

RECLAMATION

Managing Water in the West

Record of Decision

**Continued Implementation of the 2008 Operating Agreement for
the Rio Grande Project, New Mexico and Texas**

Recommending Official:

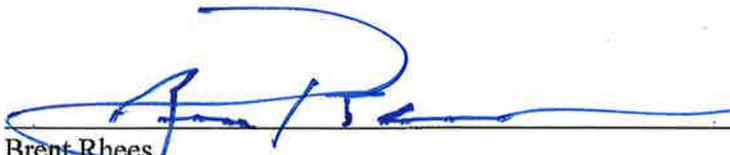


1/4/2017

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Date

Approved:



1/4/17

Brent Rhees
Regional Director, Upper Colorado Region Bureau of Reclamation

Date



MISSION STATEMENTS

Protecting America's Great Outdoors and Powering Our Future

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Summary of Action

The Bureau of Reclamation, Upper Colorado Region (Reclamation) prepared a final environmental impact statement (FEIS) to evaluate the potential impacts of continuing to implement the 2008 Operating Agreement for the Rio Grande Project, New Mexico and Texas (OA). The Rio Grande Project (Project) impounds the waters of the Rio Grande in two storage reservoirs: Elephant Butte and Caballo. The Project also includes a power generating plant, Percha, Leasburg, Mesilla, American, and International diversion dams, 139 miles of canals, 457 miles of laterals, 465 miles of drains, and other facilities. The Federal portion of the Project consist of the reservoirs and dams; the irrigation system was transferred to the two US irrigation districts, Elephant Butte Irrigation District (EBID) and El Paso County Water Improvement District No. 1 (EPCWID). The storage facilities provide project water to the EBID in New Mexico, EPCWID in Texas, and Mexico.

Reclamation manages the Project and is the lead federal agency for purposes of compliance with the National Environmental Policy Act of 1969, as amended (NEPA). Cooperating agencies are the U.S. Section of the International Boundary and Water Commission, the Colorado Division of Water Resources, EBID in New Mexico, EPCWID in Texas, and the Texas Rio Grande Compact Commissioner.

The proposed action is to continue to implement the OA through the year 2050. In conjunction with this proposed action, Reclamation also evaluated a proposal to enter into a long-term contract for storage of San Juan-Chama Project water in Elephant Butte Reservoir. These actions were described in the FEIS as Alternative 1, the Preferred Alternative. However, as noted below, Reclamation is deferring a decision on the storage proposal at this time pending further analysis of the potential upstream effects of the San Juan-Chama Project storage contract.

The purpose for action by Reclamation is to meet contractual obligations to EBID and EPCWID, and comply with applicable laws governing water allocation, delivery, and accounting. These obligations are currently fulfilled under the provisions of the OA. The need for action is to resolve the long and litigious history of the project and enter into mutually agreeable operational criteria that comply with applicable law, court decrees, settlement agreements, and contracts. These include the 2008 Compromise and Settlement Agreement, and contracts among Reclamation, EBID and EPCWID.

The FEIS and this Record of Decision have been prepared in compliance with NEPA, the Council on Environmental Quality's NEPA regulations (40 CFR 1500-1508), and Department of Interior NEPA regulations (43 CFR 46). This Record of Decision is based on the FEIS published by Reclamation in the *Federal Register*

on September 30, 2016 and by the Environmental Protection Agency on October 7, 2016.

Alternatives Considered

NEPA requires that all Records of Decision identify the alternatives that were considered, specifying which alternative (or alternatives) is environmentally preferable. The environmentally preferable alternative is the alternative that would promote the national environmental policy expressed in NEPA's Section 101.

The FEIS analyzes five alternatives that vary in inclusion of the diversion ratio adjustment, carryover accounting, and the San Juan-Chama Project storage contract. The alternatives include the alternative of no action and four action alternatives. The action alternatives reflect input from Reclamation staff, the cooperating agencies, stakeholders, and other interested parties.

Alternative 1 is Reclamation's preferred alternative. It includes continued implementation through 2050 of the operating procedures defined in the OA and corresponding Rio Grande Project Water Operations and Accounting Manual (Operations Manual). Under these operating procedures, the diversion ratio adjustment in the calculation of the allocation to each district and Mexico and carryover accounting of water would continue. This alternative also analyzes storing up to 50,000 acre-feet of San Juan-Chama Project water in Elephant Butte Reservoir through 2050.

Alternative 2 is the same as Alternative 1 except without the storage of San Juan-Chama Project water in Elephant Butte Reservoir.

Alternative 3 is the same as Alternative 1 except that carryover accounting established by the OA would be excluded from project allocation and accounting procedures.

