

Water and Natural Resources Committee

Southern New Mexico Water Concerns and Rio Grande Compact Compliance

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The background of the page is a stylized illustration of a desert landscape. In the foreground, a winding river flows through a sandy, light-colored terrain. The river is depicted with a mix of light blue and green, suggesting varying water levels or perhaps a dry, cracked bed in some areas. The middle ground shows rolling hills and a vast expanse of low-lying, green desert vegetation. In the background, a range of mountains is visible, with some peaks appearing in shades of blue and purple, possibly indicating a change in climate or a specific time of day. The sky is a deep blue with scattered, dark, stylized clouds. The overall style is graphic and artistic, using a limited color palette to create a sense of depth and atmosphere.

CLIMATE CHANGE IN NEW MEXICO OVER THE NEXT 50 YEARS: IMPACTS ON WATER RESOURCES

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NEW MEXICO'S WATER FUTURE = *DRIER / MORE VARIABLE*

- Anticipated continued changes in climate will mean **less water is available** while **demands continue to increase**.
- Given this new reality, we must **plan ahead** to ensure continuing economic development and the needs of all New Mexicans are met.

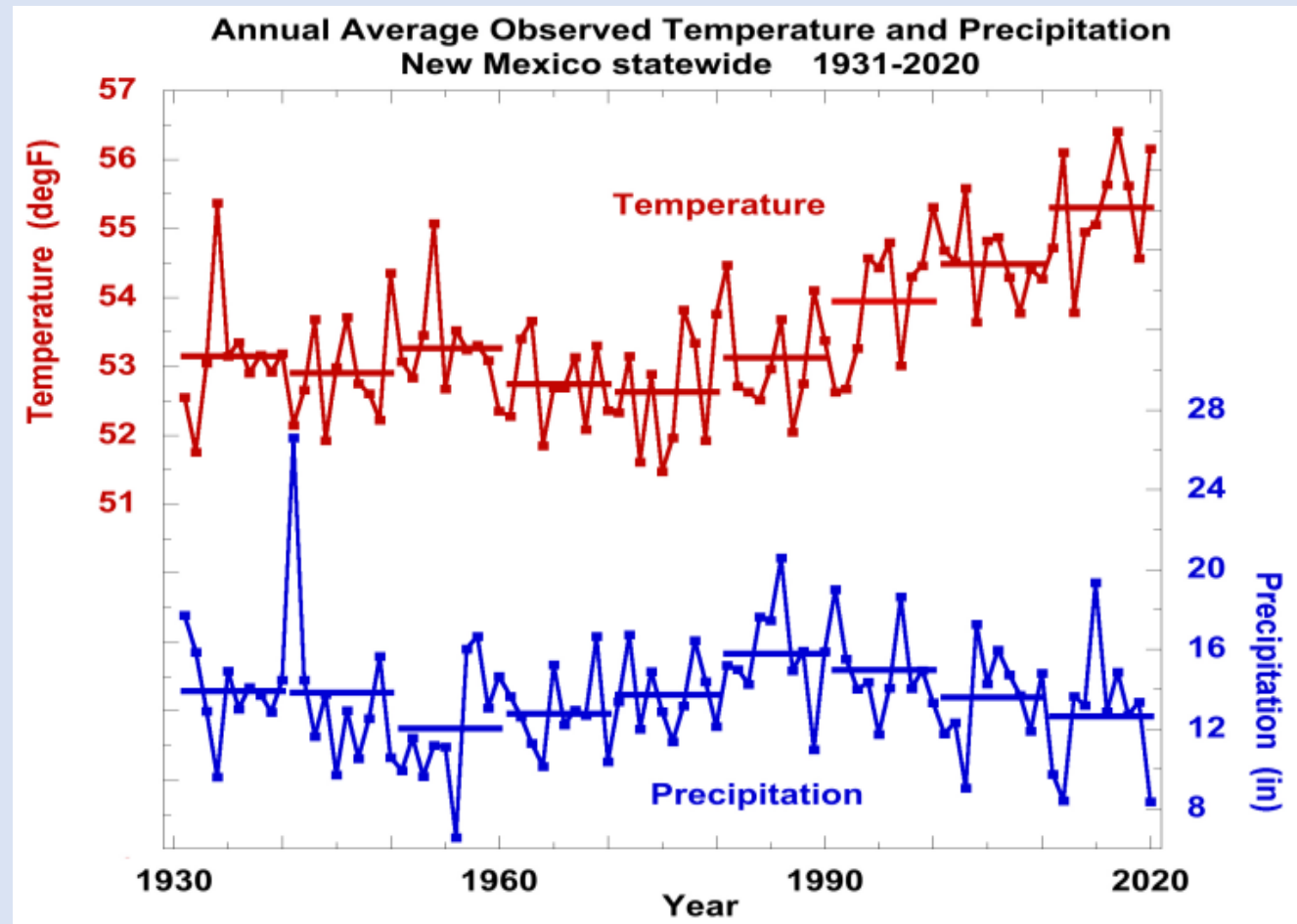


Image from [Climate Change in New Mexico over the Next 50 Years: Impacts on Water Resources](#)

TEMPERATURE CHANGE IN NEW MEXICO

Higher Emissions (RCP 8.5) 2040-2069 vs. Historical Simulation 1971-2000, Mean Change

