

# RECLAMATION

*Managing Water in the West*

## **Rio Grande Project Operating Agreement: Supplemental Environmental Assessment**

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U.S. Department of the Interior  
Bureau of Reclamation

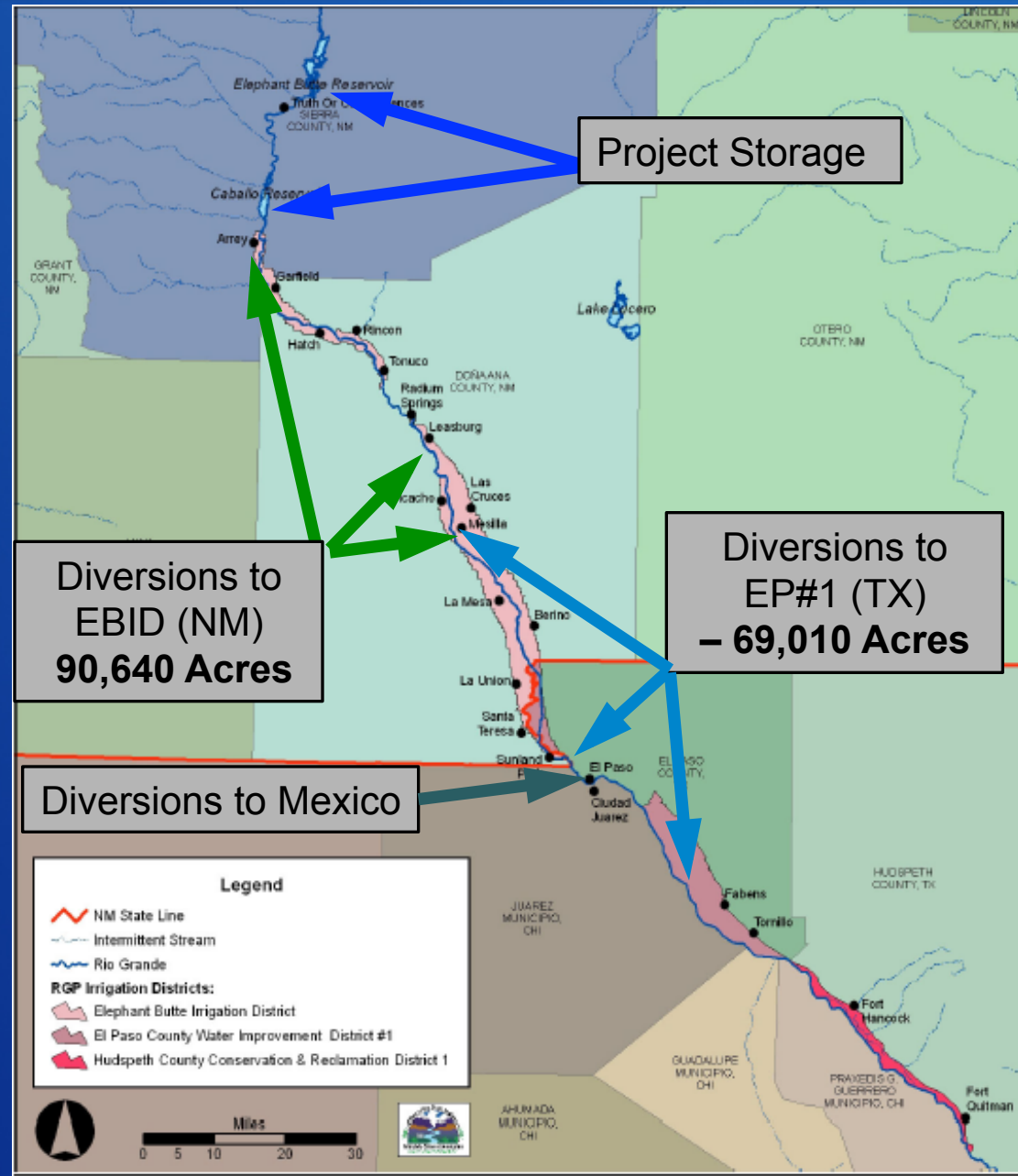
# Project Operations: 1916 - 1979

- From Project initiation in 1916 through 1979, Reclamation operated the full Rio Grande Project irrigation system in New Mexico and Texas.
- Reclamation allotted water to project lands by acre, and delivered water from storage to farm gates.



