

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 SOUTH CANAL DROP 5 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 Bureau of Reclamation has prepared an Environmental Assessment (EA) for the South Canal Drop 5 Hydropower Project of the Uncompahgre Project (Project) near Montrose, Colorado. The EA assesses the 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, located in west-central Colorado, is a Bureau of Reclamation (Reclamation) project operated and maintained by the Uncompahgre Valley Water Users Association (UVWUA). The South Canal, in conjunction with the Gunnison Tunnel, was constructed in 1909. The Canal provides water to lateral canals near the outlet of the Tunnel, directly supplies up to 172 cfs to the West Canal, and increases the volume of the Uncompahgre River downstream of the South Canal from which additional canals are supplied.

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.

On June 18, 2015, a Preliminary Lease of Power Privilege (Contract No. 2015-0031-CF-0004) was entered into by Reclamation and the UVWUA to permit cost-recovery for the construction and operation of a hydropower facility at Drop 5. The LOPP on Drop 5 must accommodate existing contractual, water delivery, and environmental commitments related to operation and maintenance of the South Canal and the Uncompahgre Project.

Purpose and Need

A Lease of Power Privilege (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 would be implemented consistent with established authorities, purposes, and water operations for the Uncompahgre Project.

The purpose of the Drop 5 Hydropower Project is to develop a 2.4 MW hydropower plant on the South Canal at Drop 5 to provide a clean, renewable energy source that is locally controlled. Current Federal policy encourages non-Federal development of environmentally sustainable hydropower potential of Federal water resource related projects. The electricity generated by the Project would provide the UVWUA with an additional source of revenue that can be used to defray annual operating expenses and assist in the maintenance and improvement of the Uncompahgre Project.

Scoping/Public Involvement

Reclamation's scoping included publishing a public meeting notice in the local newspaper, and coordination with the U.S. Bureau of Land Management (BLM), Colorado State Historic Preservation Officer, Colorado Parks and Wildlife, and the Uncompahgre Valley Water Users Association. Reclamation had previously issued similar LOPPs for hydropower projects within 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 August 27, 2015 to 31 local, state, and federal agencies and organizations, and 14 property owners adjacent to Drop 5. The Draft EA was also distributed on the Bureau of Reclamation website, along with a Press Release announcing its distribution and request for comments.

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 Drop 5 on the South Canal.

Proposed Action Alternative

Under the Proposed Action Alternative, Reclamation would execute a LOPP to permit UVWUA to construct, operate, and maintain a 2.4 MW hydropower plant and associated facilities adjacent to the South Canal at Drop 5.

Summary of Findings

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

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

Under the Proposed Action Alternative, Reclamation would execute a LOPP to permit UVWUA to construct, operate, and maintain a 2.4 MW hydropower plant and associated facilities adjacent to the South Canal. Summaries of the predicted impacts (both beneficial and negative) on environmental resources are discussed below.

Indian Trust Assets and American Indian Sacred Sites

No Indian Trust Assets have been identified within the project area. No American Indian sacred sites are known within the project area. Neither the No Action Alternative, nor the Proposed Action, will impact Indian Trust Assets or American Indian sacred sites.

Environmental Justice

The Proposed Action would not involve any relocations, health hazards, hazardous waste, property takings, or substantial economic impacts. Neither the No Action Alternative, nor the Proposed Action, would have disproportionately high or adverse human health or environmental effects on minority or low-income populations.

Energy and Socioeconomic Conditions

The new hydropower project would produce an estimated 8,623 megawatt-hours (MWh) of energy per year based on the 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. 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. There would also be 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.

Wetlands and Water Quality

The South Canal is a direct connection between the Gunnison River and the Uncompahgre River, and was previously determined to be waters of the United States. The other waters of the United States in the project area are Dry Cedar Creek and adjacent wetlands. A Clean Water Act (CWA) Section 402 Non-Point Discharge Elimination System Permit is required, as the ground disturbance activities associated with this project are greater than one acre in size. CWA Section 404 Nationwide Permit No. 17 (Hydropower Projects) addresses discharges of dredged or fill material associated with hydropower projects. UVWUA would be responsible for obtaining this Nationwide Permit prior to construction. Project construction activities will not occur within Dry Cedar Creek.

Fisheries

Diversions from the Gunnison River would not change due to operation of the hydropower project. Habitat conditions in the Gunnison River will not change. Fish that enter the South Canal through the Gunnison Tunnel would continue to experience a level of mortality by passing through the turbines at Drops 1, 3 and 4. Any fish that successfully pass through turbines at Drops 1, 3, and 4 may experience a level of mortality by passing through the turbine at Drop 5. Fishery conditions in the South Canal are not expected to significantly differ from existing conditions with the construction of a hydropower facility at Drop 5. No additional mitigation for fisheries is warranted.

