

The New Mexico Interstate Stream Commission

- Investigate, Protect, Conserve, and Develop the State's Waters and Stream Systems
- Negotiate and Administer Interstate Compacts
- Oversee Development of Regional Water Plans & State-Wide Water Plan
- Federal Issues Management (Endangered Species Act water issues)

Rio Grande Compact

The Rio Grande Compact is a 1938 water sharing agreement between the states of Colorado, New Mexico and Texas.

The Compact divides the Rio Grande within New Mexico into three distinct areas: The Upper, Middle, and Lower Rio Grande.

Upper Rio Grande – Hold depletions of water to those that occurred around 1929.

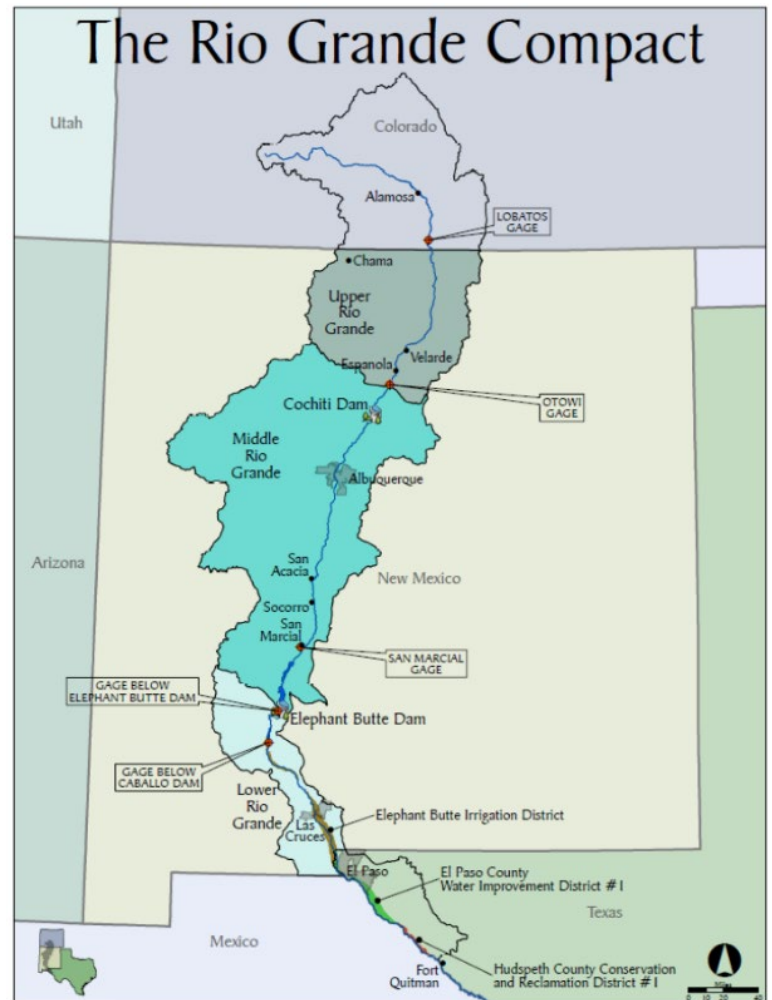
Middle Rio Grande - There is an explicit delivery requirement from New Mexico to Elephant Butte Reservoir (for use by New Mexicans and Texans in the Lower Rio Grande) that is defined by the annual native Rio Grande flows at the Otowi gage.

About 60 percent of the native Rio Grande inflow past Otowi must be delivered to Elephant Butte Reservoir in dry years and over 80 percent in wet years.