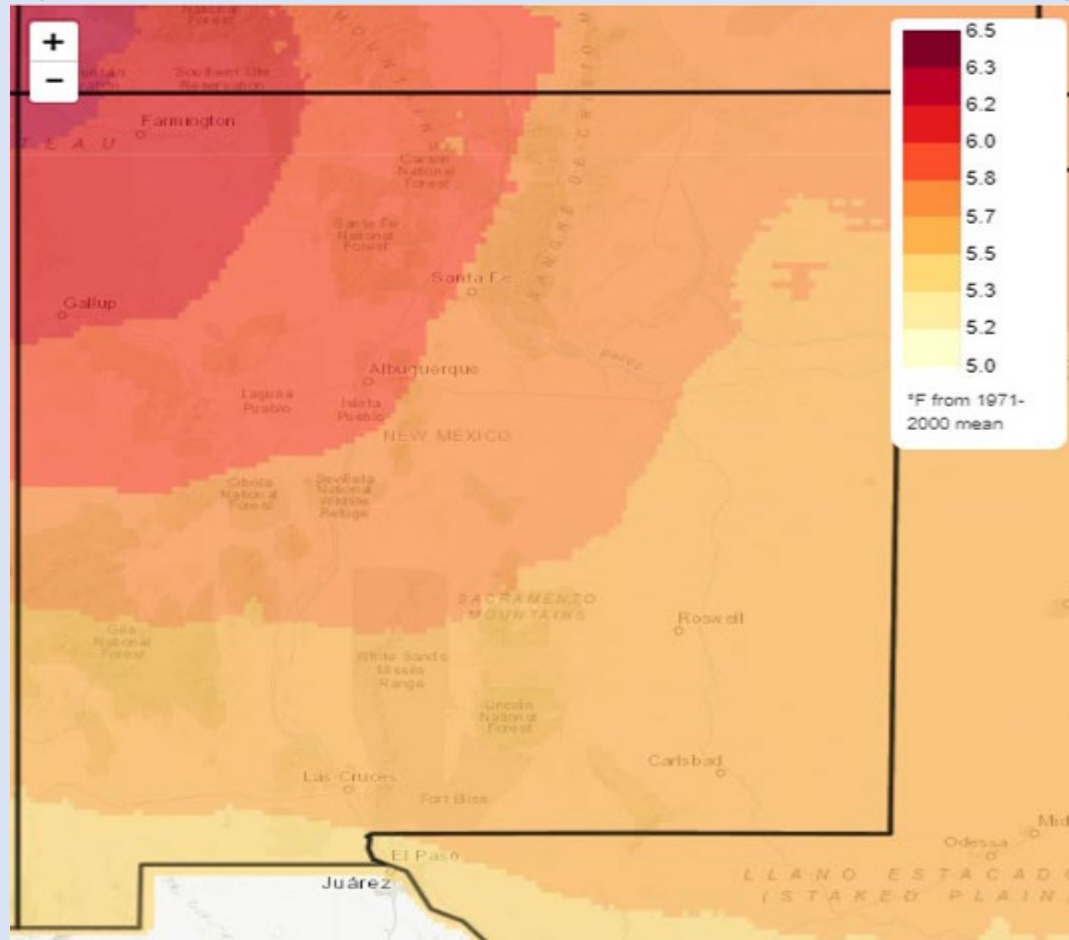
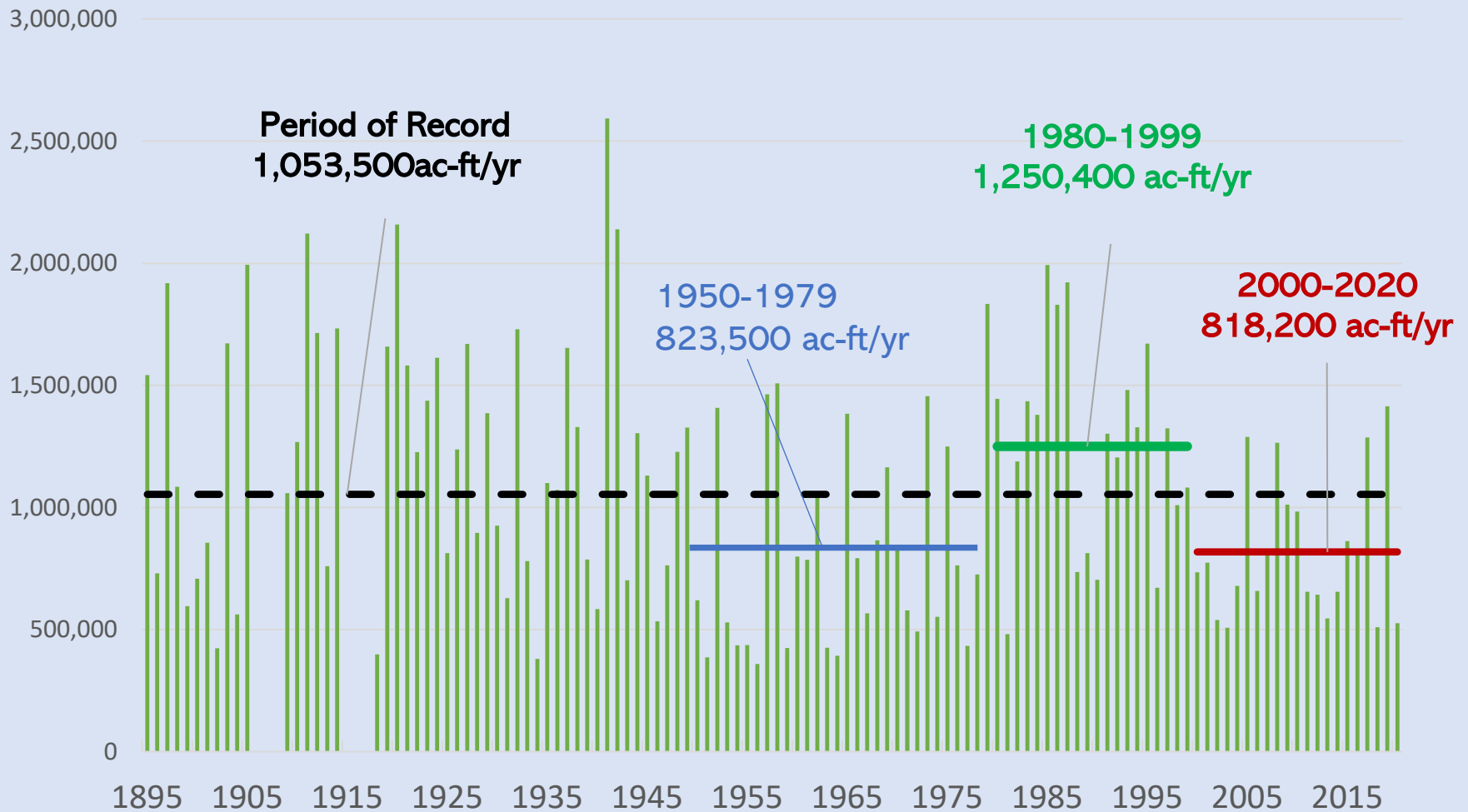


Image from [Climate Change in New Mexico over the Next 50 Years: Impacts on Water Resources](#)

- **Temperature increases throughout the entire state**
- **Increasing aridity**
- **Higher temperatures result in increased loss of water from our landscapes, including increased crop demands**
- ***Las Cruces' climate becomes more like Tucson / El Paso becomes more like Phoenix***

Annual average temperature simulated by 20 CMIP5 climate simulations by different models, spatially averaged over the state of New Mexico. Temperature change is defined as the difference between two thirty-year averages: (2040-2069) minus (1971-2000); the central years of these averaging periods are 70 years apart, so this plot represents 70-year temperature changes across the state.

