

RECLAMATION

Managing Water in the West

Final Environmental Assessment Shavano Falls Hydropower Project

**Western Colorado Area Office
Upper Colorado Region**



May 2014

Table of Contents

CHAPTER 1 – INTRODUCTION	1
PROPOSED ACTION	1
NEED FOR AND PURPOSE OF ACTION.....	1
BACKGROUND INFORMATION	2
Uncompahgre Project.....	2
Montrose & Delta Canal	2
Lease of Power Privilege	2
CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES	4
NO ACTION ALTERNATIVE	4
PROPOSED ACTION	4
Hydropower Project Design.....	5
Operation.....	7
SUMMARY	9
CHAPTER 3 – AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES ..	10
UNCOMPAHGRE PROJECT OPERATIONS AND WATER RESOURCES.....	10
ENERGY AND SOCIOECONOMIC CONDITIONS.....	11
FISHERIES.....	12
WILDLIFE AND VEGETATION	13
RECREATION	18
THREATENED AND ENDANGERED SPECIES	18
INDIAN TRUST ASSETS & ENVIRONMENTAL JUSTICE.....	20
CULTURAL RESOURCES	21
AIR QUALITY AND NOISE	22
CUMULATIVE IMPACTS.....	24
SUMMARY AND ENVIRONMENTAL COMMITMENTS.....	24
Mitigation Measures and Environmental Commitments	24
CHAPTER 4 – CONSULTATION & COORDINATION.....	26
GENERAL.....	26
DISTRIBUTION LIST	26
COMMENTS ON DRAFT EA.....	27
REFERENCES	29

ATTACHMENT A – Draft Lease of Power Privilege

ATTACHMENT B – Temporary Use Permit (No. 14-LM-4A-00110)

ATTACHMENT C – Executed MOA

ATTACHMENT D – Draft EA Comment Letter



Figure 1. Project Area

CHAPTER 1 – INTRODUCTION

PROPOSED ACTION

The proposed action is for the Bureau of Reclamation (Reclamation) to execute a Lease of Power Privilege (LOPP) to the Uncompahgre Valley Water Users Association (UVWUA) for hydropower development at existing Bureau of Reclamation facilities on the Montrose and Delta (M&D) Canal of the federal Uncompahgre Project. The LOPP would authorize the use of federal facilities and Uncompahgre Project water to construct, operate and maintain 2.8 megawatt (MW) hydropower facilities at a location known as “Shavano Falls.” The proposed hydropower project would be located in Montrose County, Colorado, approximately 6.8 miles west of the town of Montrose, Colorado as shown in Figure 1.

The hydropower project would be located in a section of the M&D Canal between the CP Lateral and CQ Lateral headgates downstream of Coal Creek. This section of the M&D Canal drops approximately 184 ft to Coal Creek and creates the Shavano Falls. Water that currently goes over Shavano Falls would be diverted into a penstock and through the hydropower plant before returning to the M&D Canal and CQ Lateral to meet irrigation delivery demands downstream. The project also includes a 0.9 mile overhead interconnection line across private lands to bring the hydropower produced at that site to the power grid.

This Environmental Assessment (EA) is prepared in accordance with the National Environmental Policy Act, the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and the U.S. Department of the Interior’s regulations (43 CFR Part 46). The EA evaluates the environmental effects of permitting the construction and operation of the hydropower project.

NEED FOR AND PURPOSE OF ACTION

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 operating expenses associated with the Uncompahgre Project while assisting local utilities in meeting regional requirements and demands for renewable energy.

BACKGROUND INFORMATION

Uncompahgre Project

The Uncompahgre Project is a Reclamation irrigation project located in west-central Colorado, which is operated by the UVWUA. Irrigated lands surround the town of Montrose, and extend 34 miles along both sides of the Uncompahgre River to Delta, Colorado. Project features include Taylor Park Dam and Reservoir in Gunnison County, the Gunnison Tunnel, 7 diversion dams, 128 miles of main canals, 438 miles of laterals, and 216 miles of drains. The systems divert water from the Uncompahgre and Gunnison rivers to serve over 76,000 acres.

The Uncompahgre Project was authorized in 1903, under the provisions of the Reclamation Act. The Gunnison Tunnel was completed in 1909 and the Gunnison Diversion Dam was completed in January 1912, allowing delivery of water from the Gunnison River to the Uncompahgre Valley. Taylor Park dam, built from funds allotted under the National Industrial Recovery Act, was completed in 1937. The project was transferred to the UVWUA for operation and maintenance in 1932.

Montrose & Delta Canal

The 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 began in 1906, and the purchase was finalized in May of 1908. After the South Canal empties into the Uncompahgre River, about 2.2 miles downstream the M&D Canal diverts water from the river and transports it northwestward. 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. Water not spilled over the canyon side continues northward in the CP Lateral. Water spilled over the falls is siphoned across Coal Creek into the CQ Lateral. The remaining flows over the falls enter Coal Creek, where it is picked up a few miles downstream in a continuation of the M&D Canal (aka C Canal).

Lease of Power Privilege

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. A LOPP has terms of 40 years, and the general authority includes, among others, the Town Sites and Power Development Act of 1906 (43 U.S.C. 522), and the Reclamation Project Act of 1939 (43 U.S.C. 485h(c)).

On August 3, 2013, Congress passed the Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act. This act requires that Reclamation first offered 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 environment commitments related to operation and maintenance of the M&D Canal and the Uncompahgre Project. All costs incurred by the United States related to development and operation and maintenance under the LOPP, including NEPA compliance, engineering reviews, and development of the LOPP, are the expense of UVWUA. A copy of the draft LOPP is included as Attachment A.

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

Alternatives evaluated in this EA include the No Action Alternative and the Proposed Action Alternative.

NO ACTION ALTERNATIVE

Under this alternative, execution of a LOPP between Reclamation and UVWUA for construction, operation, and maintenance of a hydropower facility at Shavano Falls along the M&D Canal would not occur.

PROPOSED ACTION

Under the Proposed Action, 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 (Figures 2 and 3).

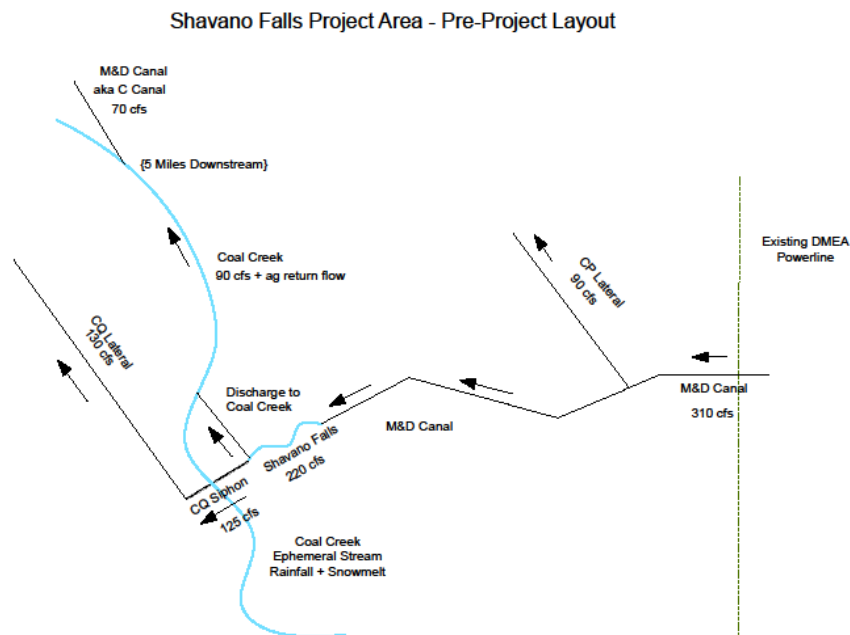


Figure 2. The existing layout of the Shavano project area. The arrows show the direction of flow.

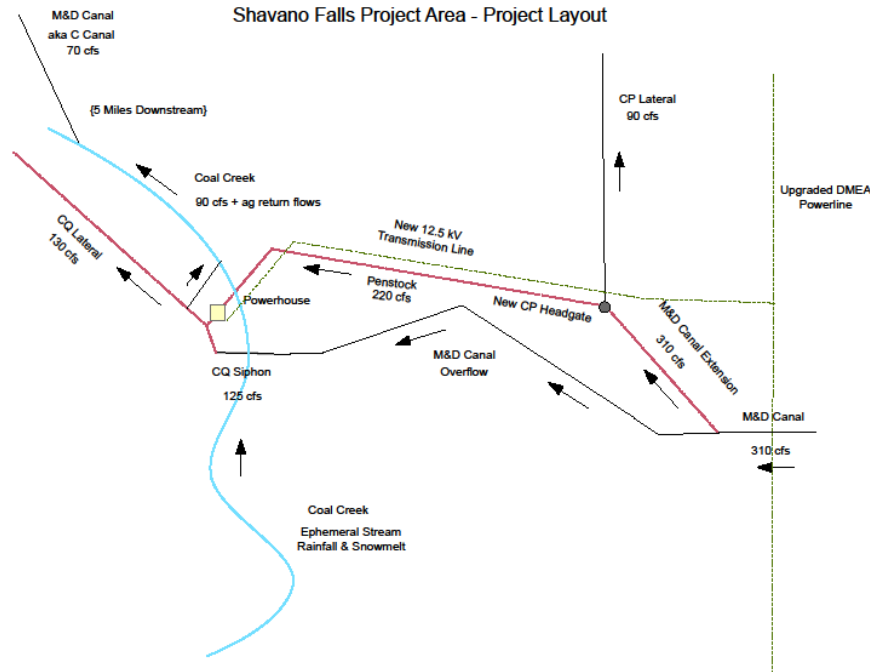


Figure 3. Proposed project layout. Modified laterals and the penstock are displayed in red. Arrows show the direction of flow.

Hydropower Project Design

Project designs would be reviewed and approved by Reclamation prior to authorizing construction. Existing diversion structures and the CQ Lateral siphon would remain in place and would be maintained to meet irrigation deliveries during construction and if the penstock or hydropower plant are down for repairs or maintenance during the irrigation season. Power produced would be wheeled by the Delta Montrose Electric Association (DMEA), to the Municipal Energy Association of Nebraska (MEAN). The project includes a new line to connect to the electrical grid and will require 0.9 miles of new transmission line to reach the substation. The first 3,452 feet of transmission line leaving the facility will be overhead, while the last 1,300-feet of transmission line will be buried. The interconnection line will be outside of the existing Uncompahgre Project facilities and rights-of-way.

Project designs include improving the existing canals and related structures to convey the entire M&D Canal flows in an expanded reach of the CP Lateral, then into a 69 inch diameter penstock 1,790 feet in length before producing power through the 2.8 MW powerplant, and then returning flows to the M&D Canal and CQ Lateral downstream. This will be a parallel bypass of water and will not alter irrigation deliveries. A summary of the hydropower project features are described in greater detail below. Additional details can be found in the project's supporting design report (Sorenson Engineering 2013):

- A. **Diversion/Bypass**-The existing CP Lateral will be replaced. It will serve as a diversion and a bypass structure for the hydroelectric facility. A second diversion (intake) will be constructed downstream of the powerhouse in the CQ Lateral to divide water between the CQ Lateral and Coal Creek. The CP Diversion will consist of a 20' wide by 4' high

roller gate which will serve as a bypass for the hydroelectric facility. A secondary fail-safe bypass will consist of a 20' long weir and two 5' wide automatic trip gates (ATG).

- B. **Canal System**-The M&D Canal is an earth embankment structure which serves Uncompahgre Project lands and is operated and maintained by UVWUA. The M&D Canal will not be altered. Prior to the 2014 irrigation season, UVWUA enlarged a 1200' long section of the CP Lateral on private lands to increase capacity from 90 cfs to 310 cfs, in anticipation of delivering the Shavano Drop water to the intake for the hydroelectric facility. UVWUA also modified the CQ Lateral by digging the lateral to the level anticipated to be needed for water coming out of the powerhouse. Coal Creek will not be altered.
- C. **Intake**-The intake structure will be located approximately 1200' downstream of the CP Diversion. It will be a new bulkhead structure consisting of two 48' wide sluice gates to continually feed the CP Lateral. Flows in the CP Lateral downstream of the intake will not be altered. A 20' wide concrete feeder canal will be utilized to divert flow from the CP Lateral to the steel penstock. A 20' wide roller gate will be placed in this new section to shut off flows to the hydroelectric facility. The 69" diameter penstock will deliver water to the generation unit in the powerhouse. A bar screen and mechanized trash removal system will be utilized.
- D. **Bypass**-During turbine shutdown or startup, the automatic electric motor will drive on the bypass roller gates at the intake, and the CP Diversion will operate at rates to match the turbine wicket gates, i.e. maintain constant upstream water level and thus constant movement of flow, including upstream flow modifications. The bypass structure will include two 5' wide automatic trip gates which will function as a redundant safe guard in the event the plant shuts down for any reason and the bypass gate is not able to divert the required flows. In conjunction with the ATGs, a 20' long weir wall will be added at the CP Lateral to return excess flows to the canal.
- E. **Powerhouse**-The powerhouse will be a steel building structure with a reinforced concrete foundation. The foundation will embed the turbine housing and steel draft tube. The building will be approximately 40' wide by 30' long and house the generator and mechanical/electrical auxiliaries. The building will be equipped with a roof access hatch to facilitate future maintenance. Powerhouses and substations will be non-reflective and painted to blend with the project area background.
- F. **Turbine**-The turbine will be a horizontal Francis. The turbine will be of American/European design built in China, as will be the generator. The turbine manufacturer is represented by Far East Engineering of Boise, Idaho.

Construction of the hydropower facility is currently a private venture, however UVWUA has applied for grants from state and federal sources. Construction is expected to take between 6 and 9 months at a cost of approximately \$8 million. Construction activities would be coordinated with canal operations and on-going irrigation delivery. Normal irrigation deliveries would be maintained throughout construction. The UVWUA has already increased the capacity of

sections of the CP and CQ Laterals to handle the additional flows for the M&D associated with the hydropower project. This was completed on private lands by UVWUA during the spring of 2014, in anticipation of approval of the LOPP. Storage areas and staging areas during construction would be adjacent to the CQ Lateral below the existing falls. Existing roads would be used for construction access, with the exception of the Shavano Falls CCC road. This road would not be used for construction access (see the Cultural Resource Section). The UVWUA also requested temporary construction access across Coal Creek on Reclamation lands. Reclamation issued the temporary use permit which authorizes the discharge of fill material for the temporary construction and use of the access road subject to approval by the Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act. A copy of the temporary use permit and ACOE's authorization are attached as Attachment B. UVWUA will be responsible for obtaining any other 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 construction activities.

Disturbed land would be contoured to prevent erosion, and topsoil, where available, will be stockpiled during construction for later use in re-vegetation. A seeding mix specifically designed for the impact area would be used, and long-term weed control would be implemented. Additional information is found in Chapter 3 under Environmental Commitments.

Operation

UVWUA anticipates that the units would be operated by an automatic computer (unmanned) control located at the plant, fitted with a dial-in signal to allow remote monitoring of the plant, including critical variables (temperature, voltage, etc) from any telephone. In addition, the control panel will be fitted with an automatic telephone dialer to alert of alarm conditions. The facilities will be utility grade with battery system operation of essential features during power outages.

At the beginning of each irrigation season, water would be discharged through the irrigation system and powerplant to exercise the gates and make certain all systems associated with the project are in working order.

The facilities would be designed and equipped with structures to protect existing canal and irrigation flows. The Uncompahgre Project was authorized under provisions of the Reclamation Act of 1902. The Uncompahgre Project was also authorized to allow for the sale of hydroelectric power under the Act of June 28, 1938 (52 Stat. 941). The hydropower project would be operated as a run-of-canal plant, and diversions to the M&D Canal from the Uncompahgre River and irrigation deliveries would not change. During the irrigation season, the Project would divert flows from the M&D Canal through the penstock and through the powerplant, and then return the water to Coal Creek and the CQ Lateral immediately below the powerplant. There would be no increases in diversions from the Uncompahgre River authorized by the LOPP for the hydropower project. No hydropower production would occur outside the normal irrigation season (November through February). Water available for hydropower is discussed further in Chapter 3 under Water Resources.

The electricity generated by the Project would provide UVWUA with a source of revenue that can be used to defray annual operating the maintenance expenses.