# Project Operations: 1980 - 2007

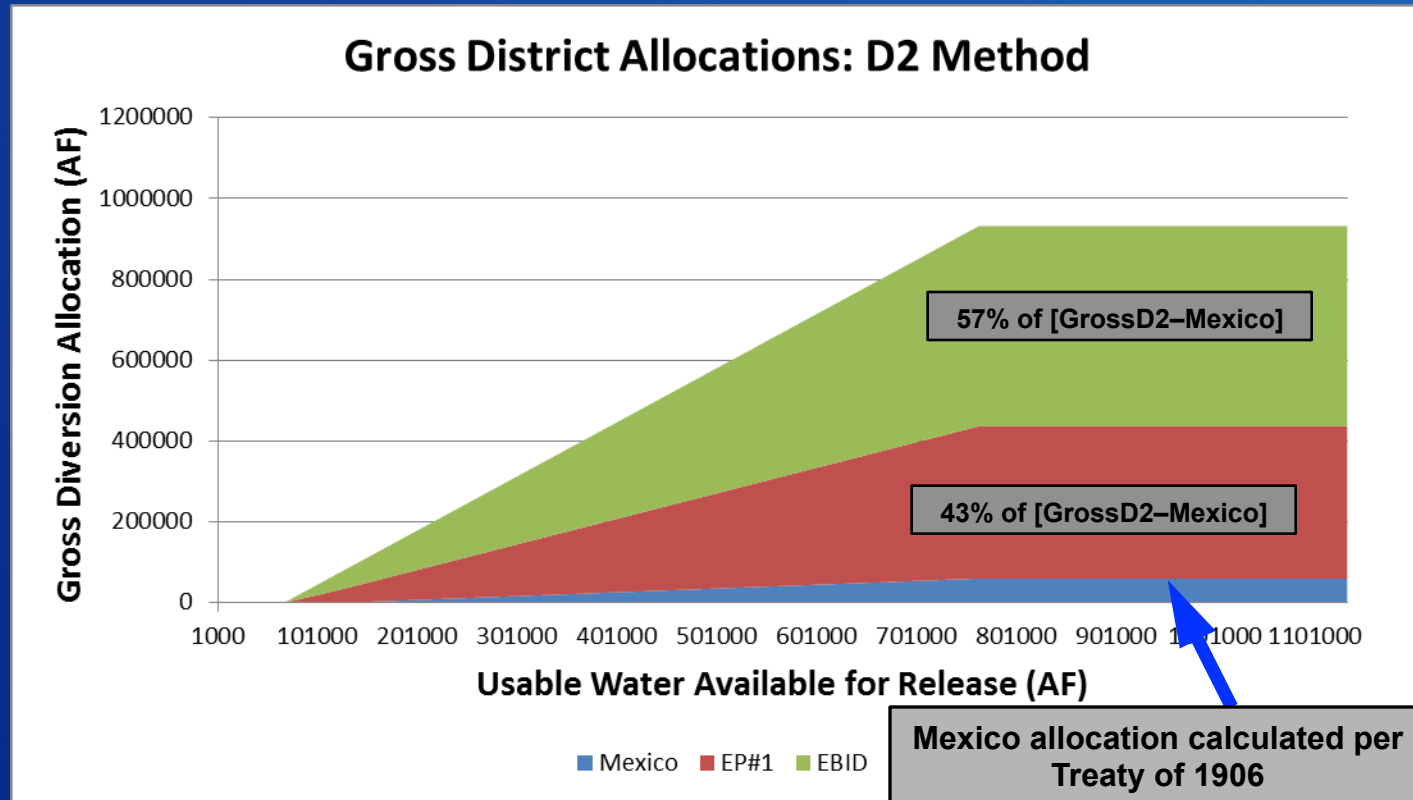
- In 1980, specified operations were transferred from Reclamation to EBID and EPCWID.
- Since 1980, Reclamation has allocated water to districts and Mexico and delivered water to river head gates rather than to project lands.



