



June 27, 2023

The Future of Water Supply on the Lower Rio Grande

Prepared By: Scott Sanchez and Cally Carswell, LFC analysts

Drought and Climate Change

- Drought has persisted in the Southwestern U.S. for more than 20 years and has been accompanied by hotter temperatures, which exacerbate arid conditions.
- Average temperatures in New Mexico are expected to increase by 5 to 7 degrees Fahrenheit over the next 50 years, on top of the 2-degree average temperature increase the state has experienced since 1970.
- Flows in the Rio Grande above Elephant Butte are projected to be 25 percent lower on average in 50 years. Hotter temperatures will also cause more water loss from the reservoir through evaporation. A 2022 study led by New Mexico Tech found that a 5 degree increase in daily high temperatures would increase evaporative water loss from Elephant Butte by 30 percent, with an additional 2 feet of water loss relative to today.

Texas v. New Mexico

- In 2013, Texas sued New Mexico for violating the Rio Grande Compact, alleging groundwater pumping decreased flows in the river and deprived Texas of its share of surface flows.
- Last fall, Texas, New Mexico, and Colorado – the three states subject to the compact – reached a proposed settlement agreement, or “consent decree,” which is under consideration by the special master overseeing the case and will have to be approved by the U.S. Supreme Court.
- New Mexico will have 10 years to reduce annual depletions by 18 thousand acre-feet, or about 7 percent of total water use in the basin, to comply with the proposed settlement. The Office of the State Engineer (OSE) believes this can be accomplished through measures including, but not limited to, water infrastructure investments, voluntary conservation programs, stormwater capture, importation, and water reuse.
- Key provisions of the proposed settlement agreement include:
 - New Mexico would continue to be entitled to 57 percent of the water in the Rio Grande below Elephant Butte and Texas to 43 percent;
 - Continued groundwater use would be allowed in both states;

-
- Deliveries to Texas would be determined via an index that would account for both groundwater and surface water depletions and would be measured at the state line;
 - The settlement agreement recognizes New Mexico’s claim that operational changes on the river pursuant to a 2008 agreement between Texas and New Mexico irrigation districts and the U.S. resulted in New Mexico receiving less than the 57 percent of water it’s entitled to. The settlement provides for correcting this imbalance;
 - New Mexico will be obligated to make up for under deliveries past certain thresholds over consecutive years and will have to deliver more water in subsequent years, with the option of transferring the water from Elephant Butte Irrigation District to an irrigation district in Texas;
 - If under deliveries exceed 80 thousand acre-feet in any single calendar year, New Mexico is required to take water management actions to increase deliveries over a six-year period; and
 - New Mexico will not get credit for stormflows over 1,000 cubic feet per second passing the state line.

Status of the Dynamic Fallowing Pilot Program

- OSE entered into its final round of agreements for expending the last of the \$7 million appropriated for the dynamic fallowing pilot program between FY22 and FY24.
- During Phase One (2021) of the program, OSE issued 24 grants to fallow a total of 1,306 acres at an average price of \$660 per acre per year.
- During Phase Two (2022-2023), OSE issued 48 grants to fallow 2,388 acres at an average price of \$1,100 per acre for the 18-month period.
 - Thanks to the extension authorized by the Legislature during the 2023 session, OSE recently offered a six-month extension to farmers, and 45 grants are being issued for a total of about 2,000 acres.
- Since 2021, a total of \$4.3 million has been paid to farmers, with the rest of the funding being used for legal and administrative costs associated with designing and implementing the pilot program.

Relevant 2023 Appropriations

- The Legislature funded several expansions to the recurring operating budgets of the State Engineer and Interstate Stream Commission to enable implementation of the proposed settlement:
 - Water Resource Allocation Program, OSE
 - Targeted pay raises for water resources professionals (\$185 thousand)
 - Lower Rio Grande groundwater depletion reduction program (\$300 thousand, 2 new FTE)
 - Interstate Stream Commission

-
- Lower Rio Grande groundwater depletion reduction program (\$150 thousand, 1 new FTE)
 - Program Support, OSE
 - Capital Projects Management and Grants Unit (\$300 thousand, 3 new FTE)
 - Deputy Secretary, Chief of Staff (\$150 thousand, 1 new FTE)
 - The Legislature also made several major special and capital appropriations to the State Engineer to support finalizing and implementing the settlement, including:
 - \$35 million special appropriation for water supply augmentation and interstate compact litigation
 - \$30 million capital appropriation for Lower Rio Grande aquifer recovery
 - \$10 million capital appropriation for river channel maintenance, habitat restoration, and flood control in the Middle Rio Grande
 - The 2023 special and capital appropriations partially funded major multi-year requests. The State Engineer is likely to request similar sums in future years. Those requests should be accompanied by specific plans and timelines for expending the funds.
 - The State Engineer has identified at least \$150 million in federal dollars that could be leveraged for the Lower Rio Grande through the Infrastructure Investment and Jobs Act and the Inflation Reduction Act. Several major Middle Rio Grande projects are also in development with significant federal leveraging opportunities and the potential to contribute to New Mexico's ability to comply with the settlement.