SUMMARY

Table 1. Summary of potential impacts for alternatives

Resource	No Action Alternative	Hydropower Development at Shavano Falls
Energy production	None	12,973 megawatt-hours (MWh) of energy per year
Wetlands and riparian resources	No Effect	Temporary Impacts associated with construction at Coal Creek and the permanent loss of 0.04 acres association with pier foundation for penstock.
Recreation use	No Change	No Effect
Fisheries	No Change	No Effect
Water rights/streamflows	No Effect	No change in water rights. Decrease flows in a 1,000-foot section of Coal Creek during irrigation season.
Endangered Species	Uncompahgre Project depletions are included in the Gunnison Basin PBO	No Change to endangered fish, no effect to other listed species.
Wildlife and vegetation	No Change	Temporary impacts associated with construction and maintenance of the hydropower facilities. Minor reduction in riparian vegetation below the falls area.
Water supply for irrigation and municipal uses	No Change	No Change
Cultural Resources	No Effect	Mitigated adverse effects to some NRHP eligible historic resources, Mitigation includes Level I HABS HAER Documentation.
Air Quality	No Change	Minor changes in Air Quality during construction associated with fugitive dust. Active dust abatement program implemented to keep changes in air quality to an insignificant level. Offset emissions of carbon dioxide (estimated at 27 to 28 million pounds per year) and other greenhouse gases.
Noise	No Change	Temporary increase of noise levels during construction; distance from any nearby structures combined with enclosure of project equipment will result in no significant long-term effect.
Socio-economics	No Effect	Assist in providing a source of renewable energy for MEAN to market to retail municipal utilities throughout Colorado; temporary benefit of increased construction jobs. Increased employment/tax revenues. Long-term benefit to UVWUA members resulting from sale of power.

CHAPTER 3 – AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

This chapter discusses resources that may be affected by actions taken to construct and operate a hydropower plant on the M&D Canal at Shavano Falls. For each resource, existing conditions and impacts are described. This chapter is concluded with a list of environmental commitments.

UNCOMPAHGRE PROJECT OPERATIONS AND WATER RESOURCES

Existing Conditions: The Uncompahgre Project is authorized and operated to provide water supplies for irrigation in the Uncompahgre Valley. Irrigation supplies are developed from four sources: direct flow diversions from the Uncompahgre River, storage water from Ridgway Reservoir, direct flow diversions from the Gunnison River, and storage water from Taylor Park Reservoir. Water associated with the Proposed Action is directly diverted from the Uncompahgre River.

Flows were measured several times during the 2012 irrigation season at a location between the CP Lateral headgate and the top of Shavano Falls. These measured flows were then combined with the records of the turn-on and shut-off dates for the irrigation seasons from 1997-2012. An estimated average daily flow of 220 cubic feet per second (cfs) in the M&D Canal downstream of the CP Diversion would be available for hydropower production. Irrigation deliveries generally begin at the end of March and the flows in the M&D Canal quickly reach 220 cfs, and remain constant until the end of the irrigation season in late October. Irrigated acres serviced by the lower section of the M&D Canal have remained constant over time, and is projected to remain unchanged in the foreseeable future.

No Action Alternative: Under the No Action Alternative, there would be no changes to current irrigation deliveries or operations. M&D Canal diversions from the Uncompahgre River vary from year to year due to water availability, weather patterns, crop and land use patterns, and other factors. This variability would continue with or without the hydropower project. Changes in climate or major changes in cropping or land use patterns may also affect irrigation diversions and water use patterns.

Proposed Action: Under the proposed action, the water diverted in the M&D Canal for irrigation would also be used for hydropower production. There would be no change in operations, the timing, or the amount of water diverted into the M&D Canal. The power plant would be operated as a run of the canal facility, and existing irrigation supplies and deliveries would not be

affected. Additional improvements to existing canals, laterals, and diversion structures would occur outside the irrigation season. Hydropower production would only occur during the irrigation season.

Water levels in the M&D Canal will not be increased. The proposed action includes features which will reduce the potential for water backing up and improve monitoring and control of water levels in the M&D Canal. The enlarged CP lateral will transport water to the penstock intake structure, and a trash removal system will remove trash and debris before water enters the penstock. Water-level sensors will automatically open the M&D canal bypass gates if there are increases or decreases in water surface elevation at the penstock intake structure. The project will also include two automatic fail safe trip gates which will trip by gravity if the water level raises more than three inches. If tripped, the upstream water level in the canal will drop.

ENERGY AND SOCIOECONOMIC CONDITIONS

Existing Conditions: Hydropower has been developed previously at two sites along the South Canal, and additional hydropower developments are planned at other locations. The existing and proposed Uncompahgre Project hydropower projects are located in the Rocky Mountain Power Area of the Western Electric Coordination Council Region of the North American Electric Reliability Council.

In the short-term, the proposed project would be used to meet a portion of the electricity demand in Municipal Energy Agency of Nebraska's (MEAN) service territory. MEAN is part of the Nebraska Municipal Power Pool and was organized in 1980 to secure power supply for its members and provide related administrative and technical services. MEAN combines the capacities of a number of municipally-owned plants with Western Area Power Administration power and purchased power. MEAN supplies power and energy to approximately 40 municipalities in Nebraska, Colorado, and Kansas (Nebraska Power Review Board 2014). There is existing potential for future power produced from the Shavano Hydropower Project to be used to meet future local power demands. Demand for electricity in Delta-Montrose Energy Association's service territory has been on an ever increasing trend for decades. The peak demand and annual energy requirements for the Rocky Mountain Power Area are projected to increase at an average annual compound rate of 1.8 to 2.0 percent (WECC 2004). The proposed project would help meet this rising demand.

Amendment 37 to the Colorado Constitution established a Renewable Energy Standard which requires each provider of retail electric service in the State of Colorado that serves over 40,000 customers to secure a minimum percentage of electricity (10% by 2015) from renewable energy sources such as wind, solar, and hydroelectricity.

The Uncompahgre Project and water supplies from the Gunnison and Uncompahgre rivers are critical to the economies of Delta and Montrose Counties, and west-central Colorado. The Uncompahgre Project supports over 66,000 acres of irrigated agriculture through a series of over 500 miles of canals and laterals. The M&D Canal's main channel extends 31.4 miles from south of the City of Montrose to southwest of the City of Delta, and was designed to carry flows up to

650 cfs. In total, the M&D Canal serves 75 laterals and sub-laterals for a total of 72.75 miles in length, and irrigates 33,600 acres. Principle crops harvested on the irrigated lands include alfalfa, wheat, corn, dry beans, and small grains (Colorado Decision Support Systems).

No Action Alternative: Under the No Action Alternative, UVWUA would not build a hydropower facility at Shavano Falls and economic opportunities associated with the hydropower project would be forgone.

Proposed Action: The new hydropower project would produce an estimated average of 12,973 megawatt-hours (MWh) of 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 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. According to initial estimates, revenues could be relatively small at first, dependent on financial terms of interest and amortization schedule, but the project should produce positive cash flow once operations start. The projections are highly dependent on interest rates and actual operation and maintenance costs. However, 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 proposed project will provide an additional source of renewable energy for MEAN to market to municipalities throughout Colorado, which could then help those agencies reach the Renewable Energy Standard.

There would be short-term employment and spending on goods, services, and materials during the construction period, with an overall increase in the level of income in the county during the construction phase. This would benefit local communities and businesses, as well as increase tax revenues from taxes collected on these purchases.

The transport and delivery of irrigation or municipal and industrial water in the M&D Canal would not be affected by hydropower development during construction, operation, or any future maintenance project.

FISHERIES

Existing Conditions: Prior to construction of Ridgway Dam, the Uncompahgre River was a very poor fishery. The Uncompahgre River downstream of Ridgway Dam has now become a popular tailwater fishery with brown, rainbow and cutthroat trout maintained by a stocking program of the Colorado Division of Parks and Wildlife. As the river enters the Uncompahgre Valley, water temperatures warm, changing the river from a cold water to a warm water fishery. Water is diverted from the Uncompahgre River to the M&D Canal approximately 11 miles downstream of Ridgway Dam.

Coal Creek is a small tributary to Dry Creek. Water flows through Shavano Falls and enters either the CQ Lateral or Coal Creek. Above the project area, Coal Creek is an ephemeral stream,

meaning it only has water flowing in it naturally after precipitation events or snowmelt, and it also receives irrigation return flows from the West Canal. During the irrigation season, an additional 90 cfs is diverted into Coal Creek below Shavano Falls. Approximately five miles downstream, about 70 cfs is diverted into the lower portion of the M&D Canal (aka C Canal). Remaining flows continue downstream where Coal Creek merges with Dry Creek and eventually the Uncompahgre River. Both Coal Creek and Dry Creek receive irrigation return flows from the surrounding fields. Fisheries in Coal Creek are limited by the intermittent flows and warmer irrigation return flows (CPW 2014). A 1975 CPW electrofishing record at the confluence with Dry Creek estimated 100 percent of the fisheries were rough fish consisting of white sucker, long nose sucker, and dace.

No Action Alternative: Under the No Action Alternative, hydropower would not be developed at Shavano Falls. There would be no changes to the fishery conditions in the Uncompahgre River.

Proposed Action: Diversions from the Uncompahgre River would not change due to operation of the hydropower project. Habitat conditions in the Uncompahgre River will not change. Project designs incorporate a trash rack and screen above the penstock intake. The trash rack and screen are adequate to prevent large fish that could have normally gone over the falls from entering the penstock. The 90 cfs normally diverted to Coal Creek below Shavano Falls would be moved about 1,000 ft downstream. This will result in reduced flows in that 1,000 ft segment of Coal Creek during hydropower operations. The reduced flows are not predicted to significantly impact the existing fisheries in Coal Creek.

WILDLIFE AND VEGETATION

Existing Conditions: Native vegetation in the study area include mixed salt desert scrub, pinyon-juniper woodland, cottonwood riparian forest, herbaceous wetland, greasewood flat, disturbed ruderal areas, agricultural fields, and residential landscaped areas. The M&D Canal introduced a water supply to the area approximately 130 years ago. Seepage from the canal, laterals, and irrigation return flows support patches of 4-wing saltbush, and in wetter areas, cattail, willows, and cottonwoods. The riparian vegetation along Coal Creek has also benefited from irrigation influences.

Water is diverted into the M&D Canal during the irrigation season (generally April-September). Above the falls, cottonwoods and other riparian and wetland vegetation has established along the M&D Canal below the CP Diversion. A majority of this vegetation is up gradient of the M&D Canal. Some previously disturbed areas near the canal also support Russian knapweed, Russian olive, and kochia.

The project area provides limited winter range for mule deer and occasionally elk. There are no prairie dog towns or known raptor nests in the hydropower project area.

No Action Alternative: Under the No Action Alternative, no hydropower facility would be developed at Shavano Falls. There would be no changes to the existing wildlife and vegetation conditions.

Proposed Action: Much of the project area has been disturbed in the past during construction, operations, and maintenance of the M&D Canal, CP, and CQ Laterals.

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 the reach of 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. Water has also been observed seeping into the falls area through breaks in the cliff face, likely originating in irrigation return flows which follow fractures in the cliff before following the falls down to Coal Creek (Mariah Associates 1986). 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. Currently, cottonwood recruitment in this area is poor, and that trend is expected to continue after project implementation.

Bio-Logic Inc. (2014) completed a wetlands inventory of the project area to delineate jurisdictional wetlands that occur along Coal Creek. Bio-Logic, Inc. surveyed a 6.4-acre area within the proposed project footprint for the purposes of identifying potentially jurisdictional Waters of the United States which may be subject to regulation by the U.S. Army Corps of Engineers. The falls and the area below the CP Diversion are outside of the proposed project footprint, and were not included in the Bio-Logic survey. The inventory identified Coal Creek, the CP Lateral, and 4 wetlands as potentially jurisdictional Waters of the United States (WoUS). WoUS are subject to the provisions of the Clean Water Act.

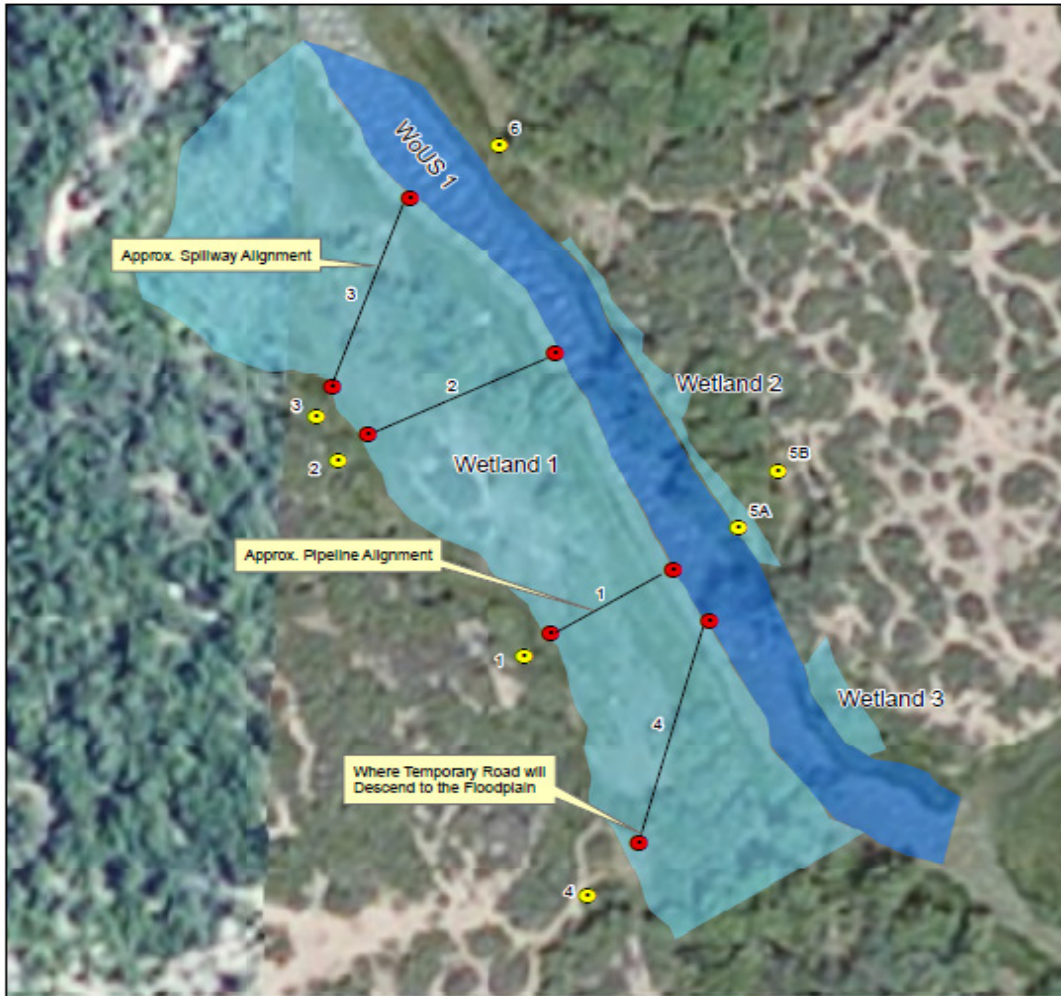
Approximately 415 feet of the ordinary high water mark (OHWM) of Coal Creek and the CP Lateral occur within the project area. Wetlands 1-3 are within the Coal Creek floodplain and Wetland 4 is located on the side of Spring Creek Mesa, below a sandstone outcrop. Delineated wetlands are described below, and wetland locations are shown in Figures 4 and 5:

Wetlands 1-A 0.346 acre-wetland confined to the floodplain terrace on the west-side of Coal Creek. Dominate vegetation is tall fescue, creeping wild rye, and salt grass. Small patches or reed canary grass are also present as well as Canada thistle, sweet meliot, western aster, showy milkweed, horsetail, and arctic rush, tamarisk and greasewood.

Wetlands 2 and 3-These two wetlands are confined to a narrow strip of bank of the floodplain terrace on the east side of Coal Creek and consist of hydrophytic vegetation dominated by reed canary grass. Wetland 2 is 0.011 acre and Wetland 3 is 0.007 acre, in size.

Wetlands 4- A 0.077-acre wetland on the west-facing side of Spring Creek Mesa, below the sandstone outcrop that forms the mesa edge and is dominated by tall fescue and redtop bentgrass

associated with reed canary grass, alkali muhly, and orchard grass. One broadleaf cottonwood and one juniper are also located within this wetland.



