Colorado River Bureau Work Plan
FY 2021

Executive Summary

The focus of the Colorado River Bureau Work Plan is the continued protection and
development of the water resources of the Colorado River Basin allocated to New Mexico
via interstate compacts. This work includes engaging in various Basin Programs and
initiatives as well as identifying and reviewing projects or proposed actions by other
agencies, states or private interests to ensure New Mexico’s continued compliance with
those compacts and relevant court decrees. Additionally, the Work Plan is focused on a
number of long-term planning efforts involving the seven Colorado River Basin States, the
Upper Colorado River Commission (UCRC), and certain agencies of the federal government
to mitigate the effects of the long-term drought in the basin and prepare for potentially
reduced water supplies as a result of long-term warming.

This Work Plan also includes evaluation, review and support of multi-state, multi-agency
projects and studies which improve water management operations and thus aid in continued
compliance by New Mexico with the various compacts related to the Colorado River Basin
to which New Mexico is a party. Finally, the Work Plan includes development and
implementation of internal projects to pursue those same objectives.

The five (5) major work plan elements include:
• Colorado River Basin Drought Contingency Plan Implementation,
• San Juan River Basin Recovery Implementation Program (SJRIP) Activities,
• Upper Colorado River Commission Planning and Coordination,
• San Juan Consumptive Use Crop Survey Work, and
• Support for and Development of Animas-La Plata Project (ALP) and Navajo Reservoir
  Release Routing Processes.

Total FY2021 work plan budget is $929,500.

Background

The Colorado River Bureau is responsible for protecting, developing, investigating and
conserving the water resources of the Colorado River Basin allocated to New Mexico.
Roughly the western fifth of the state lies within the Colorado River Basin, including the San Juan, Gila and Little Colorado River basins. In addition, the San Juan-Chama Project, which provides for many water uses in parts of the Rio Grande Basin of New Mexico, receives its supply from the Upper Colorado River Basin via an interbasin diversion.

The Colorado River Bureau’s FY2021 Work Plan is focused primarily on cooperative work with Reclamation and the Lower Basin States of Arizona, California and Nevada on the Lower Basin’s drought contingency plan as it is implemented; evaluating options for the Demand Management Storage component of the Upper Basin Drought Contingency Plan; seeking funding for the SJRIP and evaluating possible next steps for when federal authorization for the SJRIP expires; and protecting the water resources allocated to New Mexico by the four Colorado River Basin compacts to which New Mexico is signatory.¹ The Gila and San Francisco portions of the Colorado River Bureau work are presented in a separate work plan. The FY2021 Work Plan has no components specific to the Little Colorado River Basin, though the NMISC is involved in the Navajo-Gallup Water Supply Project, which includes water development in that basin.

The elements of this work plan are described below.

**Element 1) Colorado River Basin Drought Contingency Planning**

**Description**

After lengthy and intense negotiations, the Colorado River Basin Drought Contingency Plan was finalized in May 2019. Consequently, this element focuses on beginning implementation of the Plan. The Upper Colorado Basin relies heavily on Lake Powell, on the Utah-Arizona border, as a regulating reservoir supporting the non-depletion obligation contained in the 1922 Colorado River Compact. In turn, the Lower Colorado Basin relies heavily on Lake Mead, and the water released from Lake Powell, for the Lower Basin’s water supply. Due largely to extensive drought and the continued high annual draw from Lake Mead, water levels in Lakes Powell and Mead have been declining to near critically

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¹ New Mexico is signatory to the 1922 Colorado River Compact, the 1922 La Plata River Compact, the 1948 Upper Colorado River Basin Compact and the 1968 Animas-La Plata Project Compact.
low levels. Lake Mead has dropped to levels that require reduced deliveries to certain Lower Basin water users. Moreover, should the current 20-year long drought continue for several years, a lower hydraulic head at Lake Powell could constrain releases to the Lower Basin, which then could trigger limits on the Upper Basin’s water users. Lower water levels at Lake Powell also could cause reductions in hydropower revenue, which is used for operations and maintenance of multiple major water supply projects in the Upper Basin (including the San Juan-Chama Project and the Navajo Indian Irrigation Project) and for several important programs (endangered species recovery on the Upper Colorado River and San Juan River, the Glen Canyon Dam Adaptive Management Program, salinity control, etc.).

The Seven Basin States (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming) worked collectively to develop the Drought Contingency Plans to reduce the likelihood of unwanted outcomes at Lake Mead and Lake Powell. The Lower Division States (Arizona, California, and Nevada) negotiated the Lower Basin Drought Contingency Plan to support maintaining certain water level elevations at Lake Mead. Doing so triggered corresponding provisions in Minute 323 of the 1944 Mexican Water Treaty, which result in Mexico leaving more water in Lake Mead, thus aiding in Lower Basin drought mitigation efforts.