# Project Water Allocations to Irrigation Districts

- Project Allocations to the Districts have been made:
  - in accordance with the proportion of land in each District,
  - taking into account the Project delivery efficiency, as defined by the “D2 curve”.

The “D2 curve” represents the historical relationship between releases from Caballo and total project diversions



# Origin of the Operating Agreement

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- Reclamation, EBID and EPCWID signed contracts in 1979/1980 that required them to create a *mutually agreeable “detailed operational plan...setting forth procedures for water delivery and accounting.”*
- Parties agreed upon operating procedures and in 2008 signed an Operating Agreement that will be in effect until 2050.
- The Operating Agreement resolves decades of litigation, and is in compliance with a legal settlement related to some of the District’s concerns.
- Project has been operated according to this agreement since 2008.

# Operating Agreement Overview

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- As required by the Rio Grande Project contracts with the irrigation districts, the Operating Agreement:
  - Was agreed to by Reclamation and the Districts,
  - Describes how Reclamation allocates Project water to EBID, EPCWID, and Mexico,
  - Is consistent with applicable water rights, state and federal laws, and international treaties.

# Principles Underlying Operating Agreement

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## The Operating Agreement:

- Reflects historical operations
- Incorporates two key changes:
  - carryover accounting for any unused portion of the annual diversion allocations to Districts
  - adjustment of annual allocations to Districts to account for changes in Project delivery performance

# Compliance with the National Environmental Policy Act

- The **National Environmental Policy Act** (NEPA) requires evaluation of the impacts of Federal Actions on the human environment.
- Impacts can be evaluated through an **Environmental Assessment** (less comprehensive study for lower projected impact) or an **Environmental Impact Statement** (more comprehensive study).





# 2007 Environmental Assessment

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- In 2007, An Environmental Assessment for implementation of Rio Grande Project Operating Agreement was completed, covering the period 2008-2012.
  - Was in effect prior to initiation of operations under the Operating Agreement, extending through 2012.
  - Reclamation committed to gather data over the first five years of implementation to support future evaluation.

# 2013 Supplemental Environmental Assessment: Purpose and Scope

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- Evaluates operational data collected during first 5 years of operations under Operating Agreement, 2008 - 2012.
- Projects impacts on human environment for 2013-2015, during which an Environmental Impact Statement will be prepared.
  - Available data and models are best suited for projection of potential impacts over a limited time frame.
  - In short timeframe, differences in impact between previous operations and future operations is expected to be minimal.
- Alternatives Evaluated:
  - No Action: operations according to procedures used prior to 2008
  - Proposed Action: continued implementation of the 2008 Operating Agreement.

# Supplemental Environmental Assessment: Cooperating Agencies

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- The following agencies assisted with the development of the Supplemental Environmental Assessment:
  - International Boundary and Water Commission, United States Section (IBWC)
  - El Paso County Water Improvement District No. 1 (EPCWID)
  - Elephant Butte Irrigation District (EBID)
  - Texas Rio Grande Compact Commission