Basemap Source:
ESRI composite aerial image,
Aerial photos taken summer 2011

- Legend
- Vegetation Sampling Transect Endpoint
 - Vegetation Sampling Plot Center
 - Coal Creek Channel Within OHWM
 - Wetland

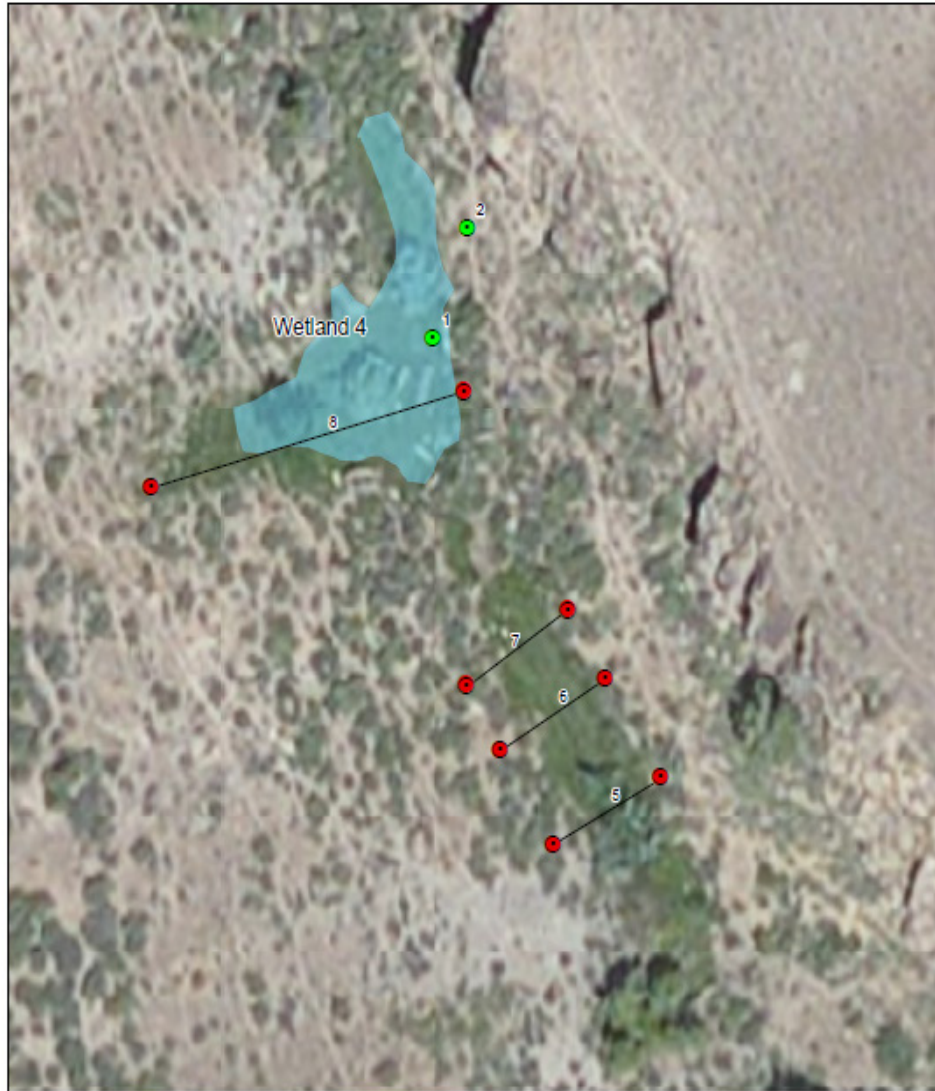
Shavano Valley Hydroelectric Project
Sorenson Engineering &
Uncompahgre Valley
Water Users Association

Figure 4
Delineated Waters of the US:
Coal Creek

BIO-Logic, Inc.
125 Colorado Avenue, Suite B
Montrose, CO 81401
(970) 240-4374
www.bio-geo.com



Figure 4. Locations of Wetlands 1, 2 and 3.



Basemap Source:
ESRI composite aerial image,
Aerial photos taken summer 2011

- Legend
- Vegetation Sampling Transect Endpoint
 - Soil Sampling Point
 - Wetland

Shavano Valley Hydroelectric Project
Sorenson Engineering &
Uncompahgre Valley
Water Users Association

Figure 5
Delineated Waters of the US:
Flank of Spring Creek Mesa

BIO-Logic, Inc.
125 Colorado Avenue, Suite B
Montrose, CO 81401
(970) 240-4374
www.bio-geo.com



Figure 5. Location of Wetland 4.

As mentioned previously, a temporary access road across Coal Creek has been permitted by Reclamation and the ACOE. This authorization allows for the temporary discharge of 72” culvert and associated fill material that will temporary affect about 0.04 acres of palustrine emergent wetlands (Wetland 1 and 0.02 acres of Coal Creek). A copy of the ACOE authorization and special conditions is included in Attachment B).

Invasive and non-native plant species such as Russian knapweed, Russian olive, and kochia will be controlled within the project area for the life of the project by UVWUA as a condition of the LOPP, which will benefit native plant and animal species that utilize the area. UVWUA is responsible for consultation with Reclamation for acceptable weed control measures, including pesticides/herbicides approved for use on Reclamation land. Use of pesticides/herbicides will comply with the applicable Federal and state laws, and will be used only in accordance with their registered uses and within limitation imposed by the Secretary of the Interior. All construction equipment will 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 and will be re-seeded. The plan for re-vegetation and related erosion control/re-contouring and implementation will require approval by Reclamation. The UVWUA would work directly with Reclamation and adjacent landowners to re-vegetate disturbed areas and develop appropriate seed mixtures.

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 these standards can be viewed at: http://www.aplic.org/uploads/files/2634/APPguidelines_final-draft_Apr12005.pdf

RECREATION

Existing Conditions: On Franklin Mesa, the M&D Canal spills water into the man-made watercourse that cascades over sandstone cliffs and enters the Shavano Valley, forming what is known as Shavano Falls. Recreation opportunities on the lands around Shavano Falls are limited because of the lack of public lands. Reclamation owns a 20 acre parcel that surrounds the falls and includes a UVWUA Ditchrider's residence and the CQ Lateral Siphon.

Areas adjacent to any canal and falls are dangerous. The maintenance road along the canal is steep and narrow in places and can be dangerous, especially when wet. For these reasons, public access is not allowed.

No Action Alternative: Under the No Action Alternative, hydropower facilities would not be constructed at Shavano Falls. There would be no change in recreation from existing conditions.

Proposed Action: Under the Proposed Action, hydropower facilities would be constructed at Shavano Falls. The watercourse created by the M&D Canal spillwater will be located within the pinstock, which will alter the ambience of the artificial falls. The project would have no effect on recreation.

THREATENED AND ENDANGERED SPECIES

Existing Conditions: Table 2 includes species which are listed under the Endangered Species Act as endangered, threatened, or are a candidate for listing which are potentially occurring in Montrose County or in downstream rivers.

Table 2. Special status species in Montrose County

Common Name	Scientific Name	Status	General Habitat
Bonytail	<i>Gila elegans</i>	Endangered	Colorado River and major tributaries
Colorado hookless cactus	<i>Sclerocactus glaucus</i>	Threatened	River benches, xeric slopes with cobbles and pebbles
Clay-loving wild buckwheat	<i>Eriogonum pelinophilum</i>	Endangered	Adobe hills
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	Endangered	Colorado River and major tributaries
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	Threatened	Small, high elevation streams
Humpback chub	<i>Gila cypha</i>	Endangered	Colorado River and major tributaries
Razorback sucker	<i>Xyrauchen texanus</i>	Endangered	Colorado River and major tributaries
Black-footed ferret	<i>Mustela nigripes</i>	Endangered	Prairie dog towns
Mexican Spotted owl	<i>Strix occidentalis lucida</i>	Threatened	Closed-canopy forests or rocky canyons
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Proposed Threatened	Riparian, cottonwood woodland
Skiff milkvetch	<i>Astragalus</i>	Candidate	Sagebrush parks
North American wolverine	<i>Gulo gulo luscus</i>	Candidate	Mountainous wilderness areas
Gunnison prairie dog	<i>Cynomys gunnisoni</i>	Candidate	Western Montrose County
Gunnison sage-grouse	<i>Centrocercus minimus</i>	Proposed Endangered	Colorado plateau, basin big sagebrush

Generated by the U.S. Fish & Wildlife Service's Environmental Conservation Online System on 03/07/2014.

The clay-loving wild buckwheat is found in specific microhabitats in the adobe hill areas along the eastern side of the Uncompahgre Valley, and it is endemic to Delta and Montrose Counties, Colorado. In the past, its habitat was fragmented and lost due to agricultural, road, and housing development. Currently, habitat is threatened by off-road vehicle use and expansion of housing areas. Vegetation surveys of the project's direct and indirect impact area did not record this species (Bio-Logic 2013 and Reclamation 2014b). There is no suitable habitat for clay-loving buckwheat within the project area.

The Colorado hookless cactus occurs primarily on alluvial benches (soils deposited by water) along the Colorado and Gunnison Rivers and their tributaries. The cactus generally occurs on gravelly or rocky surfaces on river terrace deposits and lower mesa slopes, and it is endemic to Delta, Montrose, Mesa, and Garfield Counties, Colorado. Ongoing and foreseeable threats include mineral and energy development, illegal collection, recreational off-road vehicle use, and

grazing. Vegetation surveys of the Project's direct and indirect impact area did not record this species (Bio-Logic 2013 and Recreation 2014b). The 2013 Bio-Logic inventory identified suitable habitat but no Colorado hookless cactus was found during the inventories.

The endangered bodytail, Colorado pikeminnow, humpback chub, and razorback sucker are found in the Gunnison and/or Colorado Rivers downstream from the project area, and are influenced by water use activities in the basin that affect both the quantity of flows and quality of water. In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), and the Interagency Cooperation Regulations (50 CFR 402), the Fish and Wildlife Service (2009) 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. Designated critical habitat occurs about 18 miles downstream below the confluence of the Gunnison River and Uncompahgre Rivers.

No Action Alternative: Under the no action alternative, there would be no change in effect to any threatened, endangered, or candidate species in Montrose County, Colorado.

Proposed Action: Under the proposed action, there would be no new effects 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 fish. Water depletions associated with the Uncompahgre Project were consulted on and addressed in the Gunnison Basin Programmatic Biological Opinion (FWS 2009) and, no additional consultation is needed for this project.

INDIAN TRUST ASSETS & ENVIRONMENTAL JUSTICE

Indian trust assets (ITAs) are legal interests in property held by the United States for Indian Tribes or individuals. Reclamation and other Federal agencies share the responsibility to protect these assets. There are no potentially affected ITA's in the project area, and therefore no impacts are projected.

Executive Order 12898 on Environmental Justice provides that Federal agencies analyze programs to assure that they do not disproportionately adversely affect minority or low income populations or Indian Tribes. There are no potentially affected minorities or low income populations or Indian Tribes affected by the project, and therefore, no impacts are predicted under the alternatives.

CULTURAL RESOURCES

Existing Conditions: The project impact area has been inventoried for cultural resources (Horn 2013). There were no prehistoric sites located; however, Reclamation determined that the M&D Canal, the CQ Lateral, the CP Lateral, and the CCC Shavano Falls Road are eligible for inclusion on the National Register of Historic Places (NRHP), or they contribute to officially eligible sites. The Colorado State Historic Preservation Officer (SHPO) has reviewed and concurred with Reclamation determinations. A brief description of these cultural resources is presented below.

The M&D Canal originated as the Montrose Canal and a pioneer canal in the Uncompahgre Valley, constructed between 1883 and 1888 by the Montrose & Delta Canal Company to convey water from the western side of the Uncompahgre River to farmland on the western side of the valley, namely Spring Creek and California Mesa. In 1907, the United States Government purchased the canal for use in the federal Uncompahgre Project.

The CQ Lateral was originally known as the East Coal Creek Lateral and it is unknown if it existed as part of the original M&D Canal system. Construction or improvements under the federal Uncompahgre Project were completed on the lateral between 1910 and 1912.

The CP Lateral was originally known as the Franklin Mesa Lateral and is believed to be part of the original M&D Canal system. The lateral was improved in 1911 and again in 1932 when the timber diversion at the head of the lateral was replaced with the current concrete structure.

The Civilian Conservation Corps (CCC) Shavano Falls Road is a historic dirt road constructed by the CCC through the rim of Shavano Valley from the top of Shavano Falls on the western side of Franklin Mesa to the bottom of the falls on the eastern side of Shavano Valley. The 800+ foot road is narrow, passes through sandstone rimrock, and descends steeply to the valley floor. It is supported by tabular sandstone rock retaining walls. Emergency Conservation Work Camp BR-23 began in 1936. Once completed, the road reportedly saved the ditch rider 6 miles of travel.

No Action Alternative: Under the No Action Alternative, hydropower facilities would not be constructed at Shavano Falls. There would be no impact to cultural resources.

Proposed Action: Under the proposed action, hydropower facilities would be constructed at Shavano Falls. Reclamation determined that the proposed project will adversely affect NHPA eligible cultural resources and has consulted with the SHPO. Consultation is ongoing and mitigation for adverse effects include avoiding sites where possible and completion of photo documentation according to SHPO's Level I standards. A Memorandum of Agreement (MOA) between Reclamation and the SHPO to mitigate the effects has been executed, and a copy of the MOA is included as Attachment C. Cultural mitigation measures agreed to in the MOA will be completed by UVWUA before project construction commences.

To protect the CCC Shavano Falls Road, construction equipment (i.e dump trucks, excavators, and other heavy equipment) will not be allow to use this road. Construction access to the project

site would be either from Shavano Valley Road, the M&D Canal Road on Franklin Mesa, or through private lands as shown in Figure 5 below.



Figure 5. Area of avoidance for the CCC Shavano Falls Road. This area is away from all proposed facilities and transmission lines.

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.

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.

AIR QUALITY AND NOISE

Existing Conditions: Air quality is generally excellent in the project area, and there are no air quality non-attainment areas in the vicinity (EPA 2013). Agricultural operations and construction activities can be sources of dust pollution during wind events in the general region.

There are no significant noise sources or problems in the project area. The primary sources of noise in the project area are traffic along Shavano Valley Road and the noise of flowing water in the M&D Canal over Shavano Falls.

No Action Alternative: Under the No Action Alternative, no hydropower facilities would be constructed at Shavano Falls. There would not be a change in air quality and noise.

Proposed Action: Under the Proposed Action, a hydropower facility would be constructed at Shavano Falls.

There would be minor noise impacts during excavation for the power plant and from construction traffic. The need to blast rock during construction of the penstock is likely. The use of explosive materials will follow all provisions as outline in 7 C.C.R. 1101-9 – The

Explosive Regulations of the Colorado State Division of Oil and Public Safety. A copy of these regulations is available at:

<http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251616383329&ssbinary=true>.

Prior to construction, the contractor shall obtain all applicable permits and submit a blasting plan for Reclamation’s review and approval. It is anticipated that contractors will use a non-detonating cartridge that creates harmless gases which fractures the rock. This type of blasting is well controlled and would not throw rock or other material. Chapter 6.10 provides standards for blasting vibration and air-over pressure.

During operation, the turbines and generators would produce machinery noise; however, such equipment would be fully enclosed, located a considerable distance from any dwellings, and should have no discernible impact. 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 of the project facilities, 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. Reclamation will require watering to minimize/control dust from cleared areas and along roadways. There would be no long-term adverse impacts on air quality due to operation and maintenance 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. According to the U.S. Energy Information Administration (EIA), in 2011 “the average annual electricity consumption for a U.S. residential customer was 11,280 kWh. With an average annual energy generation of 12,973,000 kWh, the Shavano Falls hydropower project would provide enough clean energy to power 1,150 homes each year. Table 3 has been modified to demonstrate the number of pounds of CO₂ that could be removed annually for the average U.S. household utilizing steam-electric generators in 2011 for the specific fuels identified (EIA 2013). Carbon dioxide emissions would be reduced by an estimated 27,000,000 to 28,000,000 pounds per year.

Table 3. Shavano Falls Hydroelectric Development Associated Carbon Reduction

Fuel Type: Coal	Lbs of CO ₂ per Million Btu	Heat Rate (Btu per kWh)	Lbs CO ₂ per kWh	Lbs of CO ₂ removed when using clean energy
Bituminous	205.300	10,128	2.08	26,983,840
Sub-bituminous	212.700	10,128	2.15	27,891,950
Lignite	215.400	10,128	2.18	28,281,140

Last updated: June 13, 2013 (<http://www.eia.gov/tools/faqs/faw.cfm?id=74&t=11>)

CUMULATIVE IMPACTS

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable significant actions taking place over a period of time. Overall, the construction of the hydropower plant should not have significant cumulative impacts.

SUMMARY AND ENVIRONMENTAL COMMITMENTS

In summary, the primary effect of the proposed action would be to develop a renewable energy resource. There would be short-term economic benefits due to construction expenditures and employment. In the long-term, UVWUA and their members would benefit from income generated from the project.