Alternative 4 is the same as Alternative 1 except that the diversion ratio adjustment established by the OA would be excluded from project allocation and accounting procedures.

Alternative 5 is the No Action Alternative. The No Action Alternative represents a return to conditions before implementation of the OA. Alternative 5 would eliminate the diversion ratio adjustment and carryover accounting, but would include the San Juan-Chama Project water storage contract. It provides a baseline for comparison of effects of each of the action alternatives.

Environmentally Preferable Alternative

The OA was finalized in a time of drought affecting the entire Rio Grande Basin. According to the U.S. Geological Survey, the years since 2003 have been the

driest since the 1950s and early 1960s. The drought has caused a reduction in the volume of water stored in Elephant Butte Reservoir (which has a capacity of about 2 million acre-feet of water): in 2013 Elephant Butte Reservoir shrank to 3 percent of its storage capacity. This drought period and Reclamation's reservoir management practices have allowed vegetation to grow within Elephant Butte and Caballo reservoir pools, creating habitat for neotropical migrant birds including the endangered Southwestern willow flycatcher (*Empidonax traillii extimus*) and the threatened Western yellow-billed cuckoo (*Coccyzus americanus*). The primary determinant of environmental effects of the alternatives studied in the FEIS is the effect to these birds and their habitat from reservoir pool level fluctuations.

Ongoing storage and release of water in the reservoirs results in fluctuations in the reservoir pool water surface elevations and inundated areas. Fluctuations are projected to benefit biota, but if the reservoir water surface elevations rise and remain at high levels inundating large areas for prolonged periods, trees and patches of riparian habitat used by threatened and endangered birds could be adversely affected. If the future climate becomes wetter, then Alternative 2 would tend to keep the reservoir elevations lower than the other alternatives, which might benefit nesting birds in existing habitat and lead to this being the environmentally preferable alternative. However, if the future climate becomes drier, then Alternatives 1 and 3 would tend to keep the reservoirs fuller thus allowing for vegetation to regenerate and this would probably offer greater benefits to riparian vegetation, birds, and other wildlife.

What the hydrologic-climatic modeling presented in the FEIS showed (especially Sections 4.2, 4.3, 4.13 and 4.14) was that the effects of the alternatives would be minimal compared to the effects due to climate change and a continuing drought. For this reason, Reclamation will continue to monitor the riparian habitat and bird population in the reservoir and along the Rio Grande. (See environmental commitments in FEIS and below.)

Decision and Rationale for the Decision

Reclamation's decision is to implement Alternative 2, the continuation of the OA. At this time, Reclamation is postponing making a decision regarding the San Juan-Chama Project storage contract pending further analysis of the potential upstream effects. A decision on this storage contract will be made after the completion of this analysis. This decision has been made after carefully weighing economic, social, and technical considerations, including that the OA promotes water conservation through the carryover provisions and ends years of litigation among the United States and the districts over the equitable distribution of Project water based upon repayment and contractual provisions. Thus, important considerations in reaching the decision include Reclamation's mission of managing, developing, and protecting water and related resources in an environmentally and economically sound manner in the interest of the American

public. Continuing to implement the OA conforms to existing repayment contracts and settlement agreements among Reclamation and the two irrigation districts.

Reclamation's decision on the OA also carefully weighs the potentially significant future environmental effects and comments and concerns of agencies, organizations and individuals (Appendix E of the FEIS and comment documents on the FEIS). Particular issues of controversy included the relationship between surface water and groundwater in the irrigated area of the Project, the effects of reservoir storage on birds listed as threatened or endangered under the Endangered Species Act, the relationship among the alternatives and the Rio Grande Compact, and potential upstream effects of the San Juan-Chama Project storage contract. The decision to implement the OA through 2050 provides the best means to minimize or avoid environmental harm and meet the purpose and need for action as stated in Section 1.7.1 of the FEIS; namely, is to meet contractual obligations to EBID and EPCWID and comply with applicable law governing Project water allocation, delivery, and accounting. The purpose is also to provide a method to mitigate for the effects on the Project of groundwater interaction in the Rincon and Mesilla Valleys. The need for action is to resolve the long and litigious history of the Project by having mutually agreeable, detailed operational criteria.

Comments Received on the FEIS and Issues Raised

Reclamation's notice of availability of the FEIS was published in the *Federal Register* on September 30, 2016, and the Environmental Protection Agency's notice was published on October 7, 2016. The FEIS was posted on Reclamation's website and copies were distributed to area libraries and to those on the mailing list. Reclamation received four comment documents after release of the FEIS and prior to preparation of this Record of Decision. Commenters include the Environmental Protection Agency (Region 6), the City of Las Cruces, New Mexico Interstate Stream Commission, and WildEarth Guardians.