The Upper Division States (Colorado, New Mexico, Utah, and Wyoming) and the Upper Colorado River Commission negotiated the Upper Basin Drought Contingency Plan to provide tools to help maintain Lake Powell at a water elevation that protects the Upper Division States’ compact obligations and hydropower generation. The Upper Basin Drought Contingency Plan has three prongs: operations changes at certain Upper Basin reservoirs to deliver water from them to Lake Powell under specific circumstances; voluntary, compensated and temporary (large scale and duration) water conservation measures in the Upper Basin with associated storage; and weather modification. The first two prongs are intended to be contingency measures that would be undertaken voluntarily to help avoid an emergency in a manner that is consistent with the body of law governing the Colorado River Basin, which is commonly referred to as the “Law of the River”, and state water law.
The winter weather modification component of the Upper Basin Drought Contingency Plan is designed to increase winter snowpack in the Colorado River Basin. Increased snowpack may augment the Colorado River Basin’s water supply by increasing stream flow. New Mexico’s contribution involves financial support of existing Colorado Water Conservation Board (CWCB) projects for winter weather modification in the San Juan Mountains of southwestern Colorado. The goal of the work for New Mexico is to increase precipitation and snowpack in that portion of the San Juan River watershed that runs off (primarily) into Navajo Reservoir and/or to increase stream flow in the Colorado River system.

The conservation and storage component of the Upper Basin Drought Contingency Plan is termed Demand Management. Each Upper Division State is conducting outreach with local stakeholders regarding Demand Management. In FY2020, NMISC staff held meetings with a group of San Juan Basin water users to discuss New Mexico’s Demand Management efforts. These discussions will continue in FY2021.

In addition, staff is exploring the feasibility of leasing water from the Jicarilla Apache Nation and placing it in the Strategic Water Reserve (SWR) to further conservation in the Upper Basin. The Strategic Water Reserve was created by New Mexico statute, NMSA 1978, Section 72-14-3.3, and allows the NMISC to acquire surface and ground water or water rights by purchase, lease, or donation, to be used to (1) assist the state in complying with interstate stream compacts and court decrees; or (2) to assist the state and water users in water management efforts for the benefit of threatened or endangered species or in a program intended to avoid additional listings of species. Given the endangered species issues on the San Juan River and potential compact compliance issues in the future due to drought in the Colorado River Basin, the SWR could provide a very useful tool to New Mexico to avoid negative impacts to its water users.

Simultaneously, the UCRC and the Upper Division States are using a grant, provided by Reclamation, to hire contractors to examine the legal, technical, and economic feasibility of a Demand Management and storage program. The NMISC will continue its involvement in this work through FY2021.
The Colorado River Basin Drought Contingency Plan supplements the provisions of the *Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (Guidelines). The Guidelines were enacted in 2007 and are in effect through water year 2026. They include a directive for the Secretary of the Interior to initiate a formal review of their effectiveness no later than December 31, 2020. This must be done in consultation with the seven Basin States. Reclamation held kickoff webinars for this review in March 2020. In FY2021, the NMISC will continue to work with other Colorado River Basin States to provide input to Reclamation for this review. Staff will conduct the work for New Mexico, but will need funding for current and future projects.

**Type of Contractual Services Needed**

1. The types of contractual services needed for Element 1 are surface water hydrology and water resources planning. See Exhibit A, page 1, columns A and E, for a list of professional service contractors that may be used.

2. We propose to again use the comprehensive multi-state agreement, approved by the Commission in February 2018, to provide $20,000 to the Colorado Water Conservation Board for Colorado’s weather modification program in the San Juan Mountains upstream of Navajo Reservoir.

**Work Plan Budget, Funding Source & Time Frame**

1. The estimated total cost form Element 1 is $230,000.
   a. $50,000 of that amount is to be funded from the Irrigation Works Construction Fund; of which $20,000 is for the winter weather modification component. Christina Noftsker is the element manager.
   b. $150,000 is proposed for an SWR lease using the FY2021 SWR special appropriation, and
   c. $30,000 for SWR acquisition due diligence from 2020 STBs.

2. The period for completion of Element 1 is through June 30, 2021.
Element 2) San Juan River Basin Recovery Implementation Program

Description

Unless extended or renewed by federal legislation, the San Juan River Basin Recovery Implementation Program will end at the end of federal fiscal year 2023. The SJRIP seeks to recover the razorback sucker and Colorado pikeminnow in the San Juan River. Critical habitat has been designated for both species for a significant portion of the river in New Mexico and Utah. Many projects have been completed since the program was initiated and the razorback sucker has recently been suggested for downlisting, while the status of the pikeminnow is currently being assessed. Operation of Navajo Reservoir is conducted, in part, to provide specific flows for the endangered species. Colorado River Storage Project (CRSP) power revenues are used to pay for many SJRIP projects and activities. In addition, the States of Colorado and New Mexico each agreed to provide funding for capital projects. The state committed to providing $2.744 million for the SJRIP. Importantly, the SJRIP provides endangered species protections for all New Mexico and Colorado water users on the San Juan and its tributaries. This includes the San Juan-Chama Project diversions.

