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## **Record of Decision for the Upper Rio Grande Basin Water Operations Review Final Environmental Impact Statement**

U.S. Department of the Interior, Bureau of Reclamation

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# RECLAMATION

*Managing Water in the West*

## **Record of Decision for the Upper Rio Grande Basin Water Operations Review Final Environmental Impact Statement**



U.S. Department of the Interior  
Bureau of Reclamation  
Upper Colorado Region

July 2007

## Summary of Action

The U.S. Bureau of Reclamation (Reclamation), Upper Colorado Region, is one of three joint lead agencies that published a final environmental impact statement (EIS) for the Upper Rio Grande Basin Water Operations Review (Review). Reclamation is one of two federal agencies responsible for compliance with the National Environmental Policy Act of 1969, as amended (NEPA), for this Review. The U.S. Army Corps of Engineers – Albuquerque District (Corps) and the New Mexico Interstate Stream Commission (NMISC) are the other joint lead agencies. Cooperating agencies include the U.S. Bureau of Indian Affairs, the U.S. Fish and Wildlife Service (Service), the New Mexico Department of Agriculture, the New Mexico Environment Department, and the Ohkay Owingeh Pueblo.

The proposed action is the adoption of an integrated plan for water operations at existing Corps and Reclamation facilities in the Rio Grande Basin above Fort Quitman, Texas. Reclamation is responsible for managing six facilities along the upper Rio Grande: the Closed Basin Project, Heron Dam and Reservoir, El Vado Dam and Reservoir, the Low Flow Conveyance Channel, and water supply activities at Elephant Butte and Caballo Dams and Reservoirs. Reclamation's proposed action is to change Heron Reservoir waiver dates and continue current operations at the Low Flow Conveyance Channel (LFCC).

The Corps is responsible for managing flood control operations at Platoro Dam and Reservoir, managing flood control and water storage at Abiquiu Dam and Reservoir, managing flood control at Cochiti Dam and Lake, managing the sediment and flood control structure at Jemez Canyon Dam, and maintaining flood control channel capacities below Abiquiu and Cochiti. The NMISC is authorized to protect, conserve, and develop waters of the state and monitors operations at reservoirs and water conveyance facilities for these purposes, and to assure compliance with the Rio Grande Compact.

The joint lead agencies adopted the following purpose and need statements for this Review based on agency responsibilities and authorities.

**Purpose**—The Upper Rio Grande Basin Water Operations Review will be the basis of, and integral to, the preparation of the Water Operations EIS. The purposes of the Review and EIS are to:

1. Identify flexibilities in operation of federal reservoirs and facilities in the upper Rio Grande Basin that are within existing authorities of the Corps, Reclamation, and NMISC and that are in compliance with state and federal law.
2. Develop a better understanding of how these facilities could be operated more efficiently and effectively as an integrated system.
3. Formulate a plan for future water operations at these facilities that is within the existing authorities of the Corps, Reclamation, and NMISC; complies with state, federal, and other applicable laws and regulations; and assures continued safe dam operations.
4. Improve processes for making decisions about water operations through better interagency communications and coordination, and facilitation of public review and input.

5. Support compliance of the Corps, Reclamation, and NMISC with applicable laws and regulations, including, but not limited to, NEPA and the Endangered Species Act (ESA).

**Need**—Under various existing legal authorities, and subject to the allocation of supplies and priority of water rights under state law, the Corps and Reclamation operate dams, reservoirs, and other facilities in the upper Rio Grande Basin to:

1. Store and deliver water for agricultural, domestic, municipal, industrial, and environmental uses.
2. Assist the NMISC in meeting downstream water delivery obligations mandated by the Rio Grande Compact of 1938.
3. Provide flood protection and sediment control.
4. Comply with existing law, contract obligations, and international treaty.

Alternative E-3 was identified as the preferred alternative in the Final EIS. Reclamation will implement the elements of Alternative E-3 associated with waivers potentially extending storage of San Juan-Chama Project waters at Heron Reservoir and continued operations of the LFCC as a passive drain with zero cubic feet per second (cfs) diversion from the Rio Grande. Reclamation will continue to improve communication and coordination of water operations with the joint lead agencies, cooperating agencies, and stakeholders within the region.

The Final EIS and this Record of Decision were prepared pursuant to the National Environmental Policy Act of 1969, as amended; the Council on Environmental Quality's *Regulations for Implementing the Procedural Provisions of NEPA* (40 CFR 1500-1508); and the Department of the Interior's NEPA Implementing Procedures (516 DM 1-15). The decision documented herein is based on information and analysis contained in the Final EIS filed with the Environmental Protection Agency (FES-07-05) on April 20, 2007, and noticed by the Environmental Protection Agency in the *Federal Register* on April 27, 2007.