ANNUAL FLOW OF RIO GRANDE AT OTOWI GAGE

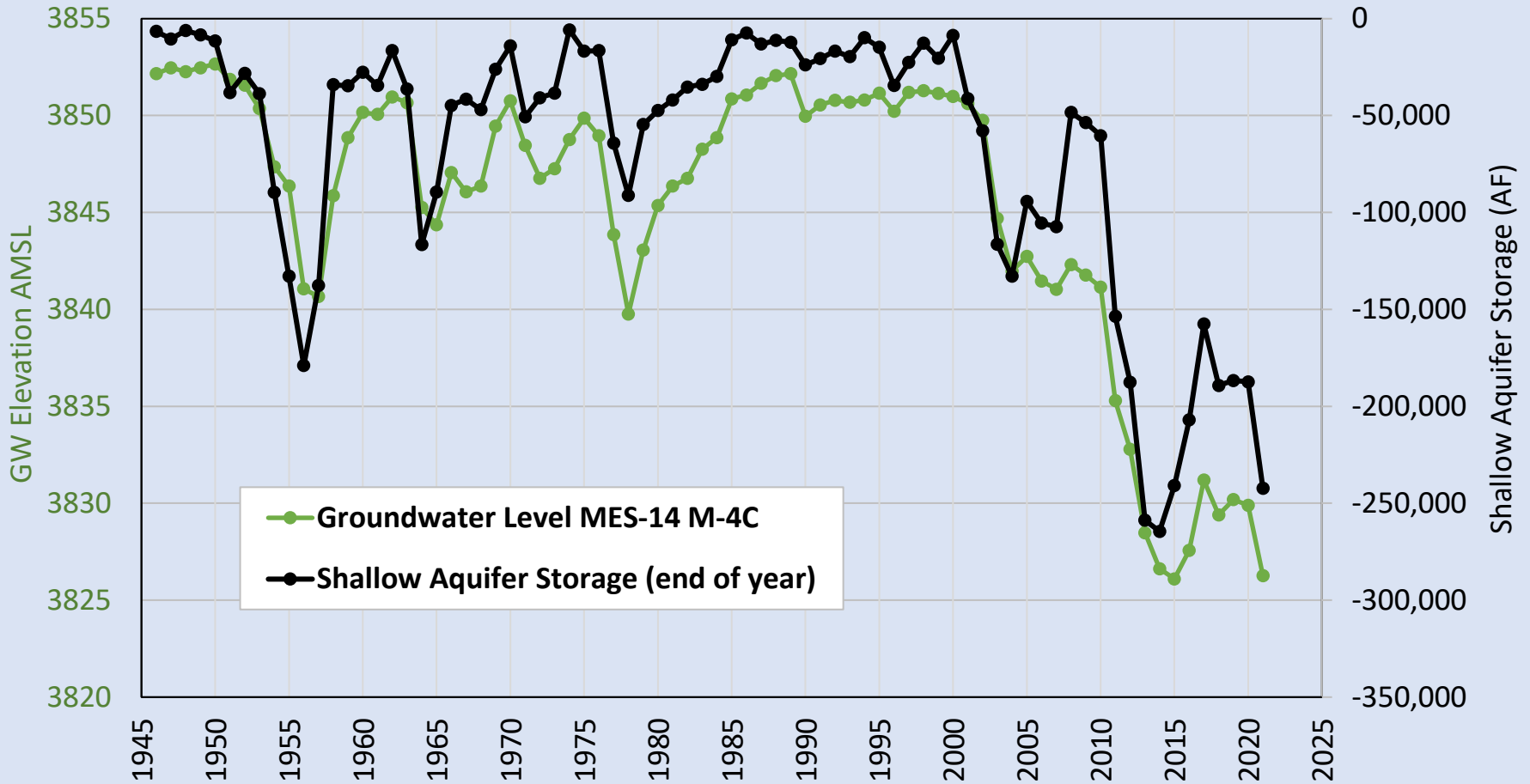


From 1971 to present, San Juan Chama Project Water has supplemented Middle Valley flows by approximately **90,000 acre-feet** annually.

