Middle Rio Grande Conservancy District

August 22, 2023

UPDATE:

2023 Irrigation Season

Presented by
MRGCD Water Management Team

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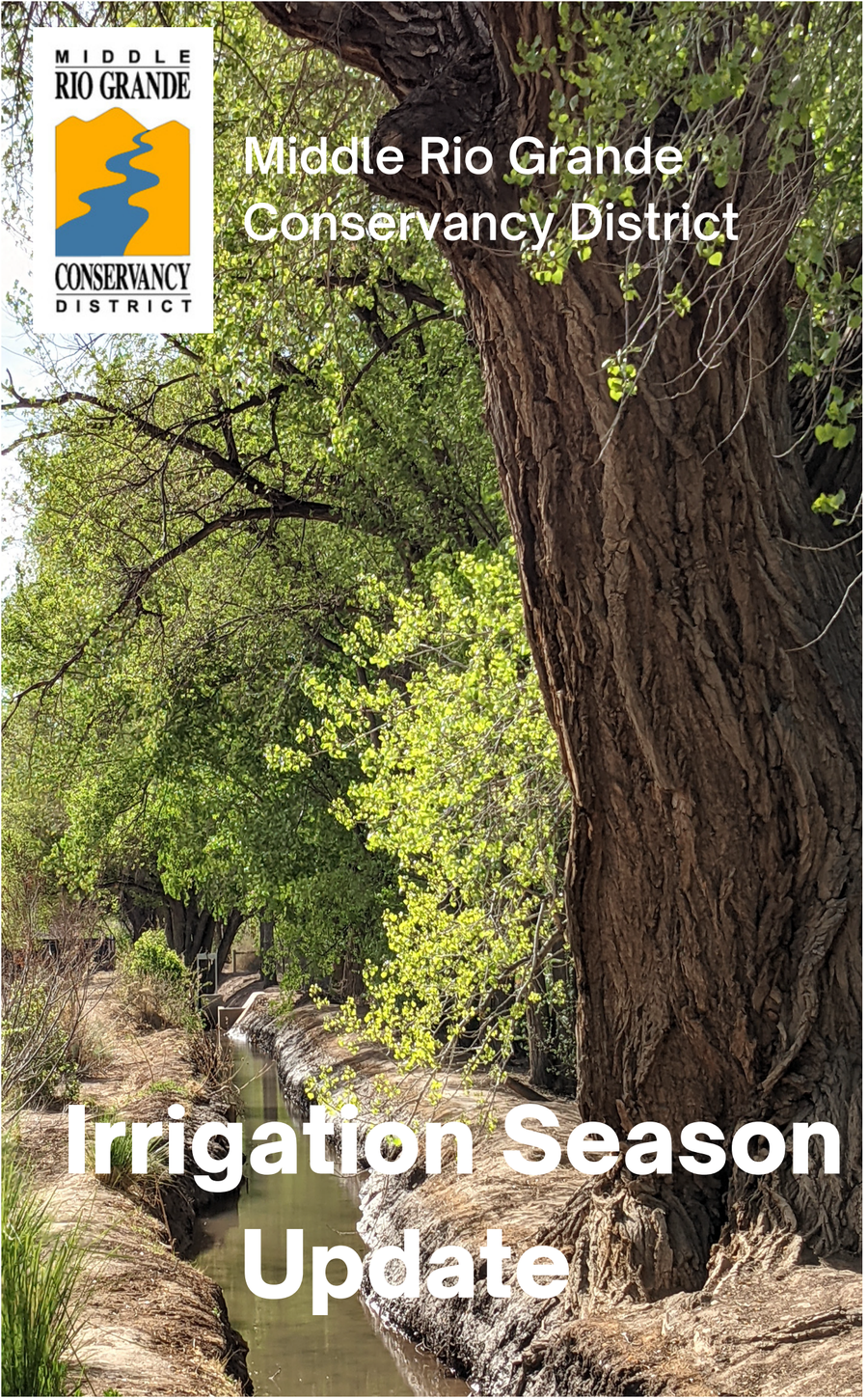

Extreme Temperatures & Lack of Rainfall Contribute to Low River Flow and High Irrigation Demand

Middle Rio Grande water users urged to prepare for extreme water shortage, limited irrigation deliveries

The Middle Rio Grande Conservancy District (MRGCD) has been releasing stored water to supplement the irrigation water supply. Storage releases will run out in the next few days and MRGCD water users should prepare for severe water shortages. The following is a breakdown of the estimated irrigation water supply after storage water runs out.