## **Alternatives Considered**

The Final EIS analyzed six action alternatives and the No Action Alternative. The action alternatives considered varying options for the following water operations elements: modifying waiver dates for San Juan-Chama Project water storage in Heron Reservoir; allowing varying amounts of native Rio Grande water conservation storage at Abiquiu Reservoir; modifying channel capacity along the Rio Chama below Abiquiu Dam; modifying channel capacity along the Rio Grande below Cochiti Dam; and varying diversion capacities to the LFCC between zero and 500, 1,000, or 2,000 cfs. All alternatives included improvements in basin-wide communications and coordination of flood control operations at Elephant Butte and Caballo Dams. The alternatives considered are summarized below:

Alternatives	Operation or Facility				
	Heron Waivers	Abiquiu Storage Capacity	Abiquiu Channel Capacity	Cochiti Channel Capacity	Diversions to LFCC
No Action (G-3)	April 30	0 af	1,800 cfs	7,000 cfs	0–2,000 cfs
B-3	Sept. 30	0–180,000 af	1,500 cfs	8,500 cfs	No Change
D-3	Aug. 31	0–180,000 af	2,000 cfs	No Change	No Change
E-3	Sept. 30	0–180,000 af	No Change	10,000 cfs	No Change
I-1	No Change	0–20,000 af	No Change	No Change	0–500 cfs
I-2	No Change	0–75,000 af	No Change	No Change	0–1,000 cfs
I-3	No Change	0–180,000 af	No Change	No Change	No Change

Note: No Change means no difference from No Action. Modeled diversions to the LFCC begin only when there is at least 250 cfs in the river.

af = acre-feet; cfs = cubic feet per second.

Alternatives were evaluated and quantitatively ranked based on the following threshold criteria: flood damage reduction and dam safety, water delivery, and compliance with the Rio Grande Compact and international treaty obligations. The impacts of the alternatives were analyzed for ecosystem resources, threatened and endangered species, operational flexibility, water quality, sediment management, Indian trust assets, cultural resources, land use, recreation, hydropower, and environmental justice. No alternative was ideal for all resources. All action alternatives, as well as the No Action Alternative, have potentially significant impacts, both adverse and beneficial.

Reclamation is required under NEPA to identify the environmentally preferable alternative. Determining the environmentally preferred alternative was difficult due to sometimes conflicting needs among threatened and endangered species and modeled similarities among the alternatives. Critical habitat for several threatened and endangered species, including the Rio Grande silvery minnow and southwestern willow flycatcher, is of concern. The key biological indicators included aquatic and riparian habitat considerations for listed species as well as overall biotic health. The environmentally preferable alternative is Alternative I-1. Alternative I-1 was the environmentally preferred alternative because it best supported aquatic and riparian resources. Alternative I-1 was one of the few action alternatives offering the potential for improved ecosystem conditions, especially with respect to considering the impacts of limiting active diversion to the LFCC in the San Acacia Section. Alternative I-1 was not selected as the preferred alternative because it did not provide sufficient deliveries of water or provide enough management flexibility to reliably meet interstate water delivery obligations.

## Decision and Rationale for the Decision

Each joint lead agency is issuing its own Record of Decision regarding actions at facilities under its jurisdiction. The joint lead agencies selected Alternative E-3 as the preferred alternative because it provides the greatest physical capacity to accommodate the wide range of hydrologic conditions in the basin. Reclamation actions under Alternative E-3 include the potential to grant waivers for San Juan-Chama Project waters stored in Heron Reservoir extending as late as September 30, and operation of the LFCC with diversions ranging from zero to 2,000 cfs. Of the action alternatives that allow up to 180,000 acre-feet of native conservation storage in Abiquiu Reservoir, Alternative E-3 offers greater support to ecosystem resources. While Alternative B-3 was the top-ranked alternative identified in the Final EIS, when considering impacts across all resources, Alternative B-3 performed poorly in ecosystem support.

Reclamation's decision is to:

- 1) Consider waiver requests at Heron Reservoir with the potential to extend San Juan-Chama Project water storage through September 30 in accordance with Reclamation policy.
- 2) Continue operating the Low Flow Conveyance Channel as a passive drain only with zero cfs diversion from the Rio Grande.

Improved communication and coordination of water operations at other federal facilities will continue to be refined and implemented. No proposed water operations changes were suggested for other Reclamation facilities including the Closed Basin Project, El Vado Dam, Elephant Butte Dam, or Caballo Dam.