# Analyses Performed

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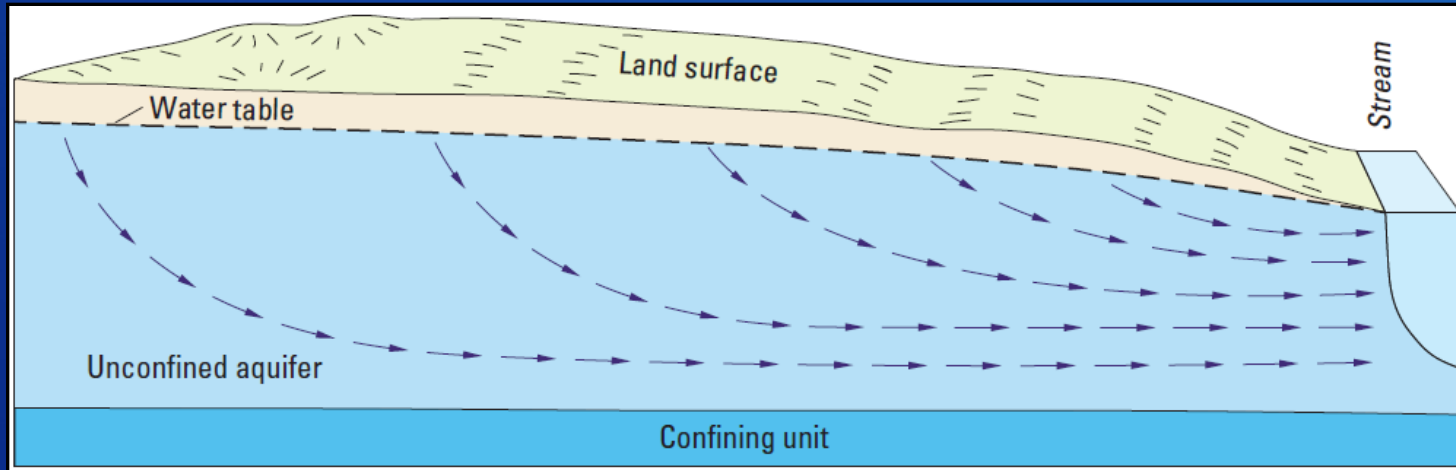
- Include effect of Operating Agreement on:
  - Surface-water allocations to the two irrigation districts and Mexico.
  - Groundwater levels, recharge, and effects on supplemental groundwater pumping in the Mesilla Basin.
  - Project delivery efficiency
  - Project reservoirs storage levels
  - Listed species under the Endangered Species Act
  - The Rio Grande Compact
  - Water quality

# Surface-Water Allocations

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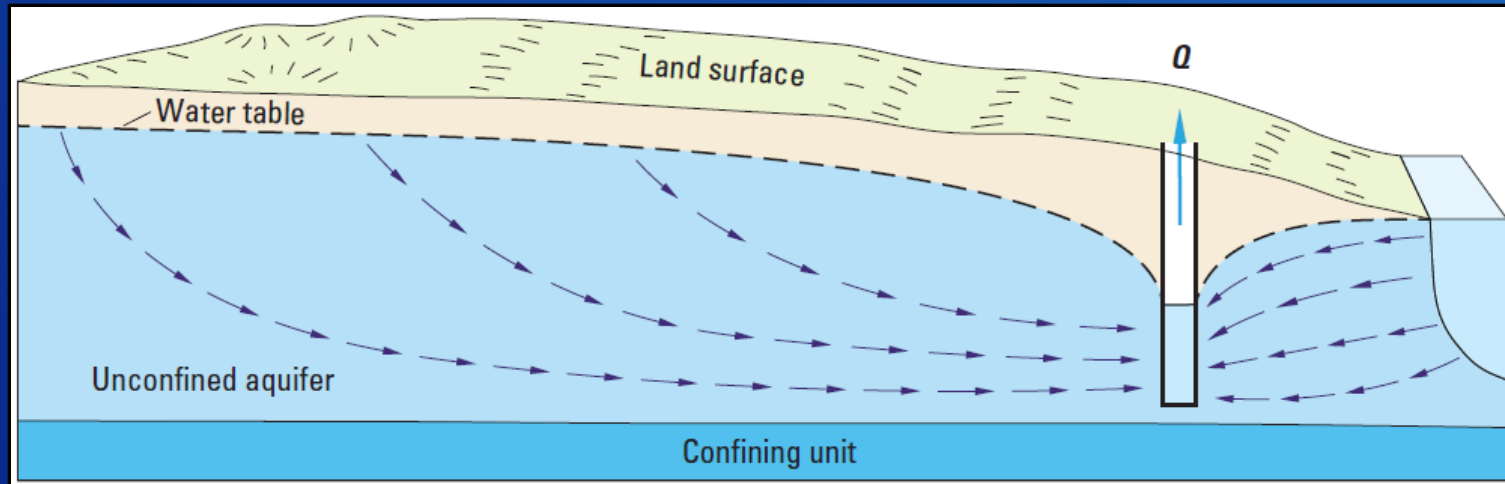
- The Operating Agreement results in changes in allocations between the districts, relative to prior operations which are consistent with the underlying principles of the Operating Agreement, including:
  - Promotion of water conservation through the carryover provision
  - Adjustment to total diversions to each district accounting for impacts of deviations in project delivery performance as a result of groundwater pumping, primarily within the Rincon and Mesilla Basins in New Mexico.