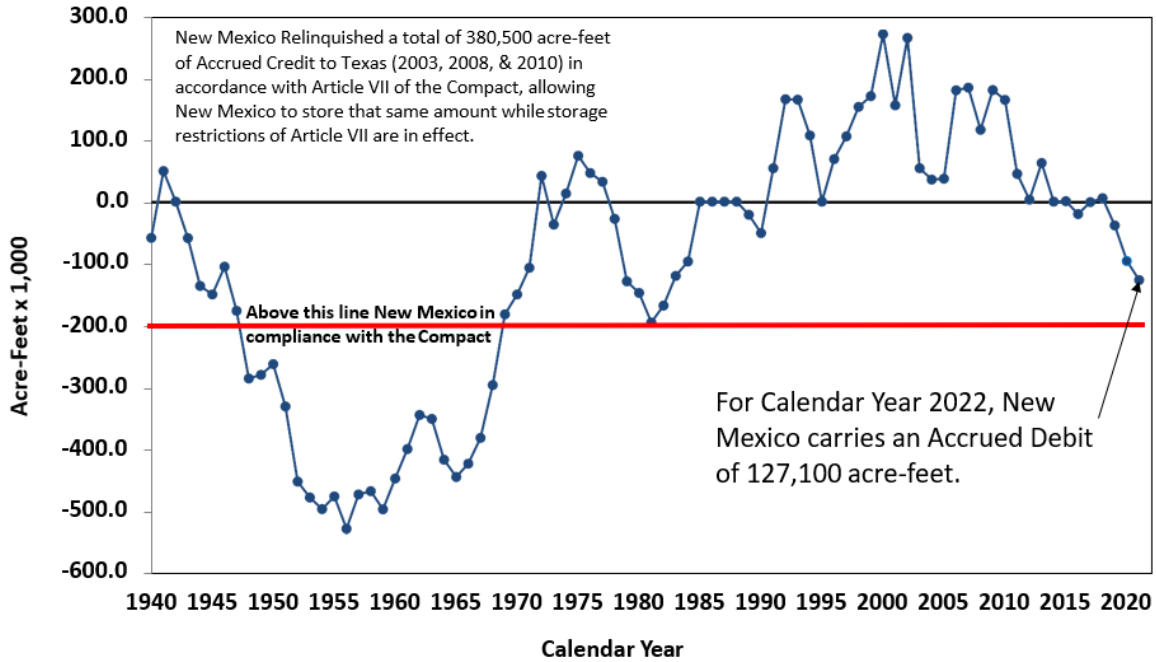
New Mexico's total allocation of inflow at Otowi for consumption in the Middle Rio Grande is capped at 405,000 AFY. However, all of the highly variable tributary inflows below Otowi gage (typically monsoon flows) and Elephant Butte can be used in the MRG.

Lower Rio Grande – Subject of On-Going Interstate Litigation with Texas. New Mexico entitled to 57% of the Rio Grande Project supply.

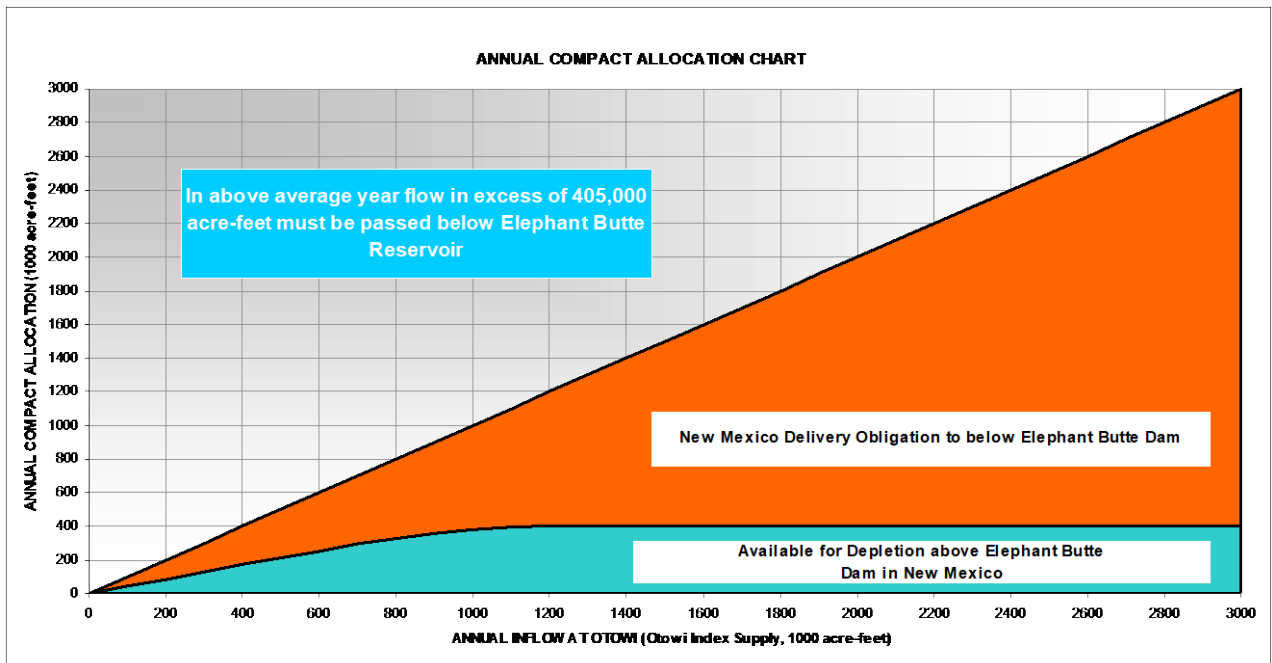
See https://geoinfo.nmt.edu/publications/guides/decisionmakers/2009/dm09_Ch1.pdf for more detailed discussion of the Compact



Rio Grande Compact Cumulative Departures 1940 to 2021



Notes: 1) The Compact Commission has not approved annual accounting since 2011. Values in the chart since that time are those calculated and proposed by the New Mexico Engineer Adviser as described in annual reports to the Compact Commission.