From USGS in Acre-Feet per Year

MESILLA AQUIFER CONDITIONS

Shallow Aquifer Groundwater Levels (south of Las Cruces)
and Shallow Alluvial Aquifer Storage (from observed water levels, since 1945)

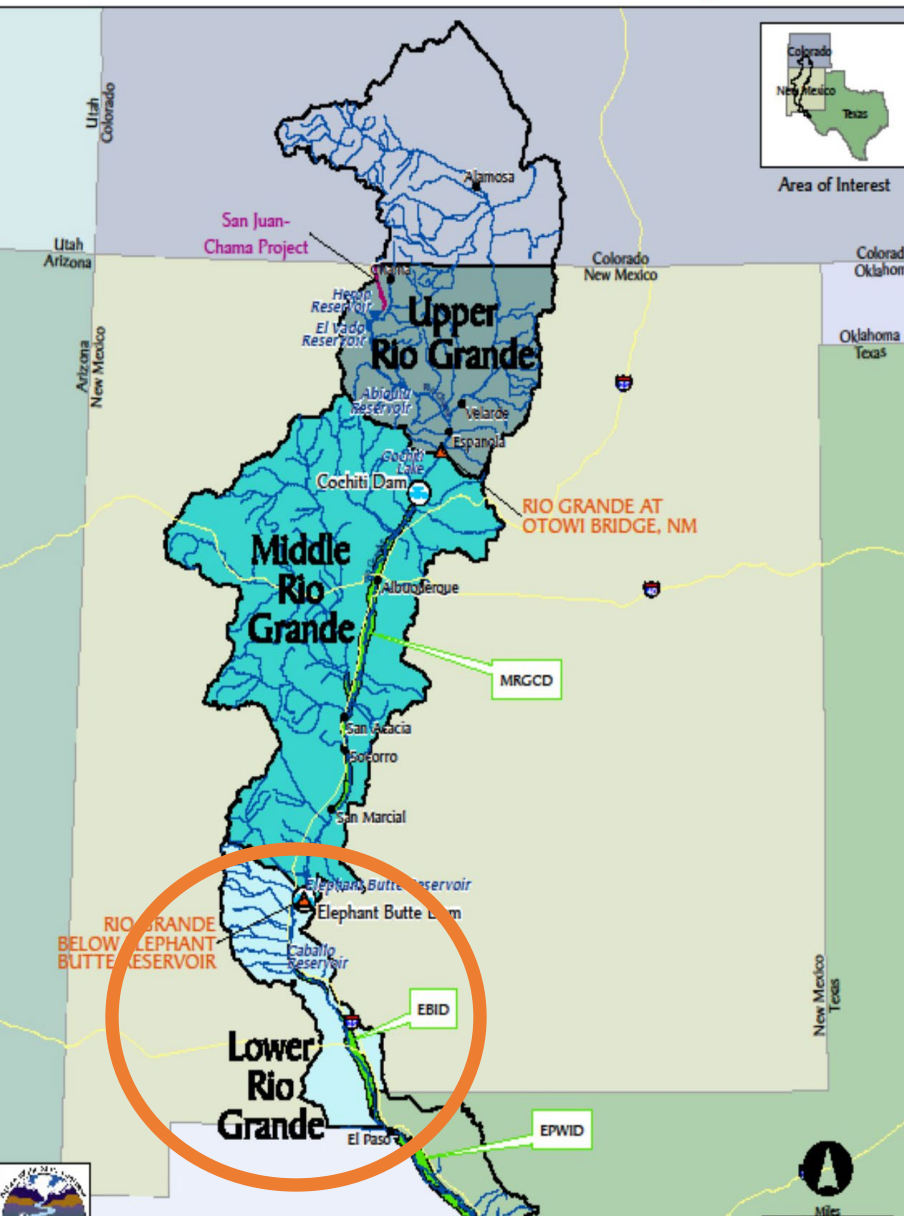


What Does this Mean?



- Holistic management / multipronged approach
- Planning and capacity development at all levels
- Build on legislative wins from 2023 session