Mitigation Measures and Environmental Commitments

The following measures will be implemented and followed by UVWUA and its contractors. The LOPP requires that these commitments be followed and met. An environmental commitment plan will be prepared to document how environmental commitments and mitigation measures will be implemented during design, construction, and operation of the Project.

- 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_Aprl2005.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.

CHAPTER 4 – CONSULTATION & COORDINATION

GENERAL

The public was invited to attend a negotiation meeting between Reclamation and UVWUA was held on April 1, 2014 in Montrose to discuss the terms and conditions associated with the construction and operation of the Shavano Hydropower Project. Reclamation also used this public meeting to provide an opportunity for the public to identify issues and concerns with the proposed project. No interested parties attended the meeting. Reclamation and the UVWUA have had informal discussions with adjacent landowners, and local, county and state agencies. Reclamation also relied on issues that were previously identified during public processes for recently constructed hydropower facilities in the Lower Gunnison Basin. These environmental assessments prepared for new hydropower facilities at Ridgway Dam and on the South Canal (Reclamation 2011 & 2012).

In addition, Reclamation has conducted consultations with the Colorado State Historic Preservation Officer under Section 106 of the National Historic Preservation Act, the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, and the U.S. Fish and Wildlife Service under the Fish and Wildlife Coordination Act. Results of these consultations have been incorporated into the project analysis and discussions in Chapter 3.

Availability of the Draft EA was announced through a press release and through a distribution letter sent to nearby landowners and interested agencies. A draft EA was distributed for agency review and comment on April 29, 2014. Comments were requested by May 13, 2014.

DISTRIBUTION LIST

News Releases announced the availability of the draft EA, and the EA was placed on Reclamation's website at: www.usbr.gov/uc/ under environment documents. The draft EA was also announced in a distribution letter to an updated mailing list as shown below:

- Colorado State Representatives
- Colorado State Senator
- Delta County Commission, Delta CO
- Montrose County Commission, Montrose CO
- Colorado Division of Water Resources, Montrose CO
- Colorado Parks and Wildlife, Montrose CO

- Colorado State Historic Preservation Office, Denver CO
- Tri-County Water Conservancy District, Montrose CO
- Delta-Montrose Electric Association, Montrose CO
- Uncompahgre Valley Water Users Association, Montrose CO
- Project 7 Water Authority, Montrose CO
- Montrose Daily Press, Montrose CO
- Telluride Watch, Telluride CO
- Ouray Plain Dealer, Ouray CO
- Western Slope Conservation Center, Paonia CO
- Daily Sentinel, Grand Junction CO
- Western Resource Advocates, Boulder CO
- High Country Citizens Alliance
- Southern Ute Indian Tribe, Ignacio CO
- Ute Mountain Ute Indian Tribe, Towaoc CO
- Fish and Wildlife Service, Grand Junction CO
- Corps of Engineers, Grand Junction CO
- U.S. Environmental Protection Agency, Denver CO
- U.S. Geological Survey, Grand Junction CO
- Individuals and Landowners

COMMENTS ON DRAFT EA

A total of one written comment was received on the Draft EA, and a copy is provided as Attachment D.

Comment Letter – Theodore L. and Judith A. Brooks

Comment: Is the freeboard of the M&D Canal upstream from the new diversion going to be decreased from the existing freeboard during normal hydropower operation and during emergency bypass? How will the new design assure that the existing freeboard will be maintained under all operating conditions of the new diversion?

Response: Water levels upstream on the M&D Canal will not be increased due to project implementation. The enlarged CP lateral will deliver water to the penstock, and the penstock will be equipped with a trash screen and trash removal system to prevent debris and trash from restricting the penstock intake. Water-level sensors will be installed which automatically open a bypass gate to prevent increased water levels upstream. The project also includes two automatic fail safe trip gates. Additional language was added to the final EA to describe these features.

Comment: The Brooks' disagree with the determination of no effect on water rights, as the Draft EA does not indicate any minimum flows downstream of the CP Diversion. Since the Winter Water Program was initiated by Reclamation, there is approximately 2-3 cfs in the canal during the winter, and a full irrigation run during irrigation season. Because it is never dry, an

ecosystem has developed between the CP Diversion and the bottom of Shavano Falls. They do not want to lose this ecosystem.

Response: No water rights will be affected due to project implementation, as all irrigation flows which currently flow beyond Shavano Falls will continue to flow beyond Shavano Falls. Additional discussion was added to final EA regarding an artificial riparian area adjacent to the M&D Canal upstream of the falls. Irrigation return flows and seeps from the CP Lateral should provide between 4 to 10 cfs of flows over the falls during the irrigation season. During the non-irrigation season, the hydropower plant will not be in operation and late fall and winter flows will continue to pass over the falls.

Comment: Four wetlands were identified in the Wildlife and Vegetation section. Where are these wetlands located? Did the Bio-Logic report include the falls and the area below the CP Diversion, and if so, what were their findings?

Response: The Bio-Logic report titled "Preliminary Wetland Delineation Report" surveyed a 6.4-acre area within the proposed project footprint for the purposes of identifying potentially jurisdictional Waters of the United States which may be subject to regulation by the U.S. Army Corps of Engineers. The falls and the area below the CP Diversion are outside of the proposed project construction footprint, and were not included in the Bio-Logic survey. Maps showing the locations of the four identified wetlands have been added to the Final EA.

Comment: The Wildlife and Vegetation section indicates there are no raptor nests in the project area. However, the area is popular with Bald and Golden Eagles, and a variety of hawks. Are there going to be any above-ground transformers or powerline installations? If so, what reasonable raptor protection will occur?

Response: There will be raptor protection on any above-ground transformer or powerline. Design standards for avian protection will follow guidelines prepared jointly by The Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) and the U.S. Fish and Wildlife Service (Edison Electric Institute). Additional text was added to the final EA and environmental commitments section.

Comment: The Brooks' have observed the contractor utilizing the CCC Shavano Falls road during the construction of portions of this project which has already occurred on private lands. Has this affected the roads' integrity? The upper half of the road is located on the Brooks' property, and they have a strong preference that the Contractor(s) do not use this road for any purpose.

Response: Once the Final EA and FONSI are executed, the CCC Shavano Falls road will not be used by heavy equipment during construction of the hydropower facilities. Smaller vehicles, such as pick-up trucks, will continue to be able to utilize the road in accordance with the Uncompahgre Valley Water User Association's easement. Previous use of the road has not affected the integrity of the road or its eligibility to the National Register of Historic Places. Use of the O&M road for canal operations and maintenance will continue as it has in the past.

REFERENCES

- Alpine 2014a. *Cultural Resource Inventory of Three Potential Hydropower Site, Montrose County, Colorado*. Alpine Archaeological Consultants, Inc. October 2013.
- Alpine 2014b. *Class III Cultural Resource Inventory of Two Transmission Line Alternatives for the Shavano Falls Hydropower Project, Montrose County, Colorado*. Alpine Archaeological Consultants, Inc. February 2014.
- APLIC 2005. *Avian Protection Plan (APP) Guidelines*. The Edison Electric Institute's Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service. April 2005.
- BIO-Logic, Inc. 2013. *Sorenson Engineering & Uncompahgre Valley Water Users Association South Canal and Montrose & Delta Canal Hydroelectric Projects Rare Plant Survey Report*. BIO-Logic, Inc. Natural Resource Consultants, Montrose, Colorado. October 10, 2013.
- BIO-Logic, Inc. 2014. *Preliminary Wetland Delineation Report. Sorenson Engineering, Shavano Valley Hydroelectric Project, Montrose County, Colorado*. BIO-Logic Inc. Natural Resource Consultants, Montrose, Colorado. January 29, 2014.
- CPW 2014. Personal communications with Dan Kowlaski, Colorado Division of Parks and Wildlife, Montrose, Colorado on April 4, 2014 and CPW Electrofishing record dated November 25, 1975.
- EPA 2013. Currently Designated Nonattainment Areas for All Criteria Pollutants. *Environmental Protection Agency*., December 5, 2013. Web. 07, accessed on Mar 5, 2014 at Website: <http://www.epa.gov/airquality/greenbook/anc13.html>.
- FWS 2009. *Final Gunnison River Basin, Programmatic Biological Opinion*. Fish and Wildlife Service, Ecological Services, Colorado Field Office, Denver, Colorado. December 4, 2009.
- FWS 2010. *RECOVERY OUTLINE for the Colorado Hookless Cactus (Sclerocactus Glaucus)*. Publication. Colorado Ecological Services Field Office: U.S. Fish and Wildlife Service, 2010.
- Mariah Associates 1986. *Threatened and Endangered Plant Survey and Reconnaissance for Riparian and Wetland Habitat on Portions of the AB Lateral and Shavano Falls Facilities of the Uncompahgre Valley Hydropower Project, Montrose County, Colorado*. Mariah Associates, Inc. July, 1986.

- Nebraska Power Review Board 2014. *Nebraska Power Review Board Orientation Manual*. Accessed on April 3, 2014 at Website: <http://www.powerreviewboard.nebraska.gov/prbmanual/3.html>
- Reclamation 2011. *Final Environmental Assessment, Tri-County Water Hydropower Project*. Bureau of Reclamation, Western Colorado Area Office, Grand Junction, Colorado. December 2011.
- Reclamation, 2012. *Final Environmental Assessment, South Canal Hydropower Project*. Bureau of Reclamation, Western Colorado Area Office, Grand Junction, CO, February 2012.
- Reclamation 2014a. *Reclamation Manual – Directives and Standards – FAC TRMR-61 Lease of Power Privilege (LOPP) Processes, Responsibilities, Timelines, and Charges*. U.S. Department of the Interior Bureau of Reclamation. February 11, 2014
- Reclamation 2014b. Unpublished report-*Uncompahgre Project, Shavano Power Alignment, Shavano Falls Hydropower Project Threatened and Endangered Plant Species Inventory*. Bureau of Reclamation, Western Colorado Area Office. March 3, 2014.
- Sorenson Engineering 2013. *Supporting Design Report for Shavano Hydroelectric Project*. Rep. Idaho Falls, Idaho: Sorenson Engineering, 2013.
- WECC 2004. *10-Year Coordinated Plan Summary; Planning and Operation for Electric System Reliability*. Western Electricity Coordinating Council. 2004. Accessed on April 9, 2014. Website at: <http://www.wecc.biz/library/WECC%20Documents/Publications/10-Year%20Coordinated%20Plan%20Summaries/2004-2013%2010-Year%20Coordinated%20Plan%20Summary.pdf>.

ATTACHMENT A – Draft Lease of Power Privilege

Contract No. _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
UNCOMPAHGRE PROJECT

LEASE OF POWER PRIVILEGE
BETWEEN
THE UNITED STATES OF AMERICA,
AND
UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION
FOR
THE DEVELOPMENT OF HYDROELECTRIC POWER
ON THE MONTROSE & DELTA CANAL- SHAVANO FALLS

1.	PREAMBLE.....	2
2.	DEFINITIONS.....	3
3.	LEASE OF POWER PRIVILEGE.....	4
4.	TERM OF CONTRACT.....	5
5.	USE OF POWER.....	5
6.	LEASE PAYMENTS TO THE UNITED STATES.....	5
7.	RECLAMATION EXPENSES.....	6
8.	DISTRIBUTION OF REVENUES.....	7
9.	ENVIRONMENTAL COMPLIANCE.....	7
10.	WATER AND LAND USE.....	8
11.	PRECONSTRUCTION REQUIREMENTS.....	9
12.	CONSTRUCTION.....	10
13.	OPERATION AND MAINTENANCE OF THE FACILITY.....	12
14.	RECLAMATION REVIEWS AND APPROVALS.....	13
15.	FUTURE WORK.....	13
16.	OWNERSHIP.....	13
17.	LIABILITY.....	13
18.	INSURANCE.....	14
19.	FAILURE TO MAKE PAYMENTS.....	15
20.	DEFAULT.....	15
21.	CANCELLATION.....	16
22.	EXPIRATION OF LEASE.....	16
23.	RESERVE FUND.....	17
24.	DISPUTE RESOLUTION.....	18
25.	AUDIT.....	18
26.	NOTICES.....	18
27.	ASSIGNMENT LIMITED – SUCCESSORS IN INTEREST OBLIGATED.....	19
28.	RULES, REGULATIONS AND DETERMINATIONS.....	19
29.	OFFICIALS NOT TO BENEFIT.....	19
30.	LIAISON OFFICER.....	19
31.	COVENANT AGAINST CONTINGENT FEES.....	20
32.	AMENDMENT.....	20

LEASE OF POWER PRIVILEGE
BETWEEN
UNITED STATES OF AMERICA
BUREAU OF RECLAMATION
AND
UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION
FOR
THE DEVELOPMENT OF HYDROELECTRIC POWER
ON THE MONTROSE & DELTA CANAL- SHAVANO FALLS

THIS Lease of Power Privilege is made this ____ day of _____, 2014 (the "Effective Date,") pursuant to the Act of June 17, 1902 (32 Stat. 388) and acts amendatory thereof or supplementary thereto, and particularly the Act of August 4, 1939 (53 Stat. 1189) as amended, and the Act of June 22, 1938 (52 Stat. 941), and Public Law 113-24 The Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act, among the UNITED STATES OF AMERICA ("United States"), acting by and through the Bureau of Reclamation; and the UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION ("Association"), a corporation organized and existing under laws of the State of Colorado, having its principal place of business at Montrose, Colorado.

1. PREAMBLE

- a. WHEREAS, the United States has constructed the Uncompahgre Project, a Federal Reclamation Project, residing in two Counties (Delta and Montrose), Colorado, hereinafter called the "Project," which was authorized by the Secretary of the Interior on March 14, 1903, under the provisions of the Reclamation Act of June 17, 1902; and
- b. WHEREAS, construction of the Project, which includes, but is not limited to, the Gunnison Diversion Dam and Tunnel, the East and West Canals, the South Canal, and various laterals, was completed in 1925; and
- c. WHEREAS, the Project provides for storage water in Taylor Park Reservoir located on the Taylor River, which is a part of the Gunnison River Basin, and diversion of water from the Gunnison River by the Gunnison Diversion Dam through the Gunnison Tunnel and the South Canal to the Uncompahgre River from which water may be further diverted to the Montrose and Delta (M&D) Canal; and
- d. WHEREAS, the initial repayment contract between the United States and the Association was dated December 3, 1904. The Project was transferred to the Association for operation and maintenance in 1932 and is operated and maintained pursuant to Amendatory Contract No. Ilr-1530, dated December 13, 1948; and

e. WHEREAS, in accordance with the Memorandum of Understanding, dated November 6, 1992, between the Federal Energy Regulatory Commission and the Department of the Interior, it has been determined that authority for licensing hydroelectric power on the Uncompahgre Project rests with the Bureau of Reclamation; and

f. WHEREAS, under the authority of Public Law 113-24 (The Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act) "...the Secretary shall first offer the lease of power privilege to an irrigation district or water users association operating the applicable transferred conduit."; and

g. WHEREAS, based on the proposal submitted by the Association for development of hydropower at Shavano Falls, the Bureau of Reclamation has determined that negotiations should proceed with the Association for this Lease of Power Privilege on the Montrose and Delta Canal (M&D); and

h. WHEREAS, the Association has entered into a contract with Shavano Falls Hydro, LLC to construct, own, and operate the Facility.

NOW, THEREFORE, in consideration of the mutual and dependent stipulations and covenants herein contained, the parties to this Lease of Power Privilege agree as follows:

2. DEFINITIONS

For the purpose of this Lease of Power Privilege, the following definitions shall apply:

(a) "Reclamation" means the Bureau of Reclamation, Department of the Interior.

(b) "Facility" means a hydroelectric power facility or facilities, to be constructed on the Leased Premises, consisting of the complete unit for a hydroelectric power generation feature associated with the "C" Canal at Shavano Falls and including, but not limited to, structures, turbines, generators, and corresponding water conduits, valves, transformers, circuit breakers, fences, poles, wires, and control and protection devices to the interconnection point identified in Exhibit A (DMEA substation) for transportation, distribution and marketing of the Facility's output.

(c) "Leased Premises" means any interest in lands, roads, dam, and structures which the United States may hold, the use or occupancy of which are concurred by the Department of the Interior, Bureau of Reclamation as reasonably necessary or appropriate for the construction, operation, or maintenance of the Facility, as depicted in the site plans, and attached hereto and incorporated by reference as Exhibit A.

(d) "Lease of Power Privilege" or "Lease" means the total agreement embodied in the combined terms and conditions of this Lease.

