats. Consultation for the Gunnison River basin includes operation and depletions associated with existing Reclamation projects, including the Uncompahgre Project, other Federal projects, and existing non-federal water depletions.

Potential habitat for other listed species does not occur in areas affected by the hydropower project.

Cultural Resources – Reclamation has determined that the proposed project will adversely affect National Historic Preservation Act (NHPA) eligible cultural resources and has consulted with the Colorado State Historic Preservation Officer (SHPO). A Memorandum of Agreement (MOA) between Reclamation and the SHPO has been executed, and mitigation for adverse effects includes avoiding sites where possible and completion of photo documentation according to SHPO's Level I Documentation standards.

Air Quality and Noise – There would be minor noise impacts during excavation for the powerplant and from construction traffic. The need to blast rock during construction of the penstock is likely. The turbine/generator represents a new potential noise source, however they will be fully enclosed and located at least 1,500 feet from the nearest existing structure. After construction, the distance from and enclosure of equipment to any residences will drop noise associated with operations of the hydropower facilities below detectable levels.

There would be short-term dust impacts during excavation work, although this is predicted to be insignificant because dust abatement Best Management Practices would be followed during construction and operation of the hydropower facilities. There would be no long-term adverse impacts on air quality due to operation and maintenance of the facilities. There would be a beneficial offset of emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases.

## Environmental Commitments

The following environmental commitments will be implemented as an integral part of the Proposed Action. Environmental commitments include:

- The construction and operation of the hydropower project shall not interfere with the irrigation supplies or maintenance of the Uncompahgre Project.
- Only existing access roads will be used to access construction areas. No new access roads will be constructed. The CCC Shavano Falls Road will not be used during construction for construction activities. Use of the road will be limited to pickup trucks and similar vehicles.
- Erosion-control Best Management Practices for drainage and sediment control will be implemented to prevent or reduce nonpoint source pollution during and following construction.
- All construction equipment shall be power-washed and free of soil and debris prior to entering the construction sites to reduce the spread of noxious and unwanted weeds.
- 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 and implementation will require approval by Reclamation.
- All new power lines and power poles will follow the recommended standards as outlined in the *Avian Protection Plan Guidelines* developed by the US Fish and Wildlife Service and Industry (Edison Electric Institute 2005). A copy these standards can be viewed at: [http://www.aplic.org/uploads/files/2634/APPguidelines\\_final-draft\\_April2005.pdf](http://www.aplic.org/uploads/files/2634/APPguidelines_final-draft_April2005.pdf)
- Dust abatement Best Management Practices will be undertaken in all areas disturbed during construction.
- Fuel storage, equipment maintenance, and fueling procedures will be developed to minimize the risk of spills and the impacts from these incidents. A Spill Prevention Control and Countermeasure Plan (SPCC) will be prepared prior to construction.
- UVWUA 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.
- In the event of discovery of evidence of possible cultural or paleontological resources, the UVWUA will immediately cease all ground-disturbing activities in the vicinity and notify Reclamation. Work will not be resumed until approved by Reclamation.
- Level I HABS/HAER documentation, as outlined in the MOA between Reclamation and the CSHPO, will be completed prior to initiating construction. The final report will be submitted to the CSHPO within 1-year of the execution of the MOA.
- If any additional areas of impact (for example: access roads, borrow pits, or waste areas) are identified during the course of the undertaking, they will be inventoried for cultural resources and consulted on with the SHPO. No construction work will occur at or near the additional impact area until this consultation is completed.
- Powerhouses and substations will be non-reflective and painted to blend with the project area background.

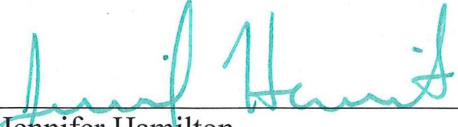
- Under the hydropower project alternative, water in the M&D Canal diverted for irrigation will also be used for hydropower production. There will be no increase in diversions from the Uncompahgre River solely for hydropower use permitted under the LOPP.
- The UVWUA will be responsible for noxious weed control within the limits of the facility for the life of the project. UVWUA is responsible for consultation with Reclamation for acceptable weed control methods, including pesticides/herbicides approved for use on public land. Use of pesticides/herbicides will comply with the applicable Federal and state laws. Pesticides/herbicides will be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. A copy of the Montrose County Weed Management Plan is available at: <http://www.montrosecounty.net/162/Weed-Mitigation>.
- All blasting activities will follow State of Colorado Regulation 7 C.C.R. 1101-9. The contractor will be responsible for obtaining all necessary permits and submitting a blasting plan for Reclamation's approval prior to blasting. Chapter 6.1 (C) states "When blasting is done in populated or residential areas or in close proximity to a structure, railway or highway or any other installation that may be damaged the following precautions shall be taken: (1) the blast shall be covered before firing with a mat or material that is capable of preventing fragments from being thrown; (2) The blast shall be loaded in compliance with the Table of Scaled Distance or be monitored by a seismograph; and (3) All persons within the blast area shall be given reasonable notification prior to blasting operations and informed as to the type of warning signal that will be given prior to the blast." Chapter 6.10 provides standards for blasting vibration and air-over pressure. Chapter 6.10(A) requires blasters implement methods to control the intensity of motion in the ground at the nearest dwelling, house, school, church, commercial or occupied building.

### Conclusions

Based on the analysis of environmental impacts, coordination with the Colorado State Historic Preservation Officer and other State, Federal and local agencies, and a review of comments received, Reclamation concludes that implementation of the Shavano Falls Hydropower Project will not result in significant impacts on the quality of the human environment or the natural resources in the project area.

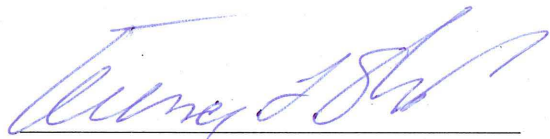
This Finding of No Significant Impact has, therefore, been prepared and is submitted to document environmental review and evaluation of the proposed action in compliance with the National Environmental Policy Act of 1969, as amended.

Prepared By:

  
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6.3.2014  
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6-10-14  
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