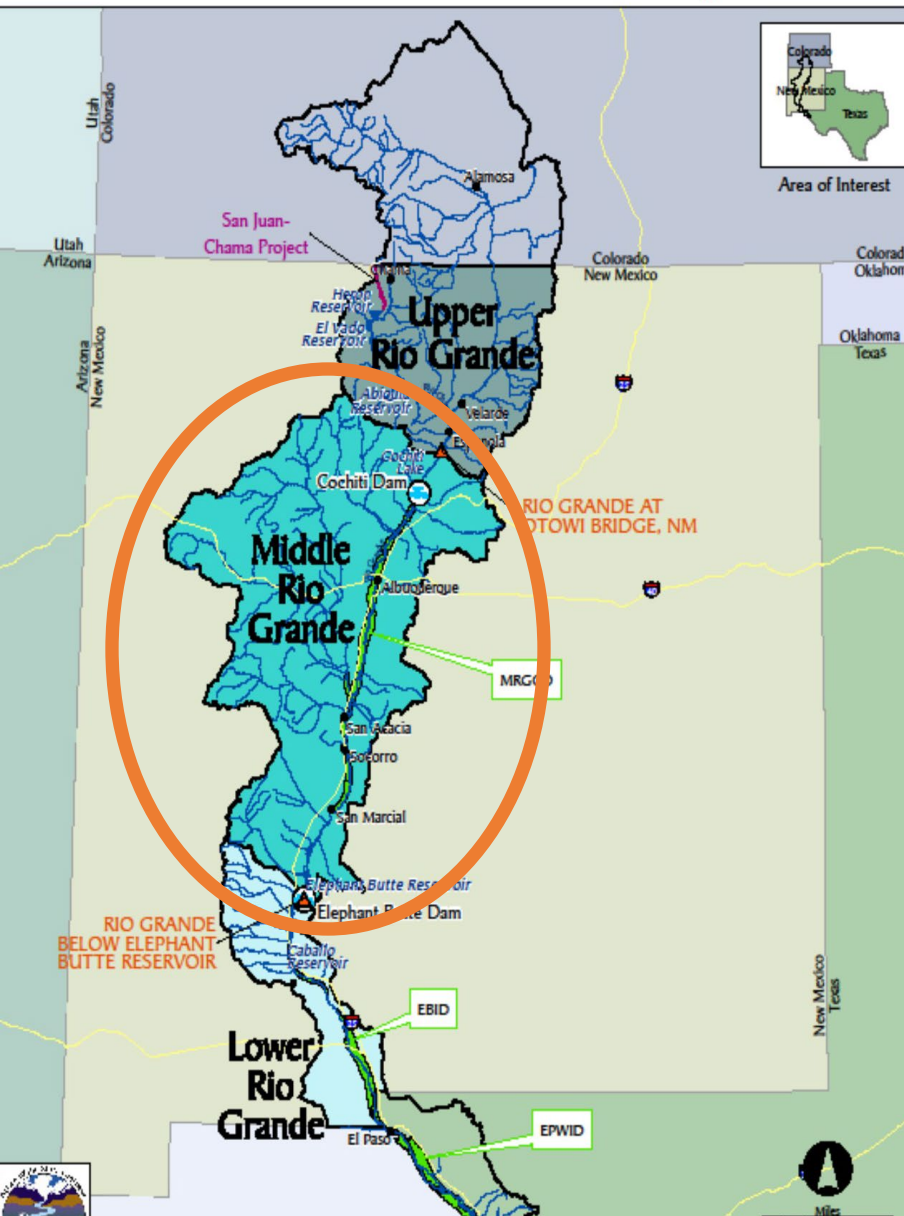
The Rio Grande Compact



Lower Rio Grande

- **Prepare to Comply with the Consent Decree**
 - Hire new staff - build the team
 - Implement Depletions Management
 - Longer-term groundwater leasing program
 - Gather community input towards a purchase program
 - Implement special projects - aquifer recharge, brackish water, water importation
 - Finalize methods for decree accounting
 - *Engage with local stakeholders to develop suite of long-term solutions*