(e) "Lessee" means the Association.

(f) "Project Water Rights" means:

(1) The rights of the Association adjudicated under Decree No. 110, Priority No. 111 ¼, on June 1, 1901, in the amount of 1,300 cubic feet per second (cfs). The Shavano Falls hydroelectric power project will rely upon these existing water rights held by the United States for the sole use and benefit of the Association, as defined below: In Case No. CA1945 in Water Division 4, 1,300 cfs absolute was decreed "for the sole use, diversion, and benefit of the [Uncompahgre] project." The water right has an appropriation date of June 1, 1901, and an adjudication date of May 8, 1913. The priority number for the water right is 111 ¼.

- a. In 1984, the Division Engineer placed 250 cfs of the 1,300 cfs on the abandonment list. In Case No. 84CW142, the Association protested the abandonment of the 250 cfs, and in a stipulation, agreed to have 239 cfs designated as conditional in return for the Division Engineer's withdrawal of the 250 cfs from the abandonment list.
- b. In Case No. 86CW01, 61 cfs of the 239 cfs was made absolute. In Case No. 87CW231, 13 cfs was made absolute. In Case No. 94CW33, 40 cfs was made absolute. As of January 2010, 1,175 cfs absolute and 125 cfs conditional comprise the Association's 1,300 cfs right.

(2) No new rights will be appropriated for the operation of this Facility.

(3) Any water from other sources that may from time to time be available for power generation.

(g) "CQ Lateral" means the water conveyance course originating from the "C" Canal approximately 17 miles from the beginning of the "C" Canal. The "C" Canal is also known as the M&D Canal which originates at the Uncompahgre River just downstream of Trout Road approximately 4 miles south of Montrose Colorado and flowing generally north-northwest.

(h) "Uncompahgre Project" or "Project" means those features and operation of the Project authorized for construction by the Secretary of the Interior on March 14, 1903, under the provisions of the Reclamation Act of June 17, 1902.

3. LEASE OF POWER PRIVILEGE

(a) Subject to the conditions and terms herein set forth, the United States leases to the Lessee:

(1) The opportunity or privilege to utilize the Leased Premises for the purpose of developing the Facility for generation and use and/or sale of hydroelectric power, and

(2) The right to use the Project Water Rights appropriated for hydropower purposes as defined in Article 2.(f)(1) herein.

(b) No Federal funds will be provided by Reclamation to develop, construct, operate, or maintain the Facility pursuant to this Lease.

4. TERM OF CONTRACT

This Lease shall be effective for forty (40) years from the date the Lease is executed unless terminated by mutual consent among the parties hereto or by default or cancellation under provisions of this Lease.

5. USE OF POWER

The Lessee will use or market the power generated at the Facility.

6. LEASE PAYMENTS TO THE UNITED STATES

(a) The Lessee shall make annual lease payments in the amount of 2 mills per kilowatt-hour of gross energy produced by the Facility, measured at the generator, to the United States for the use of the Leased Premises. Calculation of said payments will begin after the initial successful startup and testing of the generating equipment, or within 20 days from the commencement of initial startup and testing of the generating equipment, whichever comes first. In addition, during initial startup and testing, the Lessee shall make said annual lease payments for that portion of gross energy produced by the Facility that is sold and which results in a payment made for the energy produced. The Lease rate shall increase each year commensurate with inflation based on the average of the previous five years of the non-seasonally adjusted United States city average Consumer Price Index "CPI." If the 5-year CPI average shows no change or deflation, the LOPP rate will remain the same as the previous year's rate.

(b) Each payment shall be made on or before April 1 in each year for the total generation during the prior calendar year as reported in Article 13.(d) herein. Reclamation will send an invoice for lease payments to the Association at least 30 days prior to their due date.

(c) Lease payments to the United States shall reference this Lease by title and number. Reclamation will provide a billing document to the Lessee. Payment will be made payable to the "Bureau of Reclamation," and payment instructions will be followed as stated in the billing document, unless directed otherwise by the United States.

(d) Lease payments will be credited to the Reclamation Fund.

(e) The obligation for lease payments to the United States is independent of the obligation of the Lessee for Reclamation expenses under Article 7 herein and is not a general obligation guaranteed by other Lessee's revenues.

7. RECLAMATION EXPENSES

(a) The Lessee shall advance funds in minimum increments of \$10,000 (Incremental Advance) to Reclamation to pay for future expenses which may be incurred by Reclamation under this Lease. Expenses shall include an hourly rate, travel, materials, mailing, copying costs, and administration overhead costs at the then current rate, as incurred by Reclamation's personnel, contractors or consultants; provided, however, that no charge shall be assessed for information, services, or relationships that would normally be provided by Reclamation to the public at no charge. Reclamation expenses under this Lease may include, but are not limited to, the following:

- (1) Environmental compliance.
- (2) Inspections of the Facility called for by the United States, either routine or based upon a unique problem, major rehabilitation, or a reasonable concern for the integrity of a Federal structure or operation of other Facility features.
- (3) Preparation or review of technical studies.
- (4) Review of designs, specifications, legal and other documents.
- (5) Site visits and participation in meetings.
- (6) Copies of reports, drawings, and similar data.
- (7) Consultation, observation, review, and comment on tests of piping, valving, automated equipment, supervisory control systems, and any and all other aspects of construction, operation, maintenance and replacement that might impact the integrity of a Federal structure or environmental commitments.
- (8) Work necessitated by non-performance of the Lessee.
- (9) The expenses incurred in the event of failure of Federal structures resulting from operations and/or maintenance of the Facility.
- (10) All administrative costs incurred in the execution of the above-listed activities.

(b) Reclamation will establish a non-interest bearing federal account for the funds advanced by the Lessee; an initial advance of \$10,000 will be required upon execution of this Lease. At such time when funds in the account are anticipated to be reduced to or below \$5,000, Reclamation will request an Incremental Advance of funds as provided in Article 7.(a) herein. Reclamation will not pay or credit the Lessee for any interest. When performing work identified in Article 7.(a) herein, Reclamation will furnish the Lessee, not less than on a quarterly basis prior to completion of the activity, an accounting of activity, an itemization of all expenses incurred under this Article, and a reconciliation of such expenses billed with the amounts requested under this Article. After completion of the activity an accounting of expenses will be furnished to the Lessee on an annual basis or upon request of further Incremental Advances.

(c) Each request for an Incremental Advance of funds under this Article shall be in writing and shall include a statement describing the anticipated use of the requested funds.

Reclamation will discuss with the Lessee in advance of requesting funds to identify anticipated activities related to the Facility. The Lessee shall advance the requested funds within 30 days after receiving the request.

(d) Following the expiration, cancellation or termination of this Lease, Reclamation will determine its expenses associated with the Facility and submit a final accounting report to the Lessee within 60 days after the date of expiration, cancellation or termination. Reclamation will refund to the Lessee any surplus in the account within 60 days after submitting the final accounting report. The Lessee shall pay any deficit in the account within 60 days after receipt of the final accounting report.

8. DISTRIBUTION OF REVENUES

All power revenues received by the Lessee from the Facility shall be applied in the following priority:

- (1) To lease payments to the United States.
- (2) To Reclamation expenses as outlined in Article 7.
- (3) To the annual operation and maintenance cost of the Facility.
- (4) To the recovery of costs and/or the payment of debts associated with construction of the Facility.
- (5) To the reserve fund (Article 23 herein).
- (6) All additional power revenues received by the Association shall be available for their use.

9. ENVIRONMENTAL COMPLIANCE

(a) Reclamation will be the lead federal agency for compliance with the National Environmental Policy Act (NEPA), as amended.

(b) The Lessee agrees to comply with the applicable terms and conditions, including environmental commitments and mitigation measures, resulting from the completion of NEPA and Endangered Species Act compliance.

(c) Reclamation will complete an Environmental Commitment Plan prior to approving final designs for the Facility; this plan will provide specific details on environmental commitments and other environmental documents required under law. The Lessee shall implement and comply with the Environmental Commitment Plan during design, construction and operation phases of the Facility.

10. WATER AND LAND USE

- (a) The Water Rights described herein for power development shall be non-consumptive, and the Facility shall be developed, operated, and maintained consistent with applicable Federal and State law.
- (b) Reclamation does not guarantee either the quality or quantity of water for the Facility and has no obligation to alter operations of the South Canal, the M&D Canal, the CQ Lateral or other Federal projects for the benefit of power generation at the Facility. The Lessee shall not be entitled to compensation for loss of generation due to changes in operations at the Uncompahgre Project so long as such changes are consistent with all applicable laws.
- (c) The operation of the Facility shall not interfere or conflict with the purpose and operations of the Uncompahgre Project, including, but not limited to, the South Canal, the M&D Canal, or CQ Lateral.
- (d) The Lessee shall be responsible to be sure that land rights, as necessary, are available for the construction and operation of the Facility. The Leased Premises and all rights hereunder shall be held by the Lessee at all times subject to the rights of the United States. Jurisdiction and supervision of the United States over the Leased Premises are not surrendered or subordinated by issuance of this Lease. The United States reserves the right to issue licenses, rights-of-way, or permits for compatible uses of the Leased Premises. Said issuance will be made consistent with existing laws and in consultation with the parties to this Lease.
- (e) There is also reserved the right of the United States, its officers, agents, and employees, at all times to reasonable unrestricted ingress to, passage over, and egress from all of said Leased Premises for the purpose of exercising, enforcing, and protecting the rights reserved herein provided the United States notifies Lessee in advance and does not interfere with operations of the Facilities. In addition, the United States reserves the right of its officers, agents, and employees at all times to have reasonable unrestricted access and ingress to, passage over, and egress from all of said Leased Premises, to make investigations of all kinds, dig test pits and drill test holes, to survey for and construct reclamation and irrigation works and other structures incident to Federal Reclamation Projects, or for any purpose whatsoever. Ingress and egress to the hydroelectric facilities by the United States, its officers, agents, and employees, will be granted when supervised by qualified Association personnel or when adequate safety training to access the facility is verified. There is a reserved right to ingress and egress, without the requisite prior notice, in an emergency situation.
- (f) The Lessee shall reimburse the United States for all costs and expenses incurred in the defense of any action which challenges the Lessee's use of the Leased Premises under this Lease.

(g) Any existing survey markers shall not be changed or destroyed. In the event that any survey markers are moved or destroyed, inadvertently or otherwise, by construction or any other activity of the Lessee, they shall be replaced by a licensed land surveyor in consultation with the Bureau of Reclamation and/or Bureau of Land Management.

11. PRECONSTRUCTION REQUIREMENTS

(a) The following Plans for the Facility are subject to approval by Reclamation, not to be unreasonably withheld, before construction of the Facility begins:

- (1) Plans, specifications, and schedules(s) for construction and operation, including site restoration plans. Upon approval, such plans, specifications, and schedules, shall be deemed the "Plans and Specifications" as used in this Lease.
- (2) Construction agreement between the Lessee and the contractor selected for construction of the Facility.
- (3) Operations plans in harmony with the Association's contracts and agreements for the operation and maintenance of the Project.
- (4) Environmental Commitment Plan and Environmental Commitment Checklist (Checklist). The Checklist will include, but not be limited to, environmental commitments contained in the documentation completed under NEPA for execution of this Lease.
- (5) Test plan describing tests to be performed prior to acceptance of construction as complete.
- (6) Emergency Action Plan, developed in harmony with the current Emergency Action Plan for the Project, setting forth the procedures to be followed in case of accident to, or failure of, the Facility.
- (7) Security Plan. The Lessee shall meet with representatives from Reclamation to develop a security plan that will be consistent with and integrated into Reclamation's security program for the Project. Security measures from the security plan will be included in construction of the Facility. The Lessee shall be responsible for any additional security costs incurred by Reclamation related to construction, operation and maintenance of the Facility subject to Article 7 herein.

The Lessee shall submit four (4) copies of the above documents to Reclamation.

(b) The Lessee shall require its contractor to submit to the Lessee and Reclamation, prior to construction, evidence of the existence of a payment bond and a performance bond, as required by Article 12.(b) herein, and certificates of insurance as required by the construction agreement. Any such insurance certificate shall name the Lessee and United States as additional insured parties.

(c) The Lessee must receive written approval from Reclamation prior to beginning construction. Such approval shall be based upon approval of the documents identified in Article 11.(a) and in compliance with Article 12.(b) herein, and shall not be unreasonably withheld.

12. CONSTRUCTION

(a) The Lessee shall construct the Facility in accordance with the approved Plans and Specifications, construction agreement, and the approved Environmental Commitment Plan and the Checklist, as identified in Article 11.(a)(4) herein.

(b) The Lessee shall provide evidence of a comprehensive and sufficient performance bond, for construction of the project, held by the contractor constructing the Facility, for the benefit of the United States and the Lessee in an amount necessary to cover any costs for the removal of the Facilities and the clean-up or restoration of the site on Leased Premises, securing the faithful performance of its contractual obligations under its construction agreement. The performance bond shall remain in effect a minimum of 1 year after completion of construction of the Facility, or such additional warranty period as provided in the construction agreement. The date of completion of construction shall be as defined in Article 12.(n) herein. The bonds shall be issued by a Surety Company satisfactory to Reclamation.

(c) The Lessee shall provide evidence of a comprehensive and sufficient commercial surety bond held by the Lessee, for the benefit of the United States, to cover any costs for the removal of facilities and the clean-up or restoration of the site on Leased Premises during the operational phase of the Lease securing the Lessee's faithful performance of Article 21.(a)(2).

(d) In the event of an emergency at the Facility or Project, Reclamation, the Lessee, or the Lessee's agent(s) may take appropriate action pursuant to the Emergency Action Plan, or may take such further action as necessary to prevent or minimize damage to Project structures or Facility.

(e) The Lessee shall obtain and comply with any and all necessary Federal, State, and local permits and licenses. The Lessee agrees to comply with all applicable codes, ordinances, and regulations.

(f) The Lessee agrees to notify Reclamation of the Lessee's intent to begin construction at least 10 days before commencement of such work or delivery of materials. Reclamation shall have the right to post and maintain on the Leased Premises notices authorized under applicable law.

(g) Reclamation shall have reasonable access to the Facility for the purpose of assuring compliance with the terms and conditions of this Lease and to monitor the effects of the Facility on the M&D Canal and the CQ Lateral. The Lessee shall cooperate with Reclamation in such reviews and inspections. If during construction of the Facility Reclamation determines that such construction poses a threat to the structural and operational integrity of the M&D Canal or the CQ Lateral, Reclamation may order corrective action be taken by the Lessee at the Lessee's sole cost and expense. If such action is not promptly undertaken by the Lessee, and if Reclamation determines the threat is real and imminent, Reclamation may order the Lessee to stop work on or operation of the

Facility and may perform the necessary work at the Lessee's expense notwithstanding the dispute resolution provisions of Article 24 herein.

(h) Construction of the Facility includes site restoration to reasonably approximate the conditions of the site prior to construction. If, for any reason, site restoration is not completed by the Lessee in accordance with the Plans and Specifications, the work may be done by Reclamation at the Lessee's expense upon thirty (30) days prior notice to Lessee.

(i) The Lessee shall exercise reasonable care to preserve the natural landscape and shall conduct its construction operations to prevent any unnecessary destruction or scarring or defacing of the natural surroundings in the vicinity of the work. Movement of crews and equipment shall be within the areas defined in the Plans and Specifications.

(j) The Facility shall not interfere with reasonable and safe access to Project structures on the M&D Canal or the CQ Lateral, including, but not limited to, the operation and maintenance road.

(k) The Lessee shall require all contractors to accomplish onsite construction in accordance with all applicable Occupational Safety and Health Administration (OSHA) rules and regulations.

(l) The Lessee will be provided a maximum of 9 months from the date of execution of this Lease to complete final designs, specifications, and other necessary permits and an additional 1 year to begin construction. Once any work affecting the Project is begun, the Lessee shall, with diligence, pursue construction to completion of the Facility. The Facility shall be constructed as shown in the approved Plans and Specifications or as shown in written change orders approved by Reclamation in writing. The Lessee's failure to complete construction within 5 years from the date of this Lease, in accordance with the terms and conditions of this Lease, shall be considered a default under Article 20 herein.