The Environmental Protection Agency commented that the FEIS adequately addressed their comments on the draft environmental impact statement (DEIS). Their issues of concern and comments are as follows:

- **Agriculture, Agriculture to Municipal and Industrial Conversions**

The Environmental Protection Agency stated that the FEIS included more detailed model description and summaries regarding agricultural impacts of the alternatives, including an enhanced discussion of agricultural versus municipal and industrial (urban) use of water. They also stated that the environmental impact of surface water reduction on ground water consumption was adequately addressed.

- **Environmental Justice**

The Environmental Protection Agency commented that the FEIS demonstrated adequate and appropriate processes for tribal and environmental justice analysis. They agreed that Reclamation had provided a clearer summary statement that there would be no high or disproportionate adverse impacts on environmental justice communities, although the discussion of environmental justice was scattered throughout the document.

Three other commenters disagreed that Reclamation has adequately addressed their previous comments and resubmitted their prior comment documents. Their comments on the FEIS and issues of continued concern (in alphabetical order) are as follows:

- **Alternatives and Rio Grande Compact**

The New Mexico Interstate Stream Commission agreed with the change from the DEIS to FEIS in making Alternative 1 the proposed action rather than no-action; however, they objected to the range of alternatives analyzed and repeated their concern that Rio Grande Compact issues should have been analyzed and the scope of analysis expanded as a result.

Throughout the NEPA review process, the New Mexico Interstate Stream Commission, and other individuals and organizations, requested analysis of the relationship between alternatives and the Rio Grande Compact; in particular, the calculation of Compact credits. Those desiring analysis of Compact storage or relinquishment wanted the geographic scope expanded into a basin-wide analysis rather than a narrow OA analysis.

Response:

Reclamation identified elements of the OA and included or excluded them in the five alternatives carried through detailed analysis. This constitutes a reasonable range of alternatives given the purpose and need for action as stated in Section 1.7.1. Again, the decision on the San Juan-Chama Project storage is deferred at this time.

Calculation of Compact credits is mainly determined by deliveries into project storage by Colorado and New Mexico — not by the alternatives analyzed in the FEIS. In response to prior comments about Compact credits and geographic scope of analysis, Section 4.3 (on reservoir elevations) and Appendix E, Table E-2 (on releases) of the FEIS quantitatively demonstrated that Rio Grande Compact Article VII would not be affected by the alternatives. Releases would be nearly identical under the alternatives and the amount of water in reservoir storage would also be nearly identical; therefore, Article VII triggering would be unchanged and there would be no need to analyze a broader geographic scope for Compact concerns.

- **Alternatives, No Action and San Juan-Chama Contract**

The WildEarth Guardians stated that Reclamation failed to provide a reasonable range of alternatives. They stated that since the FEIS included the contract for storing San Juan-Chama Project water in Elephant Butte Reservoir, the geographic scope should have been expanded upstream. They also felt that the purpose and need for evaluating the San Juan-Chama Project storage contract was too narrow.

Response:

The decision regarding the San Juan-Chama Project storage contract is deferred at this time.

- **Endangered Species Act**

The WildEarth Guardians commented that effects on the Southwestern willow flycatcher and Western yellow-billed cuckoo were not adequately addressed and implementation of the proposed action, combined with climate change and other past, present, and reasonably foreseeable actions, warranted a jeopardy opinion from the U.S. Fish and Wildlife Service.

Response:

Reclamation's findings were that implementation of Alternative 1 "may affect, and is likely to adversely affect" the Southwestern willow flycatcher (*Empidonax traillii extimus*) and Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and "may affect, and is likely to adversely modify" flycatcher designated critical habitat and cuckoo proposed critical habitat. The comment from WildEarth Guardians was that the U.S. Fish and Wildlife Service should have disagreed with these findings and instead issued a jeopardy opinion.

In response, Reclamation's findings and presumably the Service's biological opinion is based on the comparison of the projected effects of future Project operations under the OA coupled with climate change, against the baseline of past and present effects on the species and their habitat. Reclamation and the Service acknowledge that Elephant Butte and Caballo Dams have led to the extirpation of the Rio Grande silvery minnow, and have contributed to the threatened and endangered status of the birds. But past actions leading to the present listed status of these species is in the baseline and the minor alterations in reservoir water surface elevation that are part of Reclamation's discretionary action appropriately lead to the findings of Reclamation and the Service's concurrence.

Of course, the findings and the opinion are based on commitments by Reclamation to ongoing monitoring, and consultation and coordination to ensure that take does not occur and that the species are conserved.