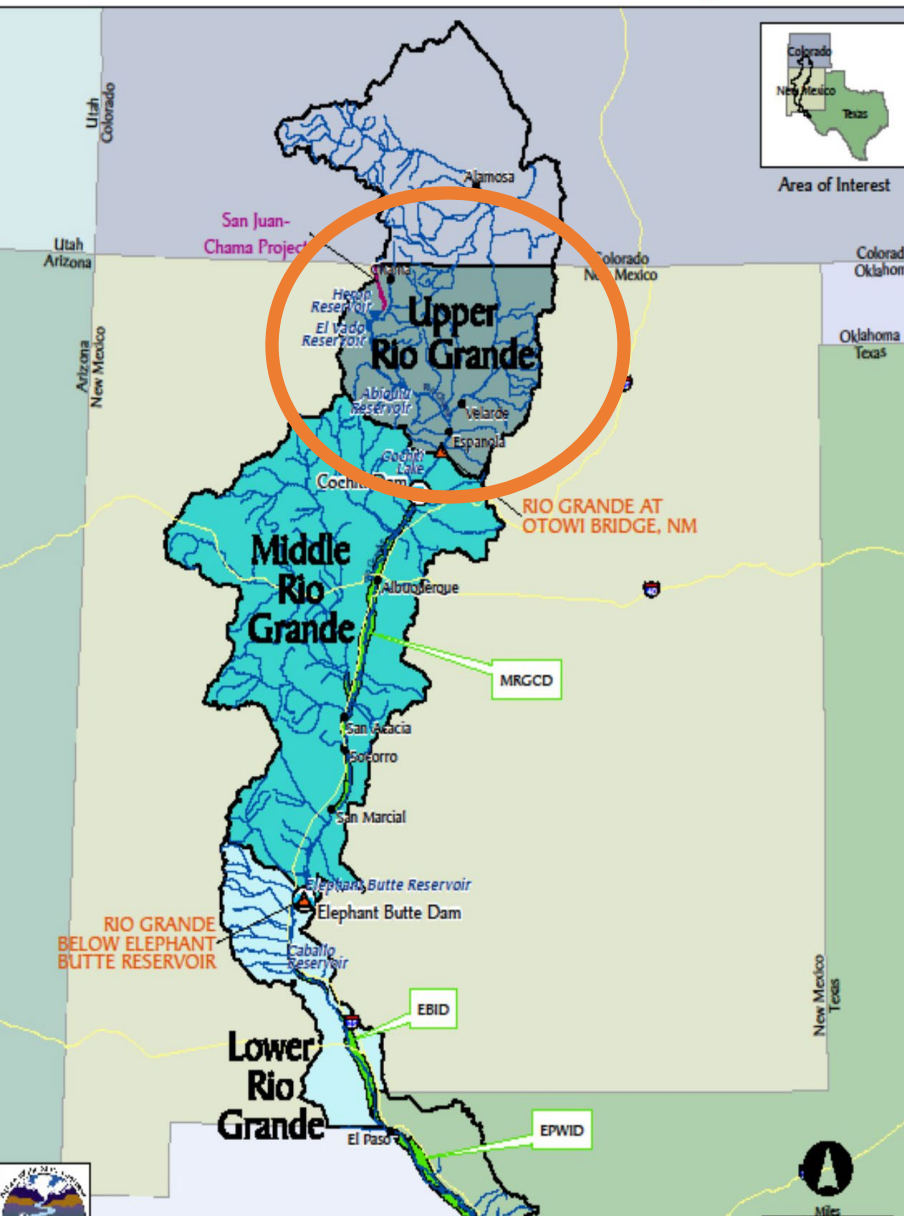
The Rio Grande Compact



Middle Rio Grande

- **Continue to Comply with Compact Requirements and Improve Deliveries**
- Active Channel Management for Multiple Purposes
 - Conveyance and Habitat
 - Critical partnerships with federal agencies: Reclamation and Army Corps of Engineers
- El Vado Dam Repairs
- Ongoing Delta Channel Maintenance and Sediment Plug Mitigation
- Levee Projects
 - Flood Projection and Loss Prevention
- Use All Available Tools
 - Low Flow Conveyance Channel Study Proposal
- Prepare for 6 Middle Rio Grande Pueblos Negotiations

The Rio Grande Compact



Upper Rio Grande

- **Continue to Ensure No Increase in Depletions from 1929 Levels**
 - Support Implementation of Ohkay Owingeh Settlement
 - Locks in Shortage Sharing on the Rio Chama
 - Ongoing implementation of Taos and Aamodt Settlements

*Coordinated State, Federal and Local Efforts in **All Three Areas** of the Basin Are Needed*

Water Security Planning Act

SB337 - Passed unanimously.

Will transform and reinvigorate regional water planning in New Mexico.

Ensures Regional Water Planning:

- Involves Robust Public Involvement – including from Major Water Rights Holders
- Is Grounded in the Best Available Data, Science and Models
- Ties to Implementation through Prioritization of Projects for Funding
- Builds local capacity
- *More to come..*





What's Needed?

OSE/ISC FY25 Budget Requests:

- Program expansions in key areas:
 - Compact Administration
 - Planning Support
 - Indian Water Rights Settlements
- 2023 Special Appropriations
 - Extensions needed

Aquifer Mapping - NM Tech Request

- Need to better understand groundwater resources, including brackish water, statewide

TIME TO WORK TOGETHER