The Commission received $400,000 in STB’s towards New Mexico’s remaining SJRIP cost share in the 2020 legislative session. The appropriation is about $28,000 more than needed to meet the $2.744 million commitment. Given anticipated additional New Mexico commitments to the SJRIP in the future and the historic difficulty New Mexico has experienced in meeting its commitment, Staff propose to provide the full $400,000 and amend agreements, as necessary, to reflect the additional $28,000 will be credited towards future New Mexico SJRIP commitments and to reflect that a small portion of the total funding provided by New Mexico to the SJRIP (approximately $50,000) can be used for operation and maintenance as well as construction related activities.

Congress has directed the SJRIP to coordinate with the Upper Colorado River Endangered Fish Recovery Program and the Interior Department to develop a report for Congress by 2021 that describes Program activities, results, and proposed next steps beyond 2023, if any. While the New Mexico congressional delegation has been tremendously supportive of the SJRIP, it has been difficult to maintain annual federal funding for the SJRIP and Upper Colorado River Endangered Fish Recovery Program in the last few years. The Upper Basin
states were successful in obtaining federal authorization for funding through 2023, but may now need to seek and support federal appropriations annually. Staff continues to work with the other Upper Basin states and our congressional delegations to secure annual federal funding going forward.

Staff will continue to engage in the SJRIP efforts during FY2021 with focus on the report to Congress, SJRIP organizational structure post-2023, and continued federal funding. Existing contractors will continue to aid in specific review, assessment, and reporting elements.

**Type of Contractual Services Needed**

1. The types of contractual services needed for Element 2 are surface water hydrology, biology, and Endangered Species Act (ESA) compliance. See Exhibit A, page 1, columns A and D, for a list of professional service contractors that may be used.

2. The sole source contract with the National Fish and Wildlife Foundation (NFWF), which was approved in 2018, will continue to be used and, potentially, amended as described above. This contract will expire June 30, 2021.

**Work Plan Budget, Funding Source & Time Frame**

1. The estimated total cost for Element 2 is approximately $490,000. $90,000 is for surface water hydrology, biology, and ESA compliance support. $400,000 will be provided to NFWF under the above referenced sole source contract for use by the SJRIP. Colleen Cunningham is the element manager.

2. The Element 2 contractual cost is funded from the Irrigation Works Construction Fund. The cost share commitment is funded by a FY2021 STB capital appropriation.

3. The period for completion of Element 2 contractual services is through June 30, 2021.
Element 3) Upper Colorado River Commission Coordination, Planning, and Strategy

Description

The Upper Division States work cooperatively as part of the UCRC to address Colorado River Basin issues. The Commissioners and staff of the UCRC work with staff and contractors from the Upper Division States to proactively address issues that affect, or have the potential to affect, the Upper Basin. These efforts include, but are not limited to, the Drought Contingency Plan work described earlier, Basin Fund MOA issues and projects, Upper Basin consumptive use, review and renegotiation of the Interim Guidelines, and “State of the Science” efforts. Staff will conduct the majority of the work for New Mexico, but may need professional technical support for some work elements.

In addition, the ISC entered into a multi-year Contributed Funds Agreement (CFA) with the UCRC on March 23, 2020. This CFA is to support the UCRC staff on modeling work related to the Colorado River Basin, and to help equip the UCRC with needed software and hardware to run hypothetical scenarios. This modeling work is necessary to gain a better understanding of the system operations and to inform the decision makers in the Upper Basin. The funding amount in this CFA is $45,000, which is broken into two pieces: $15,000 advancement, which occurred in FY2020, and the remaining $30,000 on a reimbursement basis, which will take place as needed over the course of the next two fiscal years. Staff will manage the CFA.

Type of Contractual Services Needed

1. As noted above, the ISC has entered into a CFA with the UCRC as part of efforts related to Element 1 and Element 3 of this Work Plan.

Work Plan Budget, Funding Source & Time Frame

1. The estimated contractual cost for Element 3 is approximately $30,000. Ali Effati is the element manager.

2. Element 3 is funded from the Irrigation Works Construction Fund.
3. This is a multi-year project. The period for partial completion of Element 3 is through June 30, 2021.