(m) Unless otherwise agreed to, the Lessee shall give Reclamation no less than 2 weeks notice prior to commencement of testing of the Facility. Testing will be harmonious with the approved test plan and operations plan. Reclamation shall have the opportunity to review and observe the testing. If, because of the addition of the Facility, Reclamation believes additional tests are reasonably required to ensure that the structural and operational integrity of the M&D Canal and the CQ Lateral is preserved, it shall outline such tests for the review and reasonable approval of the Lessee. If the Lessee approves of the additional testing, the Lessee shall provide such additional test as Reclamation may prescribe. If the Lessee objects to the requested additional testing, the question over whether to conduct additional testing shall be resolved pursuant to Article 24 herein. The Lessee shall provide written official test reports within 30 days after completion of the tests. Reclamation will accept or reject the test results, in writing, within 30 days after receipt of the test reports. Testing shall be considered complete upon acceptance of the test report by Reclamation. The Lessee may use or sell power generated during the test period.

(n) At such time as the Lessee determines that construction, testing, and site restoration of the Facility are complete, the Lessee shall arrange a joint inspection with Reclamation. Any remaining work, testing, or modification needed on the Facility, identified in writing by the parties during the inspection, will be completed as soon as practical by the Lessee. For the purpose of this Lease, construction of the Facility shall be complete as of the later date of either the date of the final inspection or the date the Lessee complete the tasks, if any, identified in the final inspection to the satisfaction of Reclamation. Within 60 days of completion of the Facility, the Lessee shall provide Reclamation with electronic copies of the drawings in a format reasonably acceptable to Reclamation; and electronic copies of operation and maintenance manuals for Facility equipment that could have an impact on the operational and structural integrity of the M&D Canal and the CQ Lateral.

(o) Revisions required to the Standing Operating Procedures (SOP) for the Project as a result of construction and operation of the Facility shall be recommended by the Lessee and submitted to Reclamation for its review and approval. Such revisions will be completed at the Lessee's expense. Final copies and revisions of the Project's SOP will be distributed by Reclamation to the Association.

13. OPERATION AND MAINTENANCE OF THE FACILITY

(a) Throughout the term of the Lease, the Lessee shall, at the Lessee's sole cost and expense, operate, and maintain the Facility in good condition and repair and in accordance with all applicable laws, rules, ordinances, orders, and regulations. The Facility shall be operated and maintained in accordance with the operations plans, the Emergency Action Plan, and the Checklist as each may be amended. No material alterations in the Facility or its operation, as depicted in the record drawing and operations plan, shall be undertaken by the Lessee without the written approval of Reclamation, which shall not be unreasonably withheld. Reclamation will withhold such approval only to (i) ensure the structural and operational integrity of the M&D Canal and the CQ Lateral or (ii) ensure that the operations of the Project are not otherwise interfered with. After modification to the Facility, the Lessee shall perform testing, related to such modification, as may be required by Reclamation to ensure the structural and operational integrity of the M&D Canal and the CQ Lateral. The Lessee assumes full responsibility for any pollution caused by its operations of the Facility and agrees to indemnify the United States for damages caused by any such pollution.

(b) If the Facility or operation thereof interferes with or threatens to interfere with the Project, the Lessee shall correct the interference immediately and, if necessary, as determined by Reclamation, shut down the Facility notwithstanding the dispute resolution provision of Article 24 herein. Upon notice, the Lessee shall modify the Facility or its operation of the Facility to correct any problem and shall repair any damage in a manner acceptable to Reclamation, or the Lessee shall bear the complete cost for Reclamation to repair any damage to the Project caused by the Facility notwithstanding the dispute resolution provisions of Article 24 herein.

(c) Reclamation shall have reasonable access to the Facility for the purpose of assuring compliance with the terms and conditions of this Lease and to monitor the effects of the Facility on the M&D Canal and the CQ Lateral. The Lessee shall cooperate with Reclamation in such reviews and inspections.

(d) Daily water flows and energy generation data shall be made available to Reclamation on a monthly basis or as otherwise reasonably specified by Reclamation to calculate annual payments.

14. RECLAMATION REVIEWS AND APPROVALS

Reclamation reserves the right to review and reasonably approve schedules, designs, specifications, inspections, inspection reports, tests and reports, and construction and construction reports of the Facility, but only for the express purpose of determining any impacts to the structural and operational integrity of the Project.

15. FUTURE WORK

(a) The implementation of this Lease does not in any way restrict Reclamation, in discussion with the Association, from making any future changes to the Project consistent with all applicable laws. For any proposed changes that may affect the Facility or its operation, Reclamation will first confer with the Lessee.

(b) The costs of any future changes to the Project shall be in accordance with the then existing contracts and agreements between Reclamation and the Association. The costs of any future structural or operational changes to the Facility, necessitated as the result of changes to the Project or otherwise, will be assumed by the Lessee.

16. OWNERSHIP

Title to the Facility will remain in the name of the Lessee except as provided under Article 21 or Article 22.

17. LIABILITY

(a) The Lessee hereby acknowledges that Reclamation will not be responsible for making sure the Facility is technically or economically feasible. Inspections, reviews, and approvals by Reclamation do not relieve the Lessee of its responsibilities under the terms of this Lease or otherwise.

(b) The Lessee agrees to indemnify the United States for any injury, loss or damage incurred by any person or entity, resulting from any action performed hereunder, and any

negligent act or omission of the Lessee in connection with its performance under this Lease.

(c) The Lessee shall have no claim against the United States for loss of generation caused by the normal or extraordinary operation and maintenance of the Project including, but not limited to, the quantity or quality of water delivered through the M&D Canal and the CQ Lateral.

18. INSURANCE

(a) The Lessee shall maintain workmen's compensation insurance on their own employees as may be necessary to comply with current applicable law.

(b) The Lessee shall, at their sole cost and expense, keep or cause the Facility to be kept insured for the mutual benefit of the United States, the Lessee, against loss or damage by fire, flood, and such other risks as are now or hereafter included in an extended coverage endorsement in common use for hydroelectric powerplants. Insurance proceeds shall be used by the Lessee to replace or repair the compensated loss, subject to review and concurrence by Reclamation.

(c) Throughout the term of this Lease, the Lessee shall, at their sole cost and expense, keep or cause to be kept in force, for the benefit of the United States, the Lessee, comprehensive broad form general public liability insurance in the amount of at least \$2,000,000 against claims and liability for personal injury, death, or property damage arising from the use, occupancy, disuse, or conditions of the Facility and, adjoining areas or ways, providing coverage for bodily injury or death to any person or persons for each accident or occurrence; and for property damage for each accident or occurrence.

(d) The amount of insurance coverage shall be adjusted annually by the insurance company based upon accepted standard adjustment practices.

(e) For each policy or certificate evidencing insurance, the Lessee shall instruct the insurance company to notify Reclamation not less than 30 days prior to the effective date of any cancellation, termination, or assignment of the policy or certificate or any modification of the policy or certificate. The notice shall be sent to Reclamation and shall identify this Lease, the policy and the insured.

(f) Lessee agrees to maintain insurance coverage as stated in this Article herein throughout the term of this Lease in substantially the same form and amounts as are provided for in the certificates of insurance to be attached and identified as and made a part thereof upon completion of the construction.

(g) Any insurance proceeds remaining after complying with the provisions of this Lease shall be the Lessee's sole property.

19. FAILURE TO MAKE PAYMENTS

Upon failure of the Lessee to pay any sum of money when due as provided in this Lease, that amount past due will be assessed the following:

- (1) Interest per annum on the unpaid balance from the due date of the bill through the date of the payment. The interest charged will be based on the "Treasury Current Value of Funds Rate" in effect at the time the debt becomes overdue.
- (2) An administrative charge of \$5.00 per month.
- (3) Penalty charge of 6% per annum on the unpaid balance computed after 90 days of delinquency, from the due date to the date of payment.

Further collection efforts will be consistent with the Debt Collection Improvement Act of 1996.

20. DEFAULT

(a) Each or any of the following events shall constitute default under this Lease:

- (1) Failure of the Lessee to comply with each and every material condition of this Lease.
- (2) Abandonment of the Facility by the Lessee for 12 consecutive months.

(b) In the event of default by the Lessee, Reclamation will give written notice to the Lessee and the Lessee shall then have 60 days to correct the default condition specified in the notice. However, in the event action to correct a default requires more than 60 days, the Lessee shall have a reasonable time to correct the default if the Lessee commences the action within 30 days after written notice and diligently pursues it to full correction in a manner satisfactory to Reclamation.

(c) Failure of the Lessee, without just cause, to initiate construction of the Facility within 1 year and 9 months of the date of this Lease, or to complete construction within 1 years of the date of this Lease, shall be considered to be abandonment of the Facility. Failure to operate the Facility, without just cause, for a period of 12 consecutive months or to maintain the Facility in good condition and repair shall be considered to be abandonment of the Facility. Failure of the Lessee to generate electricity with the Facility, in and of itself, shall not constitute a failure to operate the Facility, provided that the Lessee maintains the Facility in good condition and repair and provides justification to Reclamation as their failure to generate electricity.

(d) Any prevention, delay, nonperformance, or stoppage due to an act of nature or inability to obtain labor or materials or reasonable substitutes or any court or regulatory order enjoining, or restricting performance under this Lease shall excuse nonperformance, or stoppage, except obligations imposed by this Lease for the payment of monies due under this Lease.

(e) Each party hereto may use any remedy available either at law or in equity against a party in default hereof. The waiver of a default or a provision of this Lease shall not be deemed to be a waiver of any other provision, or of a subsequent default of the same provision.

(f) Any excessive delay resulting from compliance with the provisions of Federal environmental laws or administrative review by a Federal agency, pertaining to the Facility, may extend the time periods provided in this Article and Article 4 herein for a period equal to that of the delay. In the event of judicial review of environmental studies prepared in compliance with NEPA, or litigation arising out of this Lease, time periods provided in this Article and Article 4 herein will be extended for a period equal to that of the delay, provided such review or litigation was initiated by parties other than the Lessee.

21. CANCELLATION

(a) In the event of any default by the Lessee that is not corrected as provided in Article 20 herein, Reclamation shall have the right to cancel this Lease and pursue either of the following actions:

(1) Assume possession of the Facility for its own use, or lease the Facility to someone other than the Lessee. In either event, all right to use the Leased Premises and hydropower water rights for hydroelectric power purposes shall automatically revert to the United States and the Lessee shall be compensated for any un-depreciated value remaining in the Facility, based upon a 20-year straight line depreciation method of the construction cost of the Facility. Any new lessee assuming possession of the Facility will be required to enter into a contract with the Association to coordinate operation and maintenance of the Facility with the Project.

(2) Require the Lessee to remove all or part of the Facility and restore the Leased Premises to their original condition at the Lessee's expense. In this event, the Lessee shall be entitled to salvage, for its own benefit, any features or equipment so removed. Any features or equipment left in place under this Article shall automatically become the property of the United States.

(b) The Lessee shall make payments due Reclamation under this Lease as of the date of cancellation within 60 days after cancellation. The Lessee shall be responsible for any other debts associated with the Facility unless otherwise provided in this Lease.

22. EXPIRATION OF LEASE

(a) Upon expiration of the lease term pursuant to Article 4 herein, Reclamation shall have the right to:

(1) Enter into a new lease with the Lessee;

- (2) Assume title and possession of the Facility on Leased Premises for its own use;
- (3) Assume title possession and thereafter transfer ownership of the Facility and use the water rights for the hydroelectric power generation to any other party subject to terms and conditions of a new lease of power privilege; or
- (4) Discontinue operation of the Facility. In the event Reclamation determines the Facility should no longer be operated, Reclamation may require the Lessee, at its expense, to remove the Facility and restore the Leased Premises to their original condition, as far as practical. Such features and equipment, or parts thereof, including piping and control devices installed on the M&D Canal and the CQ Lateral that are necessary for the unimpaired operation of the Project, shall be left in place and shall become the property of the United States.

(b) If Reclamation elects to assume title and possession of the Facility or assume possession and transfer its ownership to another party, the United States shall either compensate the Lessee, or obligate a new lessee to compensate the Lessee, in an amount equal to the value of the Facility on the date of expiration as determined by an independent appraiser and appraisal methods to be jointly selected and determined by the Lessee and Reclamation. Reclamation shall not transfer ownership of the Facility to any third party until such compensation has been paid pursuant to a new contract. Any new lessee assuming possession of the Facility will be required to enter into a contract with the Association to coordinate operation and maintenance of the Facility with the Project.

23. RESERVE FUND

(a) Commencing 1 year after operation of the Facility and continuing during the life of this Lease, the Lessee shall maintain a reserve fund equal to one year's anticipated operation and maintenance expenses and one year's annual lease expense to Reclamation, for use in the manner, for the purposes and the circumstances agreed upon by Reclamation and the Lessee. The reserve fund will be established and maintained through annual deposits in the amounts stated to a segregated account created by the Lessee. Deposits shall be derived from funds obtained from revenues received pursuant to Article 8 herein or from other revenues of the Lessee. The annual deposit shall be made in the month of May in each year. The reserve fund shall be used for the following purposes:

- (1) To cure any financial default under this Lease to Reclamation.
- (2) For extraordinary repair or replacement of the Facility, subject to agreement by Reclamation.
- (3) For annual operation and maintenance costs for the Facility to the extent that power revenues are not sufficient therefore and for costs encountered or created by emergency conditions.

(b) The Lessee shall deposit its reserve fund in an account in accordance with the Lessee's investment policy and practices, provided, any interest paid on the reserve funds shall be and become a part of the fund from which interest was accrued. Interest that caused the fund to exceed the reserve fund maximum may be withdrawn by the Lessee to bring the

fund balance back down to the maximum or disbursed in accordance with Article 8 herein, at the sole discretion of the Lessee.

(c) Upon expiration of the term of this Lease, any amounts then remaining in a reserve fund shall be disbursed and applied in accordance with Article 8 herein.

(d) The maximum annual deposits and reserve fund amounts may be adjusted from time to time as mutually agreed to by both Reclamation and the Lessee.

24. DISPUTE RESOLUTION

(a) In the event of a dispute between the parties, the decision of Reclamation must be appealed to the Assistant Secretary – Water and Science for his/her determination prior to review by the federal court. The decision of the Assistant Secretary will be final for Reclamation and will be binding upon all parties hereto unless determined otherwise by a federal court. In the event that any action is filed in federal court, following a determination of the Assistant Secretary, the nature of the remedies will be determined by applicable federal law.

(b) This Article shall not apply to any action or inaction by the Lessee during construction, operation and maintenance of the Facility that may impair the structural integrity of the M&D Canal and the CQ Lateral Canal.

25. AUDIT

(a) The Lessee and Reclamation shall maintain accurate records and books of account in accordance with generally accepted accounting principles and consistent with this Lease. Said books and records shall present fairly all costs and expenses utilized either directly or indirectly in computing any charges or payments to the other parties to this Lease.

(b) Upon 30 days written notice, each party to this Lease shall afford the other party, or its independent auditor, reasonable access to the relevant records and books of account during the term of the Lease, and for a period of twenty-four months thereafter.

(c) The party to this Lease that requests the audit under this Article will be solely responsible for its own costs incurred to perform the audit.

26. NOTICES

(a) Any notice authorized or required to be given to the Association shall be delivered to or mailed postage prepaid to the Manager, Uncompahgre Valley Water Users Association, P.O. Box 69, Montrose, Colorado 81402-0069. Any notice authorized or required to be given to the United States shall be delivered to or mailed postage prepaid to the Area

Manager, Bureau of Reclamation, 445 West Gunnison, Grand Junction, Colorado 81505-5711. Notice shall be effective on the date of delivery or mailing.

(b) The designation of the addresses or the addresses given above may be changed by notice given in the same manner as provided in this Article for other notices.

27. ASSIGNMENT LIMITED – SUCCESSORS IN INTEREST OBLIGATED

The provisions of this Lease shall apply to and bind the successors and assigns of the parties to this Lease, but no assignment or transfer of this Lease or any right or interest therein shall be valid until approved in writing by Reclamation. Said approval shall not be unreasonably withheld.

28. RULES, REGULATIONS AND DETERMINATIONS

(a) The parties to this Lease agree that the delivery of water or the use of Federal facilities pursuant to this Lease is subject to Reclamation law, as presently amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Reclamation law

(b) Reclamation shall have the right to make determinations necessary to administer this Lease that are consistent with the laws of the United States of America and the State of Colorado, and the express and implied provisions of this Lease, and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in discussion with the parties to this Lease.

29. OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress or Resident Commissioner or officer of the Lessee shall be admitted to any share or part of this Lease or to any benefit that may arise herefrom, other than as a water user or landowner in the same manner as other water users or landowners or as a shareholder in the company.

30. LIAISON OFFICER

Each party shall provide the name of a Liaison Officer and the address and telephone number through which contacts are to be made during the term of this Lease. Changes in the appointment of the Liaison Officers shall be made by written notice to the other parties. At all times, the Lessee shall provide qualified personnel to inspect the work, to ensure compliance with the Plans and Specifications, and to represent the Lessee in the ongoing construction, operation and maintenance work.