- **Water Quality and Pumping Costs**

The City of Las Cruces commented that the FEIS ignored costs of degraded water quality from drying of drains and of increased pumping costs for Las Cruces and other non-irrigation groundwater pumpers.

Response:

This is largely correct, although the FEIS discussed the City of Las Cruces' 40 year Water Plan in Section 5.2.5, under cumulative impacts. As noted in Section 5.3.2, no data or models were available to quantify the groundwater effects of the City's water use. Furthermore, the analysis in Section 4.9 shows that the difference in groundwater levels caused by the different alternatives are minimal in comparison to the impacts of the different climate scenarios. This is relevant to the extent that groundwater levels are the driver for the impacts Las Cruces is raising.

- **Water Rights**

The City of Las Cruces commented that Reclamation misunderstood facts relating to the City's water rights. In particular, they stated that the assertion that increased municipal pumping would simply replace irrigation pumping demonstrated this misunderstanding or misinterpretation.

Response:

Analysis of the full range of the City's water rights and how they are used is beyond the scope of Reclamation's analysis. The FEIS projected the amounts of project water allocated to the irrigation districts and it is possible that this water could be available for future conversion to municipal and industrial uses by municipalities. Groundwater pumping effects on the aquifer are taken into account by the OA.

Conclusion Regarding Comments on the FEIS

After reviewing the four comment documents, Reclamation defers any decision regarding the San Juan-Chama Project storage contract. However, none of the other comments raise issues that require supplementation.

Environmental Impacts and Implementation of Environmental Commitments

For purposes of the FEIS, Reclamation, in collaboration with the U.S. Geological Survey, developed the Rincon and Mesilla Basin Hydrologic Model to simulate potential effects of the five alternatives on future project storage, release, and delivery of water to the two irrigation districts and to Mexico. The hydrologic and climatic modeling provides the basis for analysis of the potential effects of each alternative on environmental resources, including water resources (reservoir storage and release, Elephant Butte Reservoir water surface elevation, allocations, net diversions, groundwater, farm surface water deliveries, water quality), biological resources (including vegetation and wetlands, wildlife, and special status species), cultural resources, and socioeconomic resources (Indian trust assets, recreation, hydropower, net economic benefits, regional economic impacts, and environmental justice). The potential effects were identified and analyzed for each action alternative compared to the potential effects under the No Action Alternative. These comparisons are expressed in the FEIS in terms of the

differences among average values of the alternatives that would result under drier, wetter, and central tendency climate scenarios that have an equal chance of occurring in the future. Based on the analyses in the FEIS, Reclamation determined that specific measures to avoid or mitigate environmental harm would not be required except for continuing to monitor vegetation and listed species in coordination with the U.S. Section of the International Boundary and Water Commission, and the U.S. Fish and Wildlife Service, as noted below. In general, the modelling results suggest that the magnitude and duration of groundwater declines are primarily driven by climate and hydrologic variability (e.g. variations in inflows to Elephant Butte Reservoir and crop irrigation requirements) as opposed to differences among the alternatives.

General environmental commitments would include continuing to work with the U.S. Section of the International Boundary and Water Commission, EBID, and EPCWID to assess and determine the available supply, the release from storage, and delivery of Project water.

Under unforeseen or adverse conditions, Reclamation would continue to work with the U.S. Section of the International Boundary and Water Commission, EBID, and EPCWID under the parameters of the OA to resolve issues in an adaptive management framework.

Coincident with signing this record of decision, Elephant Butte Dam and Reservoir are 100 years of age. Relative to this 100-year history and as noted in Chapter 5, Reclamation considers the period through 2050 to be short-term. Within this short-term time frame, Reclamation's implementation of the OA would not result in an irreversible or irretrievable commitment of resources. This FEIS should give water users a better understanding of how the system would operate under the OA in the future under different climate scenarios. As summarized in Section 5.4 of the FEIS, implementation of any of the alternatives, combined with climate change, could result in adverse impacts to birds listed under the ESA and on designated or proposed critical habitat. However, with careful monitoring and reservoir management, and coordination with the Service, adverse effects to birds or their habitat should be avoided or reduced below the level of significance. No other significant adverse effects to resources are projected by the FEIS.

The decision to continue operating the Rio Grande Project using the diversion ratio and carryover accounting as described in the OA and Manual shall be implemented upon signing this Record of Decision. This decision is made pursuant to the authority vested in Reclamation by federal law, including the Reclamation Act of 1902 and the Rio Grande Reclamation Project Act, various contracts with the two irrigation districts, the 1906 treaty with Mexico, and other applicable laws, court decrees, agreements, and contracts.