**Element 4) San Juan Basin Consumptive Use Work**

**Description**

The 1948 Upper Colorado River Basin Compact apportioned water between the five states of the Upper Basin in terms of consumptive use. Accurate accounting of the amount of consumptive use of water from each state’s portion of the Basin is necessary for equitable administration of the compact. In order to ensure accurate accounting, the non-Navajo irrigated acres in the Animas, La Plata, and San Juan River valleys will be surveyed again in FY2021. Data for Navajo irrigated acres will be obtained from the Navajo Nation and the Bureau of Indian Affairs. Crop survey data will be compiled and combined with weather data to estimate consumptive use. Data will also be gathered and compiled from the NMOSE and other sources to estimate municipal, industrial, reservoir evaporation, and other consumptive uses. Efforts may be initiated with the IT department to further automate the consumptive use methodology.

**Type of Contractual Services Needed**

1. State of New Mexico participation for Element 4 will be accomplished using NMISC and NMOSE staff. No contractual services are currently foreseen for Element 4.

**Work Plan Budget, Funding Source & Time Frame**

1. There is not an estimated SWEP contractual cost for Element 4. Up to $10,000 may be expended for computer support/IT services. Paul Harms is the element manager.
2. Element 4 is funded from the Irrigation Works Construction Fund.
3. This is a multi-year project. The period for completion of the data collection efforts for Element 4 is through June 30, 2021.
Element 5) Support for and Development of Animas-La Plata and Navajo Reservoir Release Routing Processes

Description

The San Juan Water Commission initiated discussions with the NMOSE, NMISC and Reclamation in FY2019 on processes, procedures, and, potentially, infrastructure improvements needed to successfully route and protect Animas-La Plata (ALP) storage releases from Lake Nighthorse. Lake Nighthorse is located in Colorado and releases from the lake flow along the Animas River in New Mexico to San Juan Water Commission users. Reclamation made a similar request in regard to the releases from Navajo Reservoir. NMISC staff is involved due to the NMISC’ roles and responsibilities in interstate compact implementation, and because implementing the Upper Basin Drought Contingency Plan may require administration of releases and diversions. Reclamation and the ISC are collaborating on the model development and Reclamation is anticipated to provide the NMISC approximately $57,000 for the effort in FY2021.

This multi-year effort is anticipated to involve legal, technical, and institutional issues related to the character of the storage releases once the water crosses the border into New Mexico or is released from Navajo Reservoir, river loss rates, actual natural flow depletion on a near real-time basis, the potential for curtailment of existing diversions to allow storage releases to pass downstream, release and routing procedures, and infrastructure improvements.

The goal for FY2021 is to continue work with Reclamation and the NMOSE to collect date and monitor the new river and canal gages installed in late 2019 and early 2020, to continue to develop and design an integrated RiverWare Model for the Animas and San Juan systems upstream of the confluence of the two rivers in New Mexico, to coordinate with the San Juan Water Commission and other stakeholders on development and use of the modeling tools, and to identify additional possible infrastructure improvements and necessary next steps to draft storage release and routing procedures.

NMISC staff will coordinate with NMOSE legal, technical, and Aztec District staff as well as with Reclamation and the San Juan Water Commission on this effort.
Type of Contractual Services Needed

1. The types of contractual services needed for Element 5 are surface water hydrology and water resources planning. See Exhibit A, page 1, columns A and E for a list of professional service contractors that may be used.

2. The NMISC may enter into an agreement with Reclamation wherein Reclamation will provide funding to the Commission for the model development.

Work Plan Budget, Funding Source & Time Frame

1. The total estimated cost for Element 5 is approximately $169,500. Up to $157,000 may be expended for contractual services ($100,000 NMISC and $57,000 Reclamation); up to $5,000 will be needed for the annual Riverware license; and $7,500 may be expended to support the NMOSE District Office in its system gaging efforts. This element is jointly managed by Christina Noftsker and Shalamu Abudu.

2. Collaborative Cost Share – As stated above, Reclamation may provide approximately $57,000 to support the development of a model of the San Juan River from Navajo Reservoir to the confluence with the Animas River.

3. The total budget for Element 5, if there is no agreement with Reclamation, will not exceed $112,500 and is funded from the Irrigation Works Construction Fund.

4. The period for completion of Element 5 is through June 30, 2021.

Work Plan Risk and Impact

Implementation of the FY2021 Colorado River Bureau Work Plan will help protect New Mexico’s ability to comply with the four Colorado River Basin compacts to which the state is signatory. Additionally, implementation will help protect New Mexico’s limited water resources from potential future challenges associated with reduced water supplies related to long-term drought and potential climate change.

Work Plan Manager

Rolf Schmidt-Petersen, Acting Colorado River Basin Manager. Mr. Schmidt-Petersen will manage the work plan overall with Paul Harms, Ali Effati, Christina Noftsker, and Colleen Cunningham managing specific elements as described in the FY2021 work plan.