31. COVENANT AGAINST CONTINGENT FEES

The Lessee warrants that no person selling agency has been employed or retained to solicit or secure this Lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Lessee for the purpose of securing business. For breach or violation of the warranty, Reclamation shall have the right to cancel this Lease without liability.

32. AMENDMENT

This Lease may be amended, altered, or modified only in writing and signed by all of the parties.

IN WITNESS WHEREOF, the parties to this Lease have caused this Lease to be duly executed as the day and year first written above.

APPROVED

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Office of the Regional Solicitor

By: _____
Regional Director

ATTEST:

UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION

Secretary

By: _____
President

**U.S. Army Corps of Engineers
South Pacific Division**



Nationwide Permit Pre-Construction Notification (PCN) Form

This form integrates requirements of the U.S. Army Corps of Engineers Nationwide Permit Program within the South Pacific Division (SPD), including General and Regional Conditions. You MUST fill out all boxes related to the work being done. Fillable boxes in this form expand if additional space is needed.

Box 1 Project Name Coal Creek Temporary Crossing			
Applicant Name Uncompahgre Valley Water Users Association		Applicant Title Coal Creek Temporary Crossing	
Applicant Company, Agency, etc.		Applicant's internal tracking number (if any)	
Mailing Address 601 North Park Ave., Montrose, Colorado 81402			
Work Phone with area code 970-249-3813	Mobile Phone with area code 970-250-8118	Home Phone with area code	Fax # with area code 970-249-6830
E-mail Address sfletcher@montrose.net	Relationship of applicant to property: <input type="checkbox"/> Owner <input type="checkbox"/> Purchaser <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Other: Irrigation Operator		
Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a U.S. Army Corps of Engineers Nationwide Permit or Permits as described herein. I certify that I am familiar with the information contained in this application and, that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made the right to enter the above-described location to inspect the proposed, in-progress or completed work. I agree to start work <u>only</u> after all necessary permits have been received and to comply with all terms and conditions of the authorization.			
Signature of applicant <i>[Handwritten Signature]</i>			Date (mm/dd/yyyy) 03/24/2014

If anyone other than the person named as the Applicant will be in contact with the U.S. Army Corps of Engineers representing the Applicant regarding this project during the permit process, Box 2 MUST be filled out.

Box 2 Authorized Agent/Operator Name		Agent/Operator Title	
Agent/Operator Company, Agency, etc.		E-mail Address	
Mailing Address			
Work Phone with area code	Mobile Phone with area code	Home Phone with area code	Fax # with area code
I hereby authorize the above named authorized agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.			
Signature of applicant			Date (mm/dd/yyyy)
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.			
Signature of authorized agent			Date (mm/dd/yyyy)

Box 3 Name of Property Owner(s), if other than Applicant:		
Owner Title United States of America		Owner Company, Agency, etc. Bureau of Reclamation/UWVUA
Mailing Address 445 West Gunnison Ave., Suite 221, Grand Junction, CO 81501		
Work Phone with area code 970-280-0608	Mobile Phone with area code 970-210-3252	Home Phone with area code

Box 4 Name of Contractor(s) (if known):		
Contractor Title		Contractor Company, Agency, etc.
Mailing Address		
Work Phone with area code	Mobile Phone with area code	Home Phone with area code

Box 5 Site Number <u>1</u> of <u>1</u>. Project location(s), including street address, city, county, state, zip code where proposed activity will occur: just east of Maple Grove Rd., Montrose, Colorado 81403, adjacent property address is 58001 Maple Grove Rd.	
Waterbody (If known, otherwise enter "an unnamed tributary to"): Tributary to what known, downstream waterbody: Coal Creek <input checked="" type="checkbox"/>	
Latitude & Longitude (D/M/S, DD, or UTM with Zone): 12 0761484 E 4264520 N, NAD 83	Section, Township, Range: SW4SW4 of Section 21, T49N, R10W
County Assessor Parcel Number (Include County name): 376521300901 (Montrose County)	USGS Quadrangle map name:
Watershed (HUC and watershed name ¹): Uncompahgre ¹ http://water.usgs.gov/GIS/regions.html 14020006	Size of permit area or project boundary: ~0.06 acres ~125 linear feet
Directions to the project location and other location descriptions, if known: From Montrose, travel west on Spring Creek Rd, turn north on Shavano Valley Road and then east to Maple Grove Road and the project site.	
Nature of Activity (Description of the project, include all features): The activity will allow access to the area east of the CQ Lateral which crosses Coal Creek. The project requires temporary fill material within the ordinary high water line as shown in the attached drawings.	
Project Purpose (Description of the reason or purpose of the project): The proposed temporary access will allow for continued planning and design of the proposed Shavano Fall Hydro facility. If the hydro facilities is approved and permitted, the temporary access will also be used to access construction of the penstock east of Coal Creek.	

Box 6 Reason(s) for discharge into Waters of the United States (Description of why dredged and/or fill material needs to be placed in Waters of the United States):

The temporary discharge is need to access the eastern portion of the project site for planning, design and if approved under a separate authorization, construction of the penstock.

Proposed discharge of dredge and/or fill material. Indicate total surface area in **acres** and **linear feet** (where appropriate) of the proposed impacts to Waters of the United States, indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.), and identify the impact(s) as permanent and/or temporary for each requested Nationwide Permit¹:

¹Enter the intended permit number(s). See Nationwide Permit regulations for permit numbers and qualification information: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx>

Water Body Type	Requested NWP Number: 14				Requested NWP Number:				Requested NWP Number:			
	Permanent		Temporary		Permanent		Temporary		Permanent		Temporary	
	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length
Ephemeral Waters			0.04 acres	50 ft.								
Pick One												
Pick One												
Pick One												
Pick One												
Total:												

Total volume (in cubic yards) and type(s) of material proposed to be dredged from or discharged into Waters of the United States:

Material Type	Total Volume Dredged	Total Volume Discharged
Rock Slope Protection (RSP)		
Clean spawning gravel		
River rock		
Soil/Dirt/Silt/Sand/Mud		~200 cubic yds
Concrete		
Structure		78" x 50' CMP Culvert
Stumps/Root wads		
Other: Straw Medium		~8.6 cubic yds
Total:		

Activity requires a written waiver to exceed specified limits of the Nationwide Permit? Yes No
If yes, provide Nationwide Permit number and name, limit to be exceeded, and rationale for each requested waiver:

Activity will result in the loss of greater than 1/2-acre of Waters of the United States? Yes No
If yes, provide an electronic copy (compact disc) or multiple hard copies (7) of the complete PCN for appropriate Federal and State Pre-discharge Notification (See General Condition #31, Pre-construction Notification, Agency Coordination, Section 2 and 4).

Describe direct and indirect effects caused by the activity and how the activity has been designed (or modified) to have minimal adverse effects on the aquatic environment (See General Condition #31, Pre-construction Notification, District Engineer's Decision, Section 1):

Straw medium will be placed to delineate the existing grade in the wetland from the temporary discharge. The discharge will be removed within 1 year of construction and returned to the previous existing conditions.

Potential cumulative impacts of proposed activity(if any):
If the hydro facility is permitted, the current spill from the CQ lateral to Coal Creek would be moved approximately 1,000 ft downstream when the hydro facilities is operating during the irrigation season.

Required drawings and figures (see each U.S. Army Corps of Engineers District's Minimum Standards Guidance):
 Vicinity map: Attached (or mail copy separately if applying electronically)
 To-scale Plan view drawing(s): Attached (or mail copy separately if applying electronically)
 To-scale elevation and/or Cross Section drawing(s): Attached (or mail copy separately if applying electronically)
 Numbered and dated pre-project color photographs: Attached (or mail copy separately if applying electronically)
 Sketch drawing(s) or map(s): Attached (or mail copy separately if applying electronically)

Has a wetlands/waters of the U.S. delineation been completed?
 Yes, Attached² (or mail copy separately if applying electronically) No
 If a delineation has been completed, has it been verified in writing by the Corps?
 Yes, Date of preliminary or approved jurisdictional determination (mm/dd/yyyy): _____ Corps file number: _____ No
²If available, provide ESRI shapefiles (NAD83) for delineated waters

For proposed discharges of dredged material resulting from navigation dredging into inland or near-shore waters of the U.S. (including beach nourishment), please attach³ a proposed Sampling and Analysis Plan (SAP) prepared according to Inland Testing Manual (ITM) guidelines (including Tier I information, if available), or if disposed offshore, a proposed SAP prepared according to the Ocean Disposal Manual. Attached (or mail copy separately if applying electronically)
³Or mail copy separately if applying electronically

Is any portion of the work already complete? YES NO
 If yes, describe the work:

Box 7 Authority:
 Is Section 10 of the Rivers and Harbors Act applicable?: YES NO
 Is Section 404 of the Clean Water Act applicable?: YES NO
 Is the project located on U.S. Army Corps of Engineers property or easement?: YES NO
 If yes, has Section 408 process been initiated?: YES NO
 Would the project affect a U.S. Army Corps of Engineers structure?: YES NO
 If yes, has Section 408 process been initiated?: YES NO
 Is the project located on other Federal Lands (USFS, BLM, etc.)?: YES NO
 Is the project located on Tribal Lands?: YES NO

Box 8 Is the discharge of fill or dredged material for which Section 10/404 authorization is sought part of a larger plan of development?: YES NO
 If discharge of fill or dredged material is part of development, name and proposed schedule for that larger development (start-up, duration, and completion dates):
 Shavano Falls Hydro Project, Lease of Power Privilege from Reclamation, NWP #17 for Hydro discharge back Coal Creek.

Location of larger development (if discharge of fill or dredged material is part of a plan of development, a map of suitable quality and detail of the entire project site should be included):
 The proposed hydro facility would discharge a portion of its flows into Coal Creek about 400 feet downstream of this temporary discharge.

Box 9 Measures taken to avoid and minimize impacts to waters of the United States:

Straw medium will be used to delineate the existing grade, which will be restored next spring. The temporary crossing would be install prior to spring runoff and irrigation season and reduce the amount of activity in Coal Creek.

Box 10 Proposed Compensatory Mitigation related to fill/excavation and dredge activities. Indicate in **acres** and **linear feet** (where appropriate) the total quantity of Waters of the United States proposed to be created, restored, enhanced and/or preserved for purposes of providing compensatory mitigation. Indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.) or non-jurisdictional (uplands¹). Indicate mitigation type (permittee-responsible on-site/off-site, mitigation bank, or in-lieu fee program). If the mitigation is purchase of credits from a mitigation bank, indicate the bank to be used, if known:

¹ For uplands, please indicate if designed as an upland buffer.

Site Number	Water Body Type	Created		Restored		Enhanced		Preserved		Mitigation Type
		Area	Length	Area	Length	Area	Length	Area	Length	
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
Total:										Pick One

If no mitigation is proposed, provide detailed explanation of why no mitigation would be necessary:
 The discharge is temporary and the existing wetlands will be restored to pre-project conditions

If permittee-responsible mitigation is proposed, provide justification for not utilizing a Corps-approved mitigation bank or in-lieu fee program:

Has a draft/conceptual mitigation plan been prepared in accordance with the April 10, 2008, Final Mitigation Rule² and District Guidelines?

²http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/mitig_info.aspx

³**Sacramento and San Francisco Districts**-http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/pdf/Mitigation_Monitoring_Guidelines.pdf

⁴**Los Angeles District**-http://www.spl.usace.army.mil/regulatory/mmg_2004.pdf

⁵**Albuquerque District**-http://www.spa.usace.army.mil/reg/mitigation/SPA%20Final%20Mitigation%20Guidelines_OLD.pdf

Yes, Attached (or mail copy separately if applying electronically) No

If no, a mitigation plan must be prepared and submitted, if applicable.

Mitigation site(s) Latitude & Longitude (D/M/S, DD, or UTM with Zone):	USGS Quadrangle map name(s):
Assessor Parcel Number(s):	Section(s), Township(s), Range(s):

Other location descriptions, if known:

Directions to the mitigation location(s):

Box 11 Threatened or Endangered Species
Please list any federally-listed (or proposed) threatened or endangered species or critical habitat (or proposed critical habitat) within the project area (include scientific names (e.g., Genus species), if known):

a. Critical Habitat downstream for Endangered Colorado River Fishes b.
 c. Colorado Hookless Cactus d.
 e. Clay-loving Buckwheat f.

Have surveys, using U.S. Fish and Wildlife Service/NOAA Fisheries protocols, been conducted?
 Yes, Report attached (or mail copy separately if applying electronically) No

If a federally-listed species would be impacted, please provide a description of the impact and a biological evaluation, if available.
 Yes, Report attached (or mail copy separately if applying electronically) Not attached

Has Section 7 consultation been initiated by another federal agency?
 Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Has Section 10 consultation been initiated for the proposed project?
 Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Has the USFWS/NOAA Fisheries issued a Biological Opinion?
 Yes, Attached (or mail copy separately if applying electronically) No

If yes, list date Opinion was issued (m/d/yyyy): 2009 Gunnison Basin Programmatic Biological Opinion covers Uncompahgre Project Depletions.

Box 12 Historic properties and cultural resources:
 Are any cultural resources of any type known to exist on-site? Yes No
Please list any known historic properties listed, or eligible for listing, on the National Register of Historic Places:

a. M&D Canal b.
 c. CQ Lateral d.
 e. OCC Shevano Falls Road f.

Has a cultural resource records search been conducted?
 Yes, Report attached (or mail copy separately if applying electronically) No

Has a cultural resource pedestrian survey been conducted for the site?
 Yes, Report attached (or mail copy separately if applying electronically) No

Has another federal agency been designated the lead federal agency for Section 106 consultation?
 Yes, Designation letter/email attached (or mail copy separately if applying electronically) No

Has Section 106 consultation been initiated by another federal agency?
 Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Has a Section 106 MOA or PA been signed by another federal agency and the SHPO?
 Yes, Attached (or mail copy separately if applying electronically) No

If yes, list date MOA or PA was signed (m/d/yyyy):

Box 13 Section 401 Water Quality Certification:Applying for certification? Yes, Attached (or mail copy separately if applying electronically) NoCertification issued? Yes, Attached (or mail copy separately if applying electronically) NoCertification waived? Yes, Attached (or mail copy separately if applying electronically) NoCertification denied? Yes, Attached (or mail copy separately if applying electronically) NoExempted activity? Yes NoAgency concurrence? Yes, Attached No

If exempt, state why:

Box 14 Coastal Zone Management Act:Is the project located within the Coastal Zone? Yes No

If yes, applying for a coastal commission-approved Coastal Development Permit?

 Yes, Attached (or mail copy separately if applying electronically) No

If no, applying for separate CZMA-consistency certification?