Wildlife and Vegetation

Much of the project area has been disturbed in the past with significant earth moving due to the original construction of the South Canal, canal rehabilitation and maintenance projects over the years, and access roads. Temporary impacts to wildlife and other vegetation would occur due to

the construction of the hydropower facilities. Approximately six acres of land would be disturbed during construction of the hydropower facilities at Drop 5. Construction of the hydropower project will require work to be completed during the non-irrigation season, which may have temporary negative impacts on wintering deer. Normal operation and maintenance of the hydropower plant after the construction period is not expected to impact wintering deer.

BLM Sensitive Species

The Proposed Action is located partially within an existing right-of-way on lands managed by the U.S. Bureau of Land Management's Uncompahgre Field Office (BLM UFO). Of the 34 species identified as BLM Sensitive Species of the UFO, 22 species were determined to have the potential to occur within or near the project area. Potential for impacts to any of the BLM Sensitive Species would be unlikely due to the ongoing disturbance from routine operation and maintenance within the canal right-of-way.

Threatened and Endangered Species

Under the Proposed Action, there would be no effect on endangered, threatened, or candidate species or their habitat due to the development of any features of the hydropower project. There are no listed species present in areas that would be affected by construction, and there would be no changes in river flows or water quality that could affect the downstream endangered fishes. Water depletions associated with the Uncompahgre Project were consulted on and addressed in the Gunnison Basin Programmatic Biological Opinion. No additional depletions would be caused by the proposed Project.

Vegetation surveys of the Project's direct and indirect impact areas did not identify clay-loving wild buckwheat within the project area; however, there is a known population of clay-loving wild buckwheat near the project area. The lands surrounding the project area may provide suitable habitat for clay-loving wild buckwheat, and plant populations outside the surveyed areas are anticipated. Construction in the project area nearest to the clay-loving buckwheat will consist of raising the canal walls on the upstream segment of the South Canal. Dust is not expected to substantially increase as a result of this activity, which will avoid potential indirect effects to the buckwheat.

Recreation

Areas adjacent to any canal, hydraulic drops and other infrastructure are potentially dangerous. The maintenance road adjacent to the canal is on Mancos shale soils and can be slippery and dangerous, especially when wet. The canal and canal road crosses private land, and the canal road is often gated and signed at private property boundaries. For these reasons, public access is not allowed, and recreation is not authorized within the canal right-of-way. Under the proposed action, the maintenance road would continue to be slippery and dangerous, especially when wet, and public access and recreation along the canal and canal road would continue to be unauthorized. The project would have no effect on recreation.

Cultural Resources

The project area of potential effect has been inventoried for cultural resources. There were no prehistoric sites located; however, Reclamation determined that the affected portions of the South Canal contribute to an officially eligible site on the National Register of Historic Places (NRHP), and a construction camp adjacent to the project area is eligible for inclusion on the

NRHP. Reclamation determined that the proposed project will adversely affect segments of the South Canal, an NRHP eligible cultural resource, and has consulted with the SHPO. Reclamation determined that the project will have no effect on the construction camp, as it is located outside of the project area.

Air Quality and Noise

Air quality is generally excellent in the project area, and there are no air quality non-attainment areas in the vicinity. Under the Proposed Action, there would be an increase in noise levels during excavation and grading for the hydropower facilities and from construction traffic. During operation, the turbines and generators would produce machinery noise, representing a new noise source; however, such equipment would be fully enclosed, located a minimum of 950 feet from any dwellings, and should have minimal effects on existing noise levels. After construction of the project facilities, the enclosure of the equipment, combined with the distance to any residences and intervening topography will diminish the noise associated with hydropower facility operations at any residences. The expected increase in noise levels in the immediate vicinity of the powerplant due to operation is minimal, and therefore noise increases at any residences are anticipated to be at minimal or non-detectable levels.

There would be short-term dust impacts during excavation work, although this is predicted to be insignificant because Best Management Practices for dust abatement would be followed during construction and operation of the hydropower facilities. As with other hydropower projects, there would be a beneficial offset of emissions of carbon dioxide (CO₂) and other greenhouse gases. With an average annual energy generation of 8,623 MWh, the Drop 5 hydropower project would provide enough clean energy to power about 790 homes each year. By providing 8,623 MWh of clean energy to the electrical grid which may otherwise have been provided by fossil fuels, Reclamation estimates that CO₂ emissions would be reduced by an estimated 17,849,610 to 18,711,910 pounds per year with implementation of the hydropower project.

Cumulative Impacts

Three other hydropower plants have been constructed at Drops 1, 3, and 4, and an additional hydropower plant is proposed at Drop 2, on the South Canal upstream of the project area. Drop 2 may be under construction concurrently with Drop 5; however these plans are not yet finalized, and the potential construction is not expected to raise the cumulative impacts of the project to a significant level. At this time, there are no other known federal, state, or local projects that occur or are proposed to be constructed within, or in the immediate vicinity of, the project area. Implementation of the Proposed Action is not expected to raise cumulative impacts to a significant level.

Environmental Commitments

The following environmental commitments will be implemented as an integral part of the Proposed Action, and shall be included in the contractor bid specifications.