# Stream Depletion from Groundwater Pumping



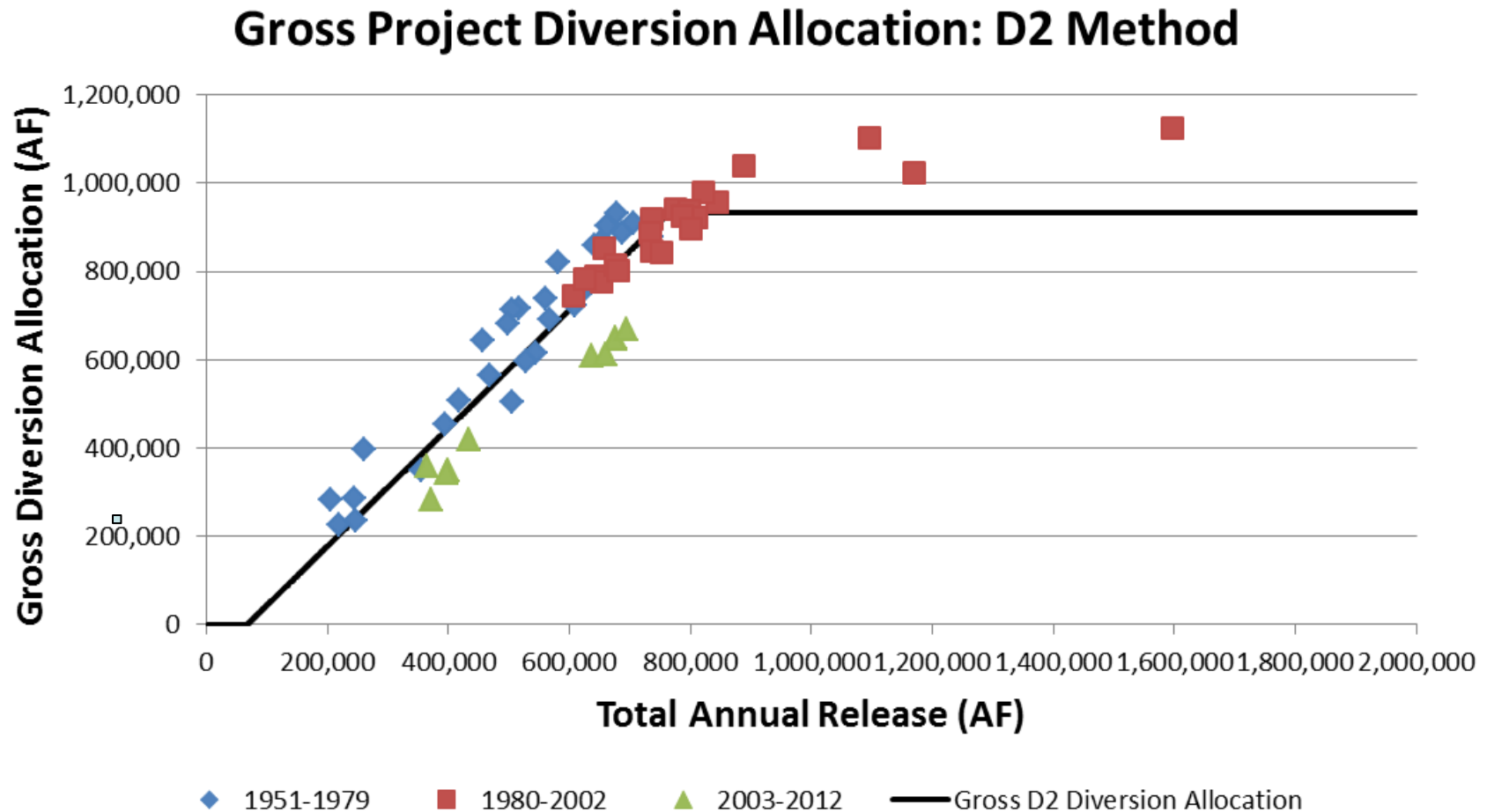
Without groundwater pumping

With groundwater pumping



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# Changes in Project Delivery Performance



$$\text{Diversion Ratio} = \frac{\text{Total Project Diversions}}{\text{Total Project Releases}}$$

# Groundwater Levels, Recharge, and Pumping Incentives

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- The Operating Agreement
  - maintains groundwater recharge via seepage and deep percolation from the river and irrigation canals.
  - has no direct effect on groundwater use, which is under the authority of the states.
  - Has no significant impact on delivery efficiency, which is primarily caused by groundwater pumping.
  - may affect the overall requirement for groundwater use.



# Reservoir Levels

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- Primarily due to the carry-over provision, reservoir levels in Elephant Butte Reservoir are projected to be higher under the Operating Agreement than would have been under Prior Operation scenarios.



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# Implications for the Rio Grande Compact

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- In the longer term, the Operating Agreement may affect:
  - The timing of Article VII storage restrictions under the Rio Grande Compact,
  - Reservoir evaporation (as a result of changes in storage), and therefore Compact delivery computations for New Mexico.
- Significant impacts on the Compact are unlikely during the period 2013-2015

# Impacts on species listed under the Endangered Species Act

- Changes in reservoir levels in Elephant Butte between 2013 and 2015 are unlikely to negatively impact existing nesting sites for the endangered southwestern willow flycatcher.



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# Water Quality

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- The Rio Grande below Caballo Dam has been identified as an impaired waterway under section 303(d) of the Clean Water Act.
- The Operating Agreement does not contribute to any additional adverse effect to water quality.
- Paso del Norte Watershed Council is developing a Watershed Based Plan to protect and improve water quality in the lower Rio Grande from Percha Dam downstream to the American Dam.



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# Finding of No New Significant Impact 2013-2015

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- Continued implementation of the Operating Agreement over the period 2013-2015 will not significantly affect the quality of the human environment.
- Continued implementation of the Operating Agreement over the period 2013-2015 would have no new environmental effects that meet the definition of significance in the Supplemental Environmental Assessment.

# Longer-Term Compliance with the National Environmental Policy Act

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- Environmental Impact Statement (EIS) will analyze implementation of OA over its remaining life (through 2050)
  - Assessing potential impacts over a wider variety of hydrologic conditions.
  - Accounting for projected impacts of climate change.
  - Using groundwater modeling to assess groundwater/surface-water interaction, and the impact of groundwater pumping in both states on Project operations.

# 2013 Supplemental Environmental Assessment

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- <http://www.usbr.gov/uc/albuq/envdocs/index.html>
- Questions?



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