

Chapter

VI

Actions Identified But Outside the Scope Of The Review And EIS

6.1 Introduction

To complete the Upper Rio Grande Basin Water Operations Review (Review) and Environmental Impact Statement (EIS) within a reasonable amount of time, the joint lead agencies (JLA) limited its scope. The JLAs did not include facilities that had litigation in progress or actions that were not authorized by existing laws and regulations. Also not considered in the scope of the EIS were actions that would require specific water commitments or actions by others who did not participate in the Review and EIS. Alternatives that fell into these categories are described here. Most of these came up during public scoping, alternatives development, technical and Interdisciplinary Team meetings, or evaluation of alternatives.

Chapter 6 is intended to highlight water operations that may prove feasible and beneficial in improving system management after further planning and environmental studies are completed. Most of the actions described below require making changes in law, resolution of legal issues, obtaining permits, assuring environmental compliance, or securing some other required element necessary to implement. All will require a spirit of cooperation and sense of community among the various basin interests because further consideration will involve specific information on whose water is stored, how much, and for how long.

6.2 Within Existing Authorities But Outside Scope—No Laws Need to Be Changed

6.2.1 Greater Utilization of Abiquiu Reservoir (Wet Water Bank)

6.2.1.1 Background

The Review and EIS evaluated alternatives to store native water up to 180,000 acre-feet (AF) in Abiquiu Reservoir, without specifying ownership of the water being stored. An assumption in the planning model of the Upper Rio Grande Water Operations Model (URGWOM) was that releases from storage would be made in November and December that would minimize losses and could be kept constant across the alternatives. However, there are opportunities to store and release for many purposes (if there is water to store, the Article 7 restriction is not in effect, and New Mexico is not in accrued debit). Storage is authorized in Abiquiu Reservoir up to the amount 200,000 AF for combined San Juan-Chama Project (SJC) water and Native Rio Grande water. However, during extreme flood conditions when downstream reservoirs are full, storage may exceed 200,000 AF. Current capacity in the authorized SJC pool is about 183,000 AF to elevation 6,220 feet, not 200,000 AF, due to sediment accumulation. The City of Albuquerque purchased flowage easements at Abiquiu Reservoir up to 6,220 feet. In 1987, the Corps reviewed the feasibility of purchasing additional flowage easements and concluded that it would not be cost-effective for any of the potential local sponsors (Corps 1987b).

6.2.1.2 Opportunity

If there were a designated pool for storage of native water, together with SJC water storage authorized up to 200,000 AF total, the cooperators could actively schedule, store, and time releases to have the pool function for many purposes (e.g., as a wet water bank). Beneficial opportunities would include:

- Potential management of Compact deliveries by New Mexico by having a place to store water that is not needed to meet Compact obligations
- Potential conservation storage for the Rio Grande silvery minnow to comply with the Endangered Species Act
- Potential drought contingency storage
- Potential wet water bank for irrigation storage, Native American storage, acequia storage, municipal and industrial storage
- Potential increase of actual storage to 200,000 AF by acquiring additional reservoir flowage easements above 6,220 feet in elevation.

6.2.1.3 Limitations

The following limitations on establishing and utilizing storage of native water in Abiquiu Reservoir were identified.

- Requires permits from the Office of the State Engineer (OSE).
- Requires agreement with City of Albuquerque for storing within their easements.
- Requires water.
- Requires environmental compliance—an Environmental Assessment (EA) that could tier from this Review and EIS.
- Requires agreement among those who have water to store and those who have storage available on how the pool will be managed and administered.
- Additional easements and environmental compliance are required for storing above 6,220 feet elevation but not exceeding the authorized 200,000 AF of storage.
- Articles 6 and 7 of the Rio Grande Compact would occasionally limit upstream reservoir storage.

6.2.1.4 Possible First steps

- 1) Cooperate to determine specifics of who has water to store, for what purposes, and storage plans.
- 2) Determine with the City of Albuquerque what the terms for use of their flowage easements to store below 6220 feet.
- 3) Obtain permits from OSE.
- 4) Conduct EA to tier off of Review and EIS for evaluation of environmental effects.
- 5) Set up native water accounts in URGWOM. (SJC accounts are already included in URGWOM.)

6.2.2 Improving Watershed Conditions to Improve Water Quality and Quantity

6.2.2.1 Background

Quantity and quality of runoff that comes into the Rio Grande and the reservoirs can be improved by the health of the watersheds. The watersheds are outside of the direct control of the JLA.

6.2.2.2 Opportunity

There is, however, much to be gained in the basin by cooperating in efforts to improve upland conditions: improved water supply and water quality, reduced fire danger, slowing the spread of noxious weeds, etc.

A number of initiatives are in progress that agencies and the private sector could more actively support with people, information, education, and funding to implement plans already developed.

1. The multi-agency Southwest Strategy, Healthy Forests, and other initiatives
2. Middle Rio Grande Regional Water Planning Water Assembly
3. Jemez Y Sangre Regional Water Planning
4. Socorro-Sierra Regional Water Planning
5. Paso del Norte Watershed Council
6. New Mexico Acequia Association
7. Soil and Water Conservation Districts

6.2.2.3 Limitations

- Watershed planning usually requires non-federal match of federal funds.
- Federal funds for watershed programs are not always available.
- Requires visibility, extraordinary coordination efforts, and constant attention to keep viable.
- Requires university/private/federal/state/tribal/local partnering to be effective.
- Habits are hard to change.