- The construction and operation of the hydropower project will be carried out in a manner that does not interfere with the irrigation supplies or maintenance of the Uncompahgre Project.
- Existing access roads will be used to access the construction, staging, and stockpile areas. No new access roads will be constructed.

- Best Management Practices, including drainage features, erosion and sediment control measures, will be implemented to prevent or reduce point source pollution during and following construction. A Storm Water Management Plan will be developed and filed with the Colorado Department of Health and Environment (CDPHE).
- Prior to construction, erosion and sediment control measures will be applied around wetland and riparian vegetation associated with Dry Cedar Creek to ensure no fill material enters the wetlands or creek.
- All construction equipment will be power-washed and free of soil and debris prior to entering the construction site to reduce the spread of noxious and invasive weeds.
- Topsoil, where available, will be stockpiled during construction for later use in restoration and revegetation of disturbed areas. Immediately upon completion of construction, disturbed areas will be re-contoured and seeded to reduce erosion and facilitate revegetation (see Appendix F in the Final EA). The plan for re-contouring and revegetation will require pre-approval by Reclamation.
- Best Management Practices for dust abatement will be followed during construction and operation of the hydropower facilities. Watering is required to minimize and control dust from cleared areas and along roadways.
- 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 and kept on-site at all times. The procedures and the SPCC will be submitted to CDHPE 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).
- UVWUA will be responsible for submitting an application for a Colorado Industrial Stormwater General Permit as provided by CDPHE at least ten (10) days prior to the commencement of construction activities. The application requires certification that a Storm Water Management Plan has been completed for the construction project.
- Prior to construction, UVWUA and its contractors will fence or mark the entirety of the project action area, and no work, access, or disturbance will occur outside the fenced/marked area, in order to avoid potential impacts to federally-listed species or cultural resources.
- In the event of discovery of threatened or endangered species, the UVWUA will immediately cease all ground-disturbing activities in the vicinity and notify Reclamation. Work will not be resumed until authorized by Reclamation.
- The Kaplan turbine design will incorporate recommended design concepts 1, 4, and 6 as outlined in *A Summary of Environmentally Friendly Turbine Design Concepts* developed by the US Department of Energy (DOE 1999) to help ensure the Kaplan turbine is designed in an environmentally friendly manner. A copy of this summary can be viewed at: <http://www1.eere.energy.gov/wind/pdfs/doewater-13741.pdf>.
- To ensure project construction will have no impact on the NRHP-eligible cultural resource located immediately adjacent to the project area, UVWUA and its contractors will install high visibility construction fencing along the project area boundary in the vicinity of the resource, and no construction work, access, or disturbance will occur outside the fenced area.

- 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 authorized by Reclamation.
- UVWUA will comply with all Stipulations contained in the Memorandum of Agreement with the Colorado State Historic Preservation Officer (see Appendix C in the Final EA).
- If any additional areas of impact (for example: access roads, borrow areas, or waste areas) are identified during the course of the undertaking, they will be inventoried for threatened and endangered species and cultural resources and consulted on with the U.S. Fish and Wildlife Service and the State Historic Preservation Officer, as applicable. No disturbance will occur outside of the identified project area boundaries until the required consultations are completed.
- Above-ground power line and power pole designs will meet recommended standards as outlined in the Avian Protection Plan Guidelines developed by the US Fish and Wildlife Service and Industry (APLIC 2005). A copy of these standards can be viewed at: http://www.aplic.org/uploads/files/2634/APPguidelines_final-draft_April2005.pdf.
- Powerhouses and substations will be non-reflective and painted to blend with the project area background in order to minimize visual impacts.
- The water utilized for power development will be non-consumptive. No new water rights will be appropriated for the purposes of operating the facility. The operation of the facility will not interfere or conflict with the purpose and operations of the Uncompahgre Project, including but not limited to the South Canal. There will be no increase in diversions from the Gunnison River solely for hydropower use permitted under the LOPP. The hydropower facility will be operated based on irrigation diversion patterns.
- Irrigation supplies and canal maintenance access will be maintained during construction at all times. Water supplies to Fairview Reservoir will not be interrupted.
- 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. UVWUA will adhere to their 2012 *Pesticide Discharge Management Plan and Integrated Pest Management Plan for Uncompahgre Valley Water Users Association*, as well as Montrose County's 2011 *Montrose County Weed Mitigation Department Weed Management Plan*. UVWUA will focus on ensuring the control of invasive weeds within the project area, especially Russian knapweed. 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.

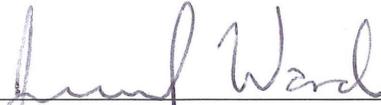
Conclusions

Based on the analysis of environmental impacts, coordination with the U.S. Bureau of Land Management and other local, state, and Federal agencies, and a review of comments received, Reclamation concludes that implementation of the Drop 5 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.

Signatures

Prepared By:



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Nov. 3, 2015
Date



Lesley McWhirter
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11/3/2015
Date



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Date