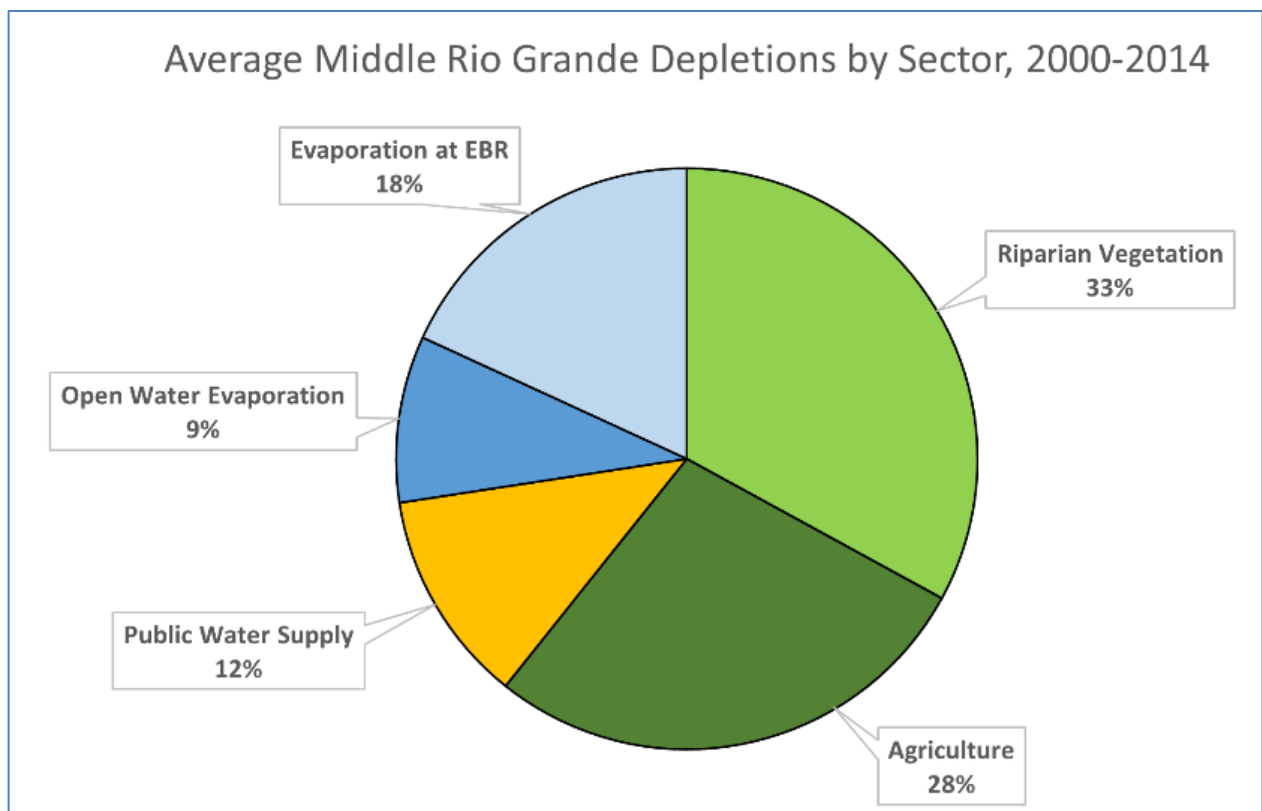


Depletions in the Middle Rio Grande

In the context of the Compact, depletions are defined as irrecoverable evaporation and transpiration losses from riparian and agricultural vegetation, open water, bare channel sediments, and municipal, industrial, and domestic use.

Atmospheric thirst due to increased temperature in the Rio Grande basin increased 135-235 mm (8-15 % increase) from 1980 to 2020, and is expected to continue to increase. (Albano, 2022 <https://journals.ametsoc.org/view/journals/hydr/23/4/JHM-D-21-0163.1.xml>) . Consequently, for the middle Rio Grande:

- Depletions in the MRG have increased over the past 10-20 years
- New Mexico currently has an accrued Compact debit for 2022 of 127,100 AF, meaning depletions have exceeded what is allowed under the Compact
- Non-human depletions are greater than Human depletions (see pie chart)
- To meet shortages, all sectors will need to reduce use in a multi-pronged approach
 - Agriculture
 - Public water supply – domestic wells
 - Riparian vegetation ET – San Acacia Reach of 60 river miles
 - Open water evaporation (including Elephant Butte evaporation)



From Upper Rio Grande Water Operations Model