This decision was made after carefully weighing economic, social, and technical considerations as well as the potentially significant environmental effects analyzed in the EIS. In addition, the comments and concerns of agencies, tribes, public and private organizations, and individuals were considered in the decision-making process.

Controversial issues associated with operation of Reclamation facilities included projected ecosystem impacts resulting from possible future active diversion to the LFCC in the San Acacia Section of the river. This river section includes critical habitat for both the Rio Grande silvery minnow and southwestern willow flycatcher and is of particular concern to the Service. At present, Reclamation does not divert water from the Rio Grande to the LFCC. Instead, the LFCC functions as a passive drain to intercept and convey shallow groundwater and irrigation return flows downstream to Elephant Butte Reservoir. Reclamation does not anticipate active diversions to the LFCC in the near future as extensive repairs or reconstruction would be needed to resume active diversion. Projected ecosystem impacts to this section would be minimized under Reclamation's proposed zero diversion to the LFCC. Without active diversion, projected ecological impacts in the San Acacia Section would be similar to those observed under the No Action Alternative.

Reclamation's decision appears to provide the best means to minimize or avoid environmental harm while increasing the ability and capacity to meet multiple needs along the river system. Reclamation's potential actions under Alternative E-3 consider minor ecosystem impacts along the Rio Chama associated with extending the period for Heron Reservoir waivers from April to September. September waivers would allow longer storage periods for San Juan-Chama Project waters with the flexibility for higher releases in the late summer, fall, and winter time periods as water is moved downstream to evacuate reservoir space for the upcoming year's storage. These later season releases could help meet flow targets at times when river flows are historically low. Under Alternative E-3, Reclamation allows for a possible range of diversions to the LFCC ranging from 0 to 2,000 cfs. Allowing diversion up to the maximum of 2,000 cfs has the greatest potential to affect ecologic resources in the San Acacia Section. As current physical conditions preclude active diversion to the LFCC, potential adverse impacts to ecosystem resources in the San Acacia Section are not projected to occur.

## **Joint Lead Agency Decisions**

The Corps and NMISC are issuing individual agency Records of Decision as follows. The Corps supports no operational changes at facilities under its discretion. However, the Corps would support future operational changes, contingent on the results of additional NEPA analysis and documentation. The safe channel capacities downstream from Abiquiu and Cochiti Dams will remain at 1,800 cfs and 7,000 cfs, respectively. However, ongoing and future flood damage reduction studies may assist in removing constraints on Rio Grande channel capacity between Cochiti Dam and Elephant Butte Reservoir. Storage of native flows in Abiquiu Reservoir will not be implemented until additional analyses are completed and NEPA documentation tiered from this Final EIS in accordance with NEPA and Council on Environmental Quality regulations.

The NMISC will continue to manage waters in support of the Rio Grande Compact. The NMISC supports the Corps' pursuit of native conservation storage at Abiquiu Reservoir and Reclamation's consideration of active diversion to the LFCC. Both of these actions support NMISC and their responsibilities for managing New Mexico's water delivery obligations under the Rio Grande Compact.

## **Summary of Comments Received on the Final EIS**

Reclamation received only a single response during the 60-day waiting period which ended on June 20, 2007. The New Mexico State Historic Preservation Office returned a "No Comment" stamped copy of the "Interested Party" letter that accompanied the Final EIS. No other comments were received.

## Environmental Commitments

As hydrologic variability continues to alter the Rio Grande, Reclamation will continue to evaluate potential alternatives for the physical relocation of the Rio Grande river channel and realignment of the LFCC south of San Acacia. In the future, if any changes in LFCC operation or physical features are proposed, additional environmental review including NEPA and ESA compliance would be required.

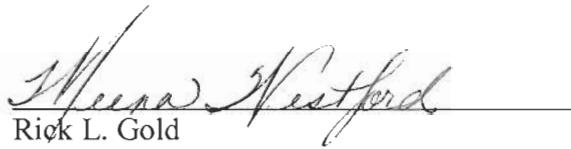
While no impacts to Indian trust assets are anticipated by the proposed changes at Reclamation facilities evaluated in this EIS, Reclamation will continue to coordinate and consult with Pueblos and Indian tribes to identify issues and consider solutions as the need arises.

## Implementation

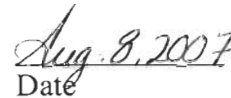
The decision shall be implemented immediately.

## Approved:

Acting  
for



Rick L. Gold  
Regional Director – Bureau of Reclamation  
Upper Colorado Region

  
Date