 Yes, Attached (or mail copy separately if applying electronically) NoPermit/Consistency issued? Yes, Attached (or mail copy separately if applying electronically) NoExempt? Yes NoAgency concurrence? Yes, Attached No

If exempt, state why:

Box 15 List of other certifications or approvals/denials received from other federal, state, or local agencies for work described in this application:

Agency	Type of Approval ⁴	Identification Number	Date Applied	Date Approved	Date Denied
BOR	CEC	WCAO-CEC 14-08	03/20/14	03/21/14	
BOR	Temp. Use Permit		03/21/14		

⁴ Would include but is not restricted to zoning, building, and flood plain permits

Nationwide Permit General Conditions (GC) checklist:

(<http://www.gpo.gov/fdsys/pkg/FR-2012-02-21/pdf/2012-3687.pdf>)

Check	General Condition	Rationale for compliance with General Condition
<input checked="" type="checkbox"/>	1. Navigation	Project does not affect navigation
<input checked="" type="checkbox"/>	2. Aquatic Life Movements	Project will not affect aquatic life movements
<input checked="" type="checkbox"/>	3. Spawning Areas	Project will
<input checked="" type="checkbox"/>	4. Migratory Bird Breeding Areas	No effect
<input type="checkbox"/>	5. Shellfish Beds	
<input type="checkbox"/>	6. Suitable Material	
<input type="checkbox"/>	7. Water Supply Intakes	
<input type="checkbox"/>	8. Adverse Effects from Impoundments	
<input type="checkbox"/>	9. Management of Water Flows	
<input checked="" type="checkbox"/>	10. Fills Within 100-Year Floodplains	Temporary discharge within 100-year floodplain for Coal Creek
<input type="checkbox"/>	11. Equipment	
<input type="checkbox"/>	12. Soil Erosion and Sediment Controls	
<input checked="" type="checkbox"/>	13. Removal of Temporary Fills	Straw medium will be used to delineate existing pre-construction elevations as described in Regional Conditions for Colorado No. 8.
<input type="checkbox"/>	14. Proper Maintenance	

<input type="checkbox"/>	15. Single and Complete Project	
<input type="checkbox"/>	16. Wild and Scenic Rivers	
<input type="checkbox"/>	17. Tribal Rights	
<input checked="" type="checkbox"/>	18. Endangered Species	See Box 11 above.
<input type="checkbox"/>	19. Migratory Bird and Bald and Golden Eagle Permits	
<input checked="" type="checkbox"/>	20. Historic Properties	See Box 12 above.
<input type="checkbox"/>	21. Discovery of Previously Unknown Remains and Artifacts	
<input type="checkbox"/>	22. Designated Critical Resource Waters	
<input type="checkbox"/>	23. Mitigation	See Box 10 above.
<input type="checkbox"/>	24. Safety of Impoundment Structures	
<input type="checkbox"/>	25. Water Quality	See Box 13 above.
<input type="checkbox"/>	26. Coastal Zone Management	See Box 14 above.
<input type="checkbox"/>	27. Regional and Case-by-Case Conditions	
<input type="checkbox"/>	28. Use of Multiple Nationwide Permits	
<input type="checkbox"/>	29. Transfer of Nationwide Permit Verifications	
<input type="checkbox"/>	30. Compliance Certification	
<input checked="" type="checkbox"/>	31. Pre-Construction Notification	



**Sacramento District
Nationwide Permit Program
Regional Conditions Checklist for Colorado**

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

On March 18, 2012, the U.S. Army Corps of Engineers' South Pacific Division approved 26 regional conditions for the 2012 Nationwide Permits (NWP) in Colorado, within the Sacramento District. This checklist is intended to assist applicants with completing the South Pacific Division Pre-Construction Notification Checklist and to ensure compliance with the regional conditions. This checklist does not include the full text of each regional condition.

Please refer to the *2012 Regional Conditions in Colorado* when completing this checklist (http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps/2012-NWP-RC-CO.pdf).

Please check the box to indicate you have read and have/will comply with the regional condition and provide a rationale on how you have/will comply with the condition.

Check	Regional Condition	Compliance Rationale
<input type="checkbox"/>	1. Nationwide Permit 12. PCN must be submitted for open trenching in perennial waters or if the utility line is for the purpose of water transmission	The activity does not involve open trenching and is not for the purpose of water transmission. OR The PCN has been submitted with this checklist, and if the project will result in a withdrawal of water from a waterway, includes an evaluation of the effects of the withdrawal.
<input checked="" type="checkbox"/>	2. Nationwide Permits 12 and 14. PCN must be submitted for projects in the Colorado River Basin.	The activity does not involve utility lines or transportation activities in perennial waters or special aquatics in the Colorado River Basin. OR The PCN has been submitted with this checklist.
<input type="checkbox"/>	3. Nationwide Permit 13. PCN must be submitted for bank stabilization exceeding 250 feet or in streams with an average width of less than 20 feet. <input type="checkbox"/> For streams with a width less than 20 feet, activities are limited to no more than ¼ cubic yard per linear foot.	The activity does not involve bank stabilization activities. OR The activity involves bank stabilization but under the thresholds of the regional condition 3. OR The PCN has been submitted with this checklist. (also address the requirement for no more than ¼ CY in streams < 20 feet wide, if applicable)
<input type="checkbox"/>	4. Nationwide Permit 23. PCN must be submitted.	The activity does not involve the use of NWP 23. OR The PCN has been submitted with this checklist.
<input type="checkbox"/>	5. Nationwide Permit 27. <input type="checkbox"/> Fishery enhancement in perennial streams not authorized. <input type="checkbox"/> Channel realignment not authorized. <input type="checkbox"/> Structures must allow passage of aquatic organisms. <input type="checkbox"/> Structures must not impede navigation. <input type="checkbox"/> Concrete/grout not authorized. <input type="checkbox"/> Construction of water parks and flood control projects not authorized.	I agree that the activity meets all requirements of regional condition number 5.

Check	Regional Condition	Compliance Rationale
<input type="checkbox"/>	6. Nationwide Permits 29 and 39. Floodplain map must be submitted with the PCN.	The activity does not involve the use of NWPs 29 or 39 OR A copy of the floodplain map has been submitted with the PCN.
<input checked="" type="checkbox"/>	7. Important Spawning Areas. <input checked="" type="checkbox"/> Will not destroy spawning areas or be conducted during trout and Kokanee spawning seasons. <input type="checkbox"/> Bio-engineering required for bank protection activities over 50 feet. <input type="checkbox"/> PCN required for activities in important spawning areas.	The activity will not be located in identified important spawning areas. OR The PCN has been submitted with this checklist (also explain how the activity will comply with the remaining requirements of this condition).
<input checked="" type="checkbox"/>	8. Removal of Temporary Fills. Horizontal marker must be used in wetlands.	I agree to use a horizontal marker to delineate the existing ground elevation of wetlands that will be temporarily impacted. OR The activity does not involve temporary fill.
<input type="checkbox"/>	9. Fens. NWPS, with the exception of 3, 5, 6, 20, 27, 32, 37 and 38, are revoked in fens and wetlands adjacent to fens. PCN required for these other NWPs.	The activity would not occur in a fen or wetland adjacent to a fen. OR The activity does not involve use of a revoked NWP. OR The PCN has been submitted with this checklist.
<input type="checkbox"/>	10. Springs. PCN must be submitted within 100 feet of discharge of a spring.	The activity would not occur within 100 feet of the discharge point of a spring. OR The PCN has been submitted with this checklist.
<input checked="" type="checkbox"/>	11. Suitable Fill. <input type="checkbox"/> PCN must be submitted for the use of broken concrete. <input type="checkbox"/> Must demonstrate that soft engineering methods are not practicable. <input type="checkbox"/> Concrete with exposed rebar not authorized.	The proposed project would not involve the use of broken concrete or concrete with exposed rebar. OR The PCN has been submitted with this checklist (also explain why soft engineering methods are not practicable, if applicable).

ATTACHMENT C – EXECUTED MOA

**MEMORANDUM OF AGREEMENT
BETWEEN
BUREAU OF RECLAMATION, WESTERN COLORADO AREA OFFICE
AND COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING THE SHAVANO FALLS HYDROPOWER PROJECT ON AND
ADJACENT TO THE M&D CANAL, UNCOMPAHGRE PROJECT, COLORADO**

WHEREAS, the Bureau of Reclamation (Reclamation) and the Uncompahgre Valley Water Users Association (UVWUA) plan to construct a hydropower plant on the Montrose & Delta (M&D) Canal in Montrose County, Colorado (Project); and

WHEREAS, Reclamation plans to issue a Lease of Power Privilege (LOPP) for the Project pursuant to the Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act, thereby making the Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f, and its implementing regulations, 36 CFR Part 800; and

WHEREAS, Reclamation has defined the undertaking's area of potential effect (APE) as described in Attachment A; and

WHEREAS, the Bureau of Reclamation (Reclamation) as lead Federal agency has determined that the Project will have an adverse effect on the Montrose and Delta (M&D) Canal (5MN1855), the CQ Lateral (5MN10208), and the CP Lateral (5MN1025). These cultural resources have been determined by Reclamation, in consultation with the Colorado State Historic Preservation Officer (SHPO), to be eligible for inclusion on the National Register of Historic Places under Criteria A and/or C; and

WHEREAS, UVWUA is the sponsor of the Project. UVWUA has participated in the consultation and has been invited by Reclamation to sign this Memorandum of Agreement (MOA);

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), Reclamation has notified the Advisory Council on Historic Preservation (Council) of its adverse effects determination and provided the specified documentation, and the Council has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii);

NOW, THEREFORE, pursuant to Section 106 of the NHPA, Reclamation and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect on historic properties.

STIPULATIONS

1. Reclamation shall ensure that the following measures are carried out:

- a. Prior to any modifications associated with this undertaking, Reclamation will ensure that the segments of the M&D Canal (5MN1855.2), CQ Lateral (5MN10208.1), and CP Lateral (5MN10215.1) are recorded in accordance with the guidance for Level I Documentation found in "Historic Resource Documentation, Standards for Level I, II, and III Documentation" (Office of Archaeology and Historic Preservation Publication 1595, October 2007).
- b. The Shavano Falls Road (5MN10236) constructed by the Civilian Conservation Corps is an NRHP eligible property, but will not be used for construction activities. Use of the road will be limited to pickup trucks and similar vehicles, as it has been in the past for continued operation and maintenance of the M&D Canal and the Shavano Falls.
- c. The documentation will include mapping and photographic documentation of those portions of the historic property to be included in the hydropower project. Photographs will be black and white archival quality (4" x 6") prints. Features will be plotted on the maps with GPS waypoints and will be extensively described and indexed in the report.
- d. Reclamation will supplement the Level I Documentation with a descriptive and historical narrative. The narrative will synthesize the existing documentation on file and describe the canal and laterals in the context of the development and history of the Uncompahgre Project area. The narrative will include photographs of the landscape features taken during the cultural resources survey. A Summary Report for the recorded segment, which includes the Level I Documentation and the narrative, will be prepared.


The Summary Report will be prepared within one year of the execution of this MOA.

2. **Monitoring:** The signatories may monitor activities pursuant to this MOA, and the Council will review such activities if so requested by a party to this MOA. Reclamation will cooperate with the signatories in carrying out their review and monitoring responsibilities.
3. **Dispute Resolution:** Should the SHPO object within 30 days to any documentation provided for its review pursuant to this agreement, Reclamation shall consult with the SHPO to resolve the objection. If Reclamation determines the objection cannot be resolved Reclamation shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation the Council will:
 - a. Advise the agency that the Council concurs in the agency's proposed response to the objection, whereupon the agency will respond to the objection accordingly;

- b. Provide the agency with recommendations, which the agency shall take into account in reaching a final decision regarding its response to the objection; or
 - c. Notify the agency that the objection will be referred for comment pursuant to 36 CFR § 800.7(a)(4), and proceed to refer the objection and comment. The agency shall take the resulting comment into account in accordance with 36 CFR § 800.7(c)(4).
4. Amendment and Termination: Any signatory to this agreement may request that it be amended, whereupon the parties will consult to reach a consensus on the proposed amendment. Where no consensus can be reached, the agreement will not be amended.
5. Duration: This MOA will be null and void if its stipulations are not carried out within five (5) years from the date of its execution. At such time, and prior to work continuing on the undertaking, Reclamation shall either (a) execute a MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the Council under 36 CFR § 800.7. Prior to such time, Reclamation may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation 4 above. Reclamation shall notify the signatories as to the course of action it will pursue.
6. In the event that Congress amends Section 106 of the NHPA or in the case of substantial changes to 36 CFR Part 800, the parties to this agreement will consider whether it would be appropriate to amend the agreement. Any signatory to this agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the signatories and concurring parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.
7. Failure to Carryout Terms: Failure to carry out the terms of this MOA requires that Reclamation again request the Council's comments in accordance with 36 CFR Part 800. If Reclamation cannot carry out the terms of the MOA, it will not take or sanction any action or make an irreversible commitment that would result in an adverse effect to the historic property covered by the MOA or that would foreclose the Council's considerations of modifications or alternatives that could avoid or mitigate the adverse effect on the properties until the commenting process has been completed.

Execution of this MOA by Reclamation and the SHPO, its subsequent acceptance by the Council, and implementation of its terms, evidence that Reclamation has afforded the Council an opportunity to comment and that Reclamation has taken into account the effects of the undertaking on historic properties.

Colorado State Historic Preservation Office

By:  (Deputy SHPO) Date: 5/28/14
for Edward C. Nichols, State Historic Preservation Officer

Bureau of Reclamation, Western Colorado Area Office

By:  Date: 5-16-14
Ed Warner, Area Manager

Uncompahgre Valley Water Users Association

By:  Date: 5/12/14
Steve Fletcher, Manager

ATTACHMENT D – Draft EA Comment Letter

VIA EMAIL: jhamilton@usbr.gov

May 13, 2014

Ed Warner, Area Manager
US Bureau of Reclamation
Western Colorado Area Office
445 West Gunnison Ave., Suite 221
Grand Junction, CO 81501

Subject: Draft Environmental Assessment, Shavano Falls Hydropower Project

Dear Mr. Warner,

We appreciate the opportunity to comment on the subject draft EA per your notification dated April 29, 2014. We also appreciate the assistance provided by Ms. Jenny Hamilton of your office and the personnel at UVWUA for answering our questions.

We are the owners of the property south of and adjacent to the M & D Canal that has been included in and designated as being within and included in the "Shavano Falls Site Plan" as show on page 4, Figure 4 of the Draft EA.

We support the concept of UVWUA use of existing canals to development hydroelectric projects to offset operational and maintenance costs to the members and the production of renewable resource electricity. However, we think this should be accomplished with a minimum of impact on existing land and resources; therefore, we have the following comments:

(1) Page 5 & 6 of the EA discusses the Project design. Paragraph A, Page 5 indicates that the existing CP Diversion will be replaced with a 20' wide x 4' high roller gate and a secondary bypass will consist of a 20' long weir and two 5' wide automatic trip gates. Our concern is whether the freeboard of the M & D Canal upstream from the new diversion will be decreased from the existing freeboard during normal hydro plant operation and during emergency bypass. During high flows in the existing canal with the existing diversion, the canal has less than 6 inches of freeboard on the south side of the canal and less than 3 inches of freeboard under our driveway bridge on 5875 road. During one incident where trash partially blocked this diversion water washed over the County road, washed out our driveway bridge over the BNB Lateral and 150

feet of our road. UNVWU maintains a daily inspection and trash removal on this diversion to keep this from happening again.

So the question is will the new design and operation of the diversion increase the water level, thus decreasing the freeboard of the M & D Canal upstream from the new diversion and how will the new design assure that the existing freeboard will be maintained under all operating conditions of the new diversion?

(2) Page 6, Paragraph C indicates that the M & D Canal from the CP Diversion to the bottom of the existing Shavano Falls will be abandoned and used only as a bypass for operational reasons; therefore, we disagree with the "no effect" finding for "Water rights, stream flow" indicated in Table 1, Page 8 of the EA. There is no indication of any minimum flows downstream of the CP Diversion. Under UVWUA current operations this part of the M & D Canal and the falls are very seldom without water. Since the winter water program was initiated by UVWUA and USBOR, during the winter this area of the canal and falls runs approximately 2-3 cfs and has a full irrigation run during irrigation season; therefore, it never is dry and as a result an ecosystem has been developed and maintained between the CP Diversion and the bottom of Shavano Falls. I have discussed the possibility of allowing a minimum flow of 3 cfs to maintain this ecosystem below the Diversion with UVWUA and private developer personnel with no results one way or the other. The only source of water below the Diversion is our irrigation water runoff, less than .5 cfs, and the BNB Lateral which during July, August, September and October has less than 1 cfs in it most days. We would hate to lose this ecosystem that has existed over 100 years.

(3) Page 12, "WILDLIFE AND VEGETATION" section indicates the identification of 4 wetlands. The site plan on page 14 is so small we cannot tell if and where the wetland were designated on the site map and the description of all 4 designated wetland locations are difficult if not impossible to locate on the site plan. Also since the Bio-Logic (2014) report is not available for our review, we do not know whether the Project Area below the CP Diversion including the falls was part of that review and if so what were their findings.

(4) Page 12, "WILDLIFE AND VEGETATION" section indicates there are no raptor nests in the project area. The air currents hitting the west cliff area along Shavano Valley creates upward air currents that are popular with Bald and Golden Eagles and all types of hawks. Over the past 40 years these species have nested and hunted this area in significant numbers. We feel that within the project area, reasonable raptor protection should be included on any above ground transformer and power line installations.

(5) Page 18, regarding the protection of the designated CCC Shavano Falls Road; This upper half of this road is located on our land and the lower half on USBR (UVWUA managed) land with a UVWUA ditch rider residence at the bottom of the road. This is

not a public access road and the use of this road for the past 40 years has been limited to the water users, us and area farmers that use ATVs to access property they farm in Shavano Valley. The contractor has already used this road to take heavy equipment from the top to the lower construction site. We did not give permission for them to use this road and I do not know if the Water Users gave them permission. I also do not know how this use affected the roads integrity. We have a strong preference that the Contractor(s) do not use this road for any purpose.

Sincerely,

Theodore L. and Judith A. Brooks
14291 5875 Rd.
Montrose, CO 81403
Ph. (970) 249-4550
email: r_and_m@montrose.net