6.2.2.4 Possible First Steps

- 1) Get the planners together.
- 2) Get the planners together with the funding programs, such as the U.S. Army Corps of Engineers (Corps) 729 Watershed Planning Program for filling data gaps, Bureau of Reclamation Irrigation Conservation and Efficiency Program, Natural Resources Conservation Service Watershed Planning Program.
- 3) Share information, data, and expertise.
- 4) Develop a communication and funding network for long-term progress.

6.2.3 Coordinate Water Supply Operations at Elephant Butte Reservoir and Caballo Reservoir with the Middle Rio Grande

6.2.3.1 Background

The Review and EIS scope did not include any water supply operations below Elephant Butte Reservoir. Improved communication and coordination, and flood control protocol resulted from the Review and EIS. Only flood control operations are in the URGWOM model in the Southern Section. Improved coordination and communication above and below Elephant Butte for water supply, as well, has potential to benefit both upstream and downstream sections.

6.2.3.2 Opportunity

- Time deliveries to Elephant Butte to reduce depletions
- Potentially reduce evaporation losses by storing in upstream reservoirs
- Work more closely with Middle Rio Grande Conservancy District (MRGCD) water users and Reclamation to seasonally time diversions through the Low Flow Conveyance Channel to improve downstream deliveries with fewer losses.

6.2.3.3 Limitations

- Articles 6 and 7 of the Rio Grande Compact would occasionally limit upstream reservoir storage.
- Better understanding of losses through the San Acacia Section is needed.
- Shallow groundwater-surface water interaction data are needed to better define losses from Cochiti Dam to Elephant Butte.

6.2.3.4 Potential First Steps

- 1) Include people in the Southern Section with water to store when working out agreements to store in Abiquiu.
- 2) Coordinate annual operating plans that are developed both upstream and downstream from the April 1 forecast.
- 3) Update operation plans on a monthly basis and share information.
- 4) Support shallow groundwater/surface water data collection through the Central and San Acacia Sections.
- 5) Include water supply operations in the URGWOM model in the Southern Section.

6.3 Actions Outside Existing Laws, Authorizations, And Regulations

6.3.1 Storage of Rio Grande Water in Heron Reservoir

6.3.1.1 Background

Heron Reservoir is authorized solely to store SJC Project water as it is pumped through the tunnels from the Upper Colorado Basin. A small, temporary pool (from 6,000 to 10,000 AF) of Native Rio Grande water may be useful for short-term benefit when certain situations arise.

6.3.1.2 Opportunity

- Could be used for drought contingency.
- Acequias could have some storage available to stretch low runoff through an irrigation season.
- An entity could take delivery of their SJC water at Heron.

6.3.1.3 Limitations

- Requires changes in the law authorizing Heron Reservoir.
- Requires approval of the three Rio Grande Compact Commissioners.
- If and when space is needed to receive initial deliveries of San Juan-Chama Project water, the space would have to be evacuated (Pueblo Reservoir on the Arkansas River in Colorado does this).

6.3.1.4 Potential First Steps

- 1) Rewrite some water conservation accounts, and losses in the URGWOM model; revise URGWOM rule set and run the model to understand the hydrologic effects and secure Compact support.
- 2) Depending on the outcome of Step 1, undertake planning and environmental compliance studies for authorization change.

6.3.2 Use of Cochiti Lake for Other than Authorized Purposes

6.3.2.1 Background

There have been many proposed actions for Cochiti Dam and Lake that are outside of existing authorities. The management of lands associated with Cochiti Dam and Lake are held in trust by the United States for the beneficial owners, the Pueblo de Cochiti, a federally recognized Native American Tribe. As a result of its Native American Trust responsibilities, the Corps is required to protect Cochiti natural and cultural assets. The Corps and the Pueblo de Cochiti are conducting an array of studies that are intended to characterize the interactions of Cochiti Dam and Lake with Tribal and other resources. The studies will provide a baseline against which the impacts of future operational changes at the lake may be evaluated.

6.3.3 Use of Abiquiu Reservoir for other than Authorized Purposes

6.3.3.1 Background

Abiquiu Reservoir is authorized for flood and sediment control by the Flood Control Acts of 1948 and 1950. Reservoir regulation is coordinated with regulations at Jemez Canyon Dam, Cochiti Lake and Galisteo Dam. As a result of a 1976 Resolution by the Committee on Public Works of the United States Senate, the Corps was asked to study the advisability of storing conservation water in Abiquiu Reservoir. The Albuquerque District finalized a report in December 1987 (Corps 1987b) recommending that due to the cost of adding additional storage would be in excess of \$95 million and that the costs would have to be paid 100% by a local sponsor it was not feasible. No entities expressed any interest in storage at these costs. However, it was recommended that because of the physical feasibility of storing additional water that the possibility of storing be reconsidered if and when conservation storage at Abiquiu becomes viable, necessary, and feasible for beneficial use.

6.3.4 Use of Jemez Canyon Dam for other than Authorized Purposes

6.3.4.1 Background

Jemez Canyon Dam is authorized for flood and sediment control. Water stored permanently for other than these authorized purposes require a law change and environmental compliance. There have been previous water storage agreements that stored water in Jemez Canyon. One expired in 2000 and the Reservoir was evacuated. In 2002, an agreement between the Pueblo of Santa Ana and the State of New Mexico was made to temporarily store water in Jemez Canyon under a deviation in operations approved by the Corps of Engineers. There are no agreements currently in place. Jemez Canyon Dam is on Pueblo of Santa Ana land and the Corps has Native American trust responsibilities with respect to any changes in actions at Jemez Canyon Dam.