- Estimated total inflow (*Native* + *San Juan-Chama*) to the Middle Rio Grande Valley: 320 cubic feet per second (cfs)
  - Estimated total *Native* inflow: 240 cfs
  - Estimated *San Juan-Chama* inflow (Bureau of Reclamation Supplemental) Release: 80 cfs
  - Estimated *Native* inflow for Prior and Paramount demand: 200 cfs
  - Estimated *Native* inflow above Prior and Paramount demand: 40cfs

In response to higher-than-normal irrigation demand and lower than expected natural river flow, the MRGCD began releasing *San Juan-Chama* (SJC) water on July 17, earlier and faster than it had anticipated. Once the SJC water is depleted, MRGCD will rely solely on the natural river flow (*Native* water) to continue making irrigation deliveries. The majority of the *Native* water that remains will be designated to Prior and Paramount (P&P) Lands, which have a senior water right. After P&P Lands have been serviced, there will be very little water to distribute to the rest of MRGCD water users throughout its four (4) divisions. Water users above any Prior and Paramount lands may be curtailed.

Diversion dams have been set for low flow operations. It is possible that poor river flow conditions will result in the Albuquerque river reach drying for the second year in a row and for only the second time in the last 40 years. The Bureau of Reclamation will release its supplemental SJC water to be strategically bypassed at certain diversion dams and/or diverted to outfalls. Water from the Environmental Water Leasing Program (EWLP) and other conservation organizations will contribute to strategic outfalls. This water is not available to MRGCD water users.

Each area of the MRGCD is unique and some water will naturally arrive to certain areas through returns and drains. Drain-supplied areas have an inherent advantage over non-drain-supplied areas. Water collected in drains can be diverted into certain canals and supplied to irrigators, but it will not be enough to meet the irrigation demand. There will be an extended wait time to get water. There is no fixed rotation. Days between irrigations will depend on supply and efficiency. Low supply and poor efficiency will increase wait times. Irrigation Systems Operators (ISOs) will provide notice of water availability as water rotates through the system. Water users must be prepared to take water on short notice if rain runoff suddenly boosts the irrigation supply.

The water supply outlook for the remainder of irrigation season is not encouraging and the monsoon rains are uncertain. Farmers should take this into consideration when making farming plans for the remainder of the season. Water users are urged to prepare for extreme water shortage.

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Temperature & Precipitation Outlook

The National Weather Service (NWS) seasonal temperature and precipitation outlook is forecasting warmer and dryer than average conditions through October.

Scan the QR codes below for more information on the weather outlook.

14 Day

90 Day

Figure 1.
Precipitation 90-day Outlook

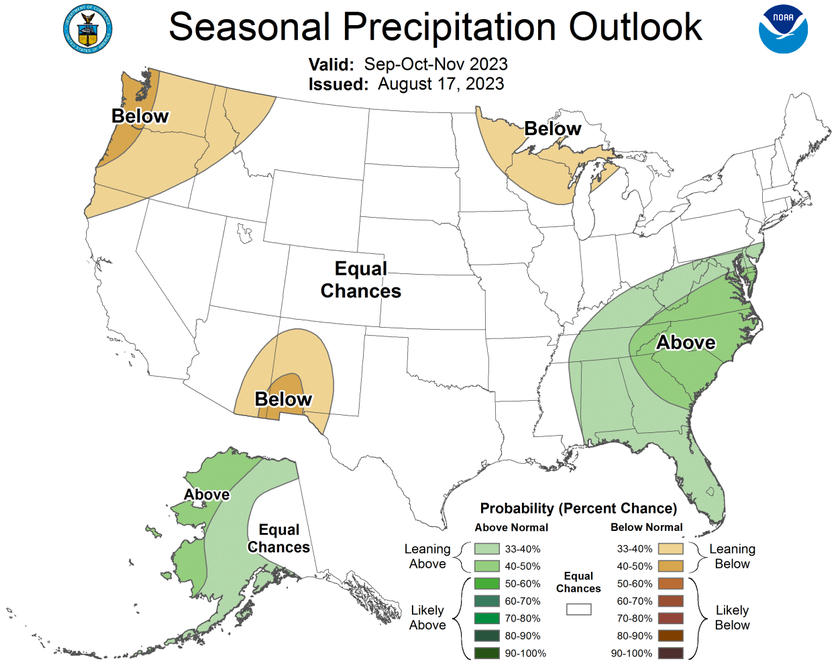
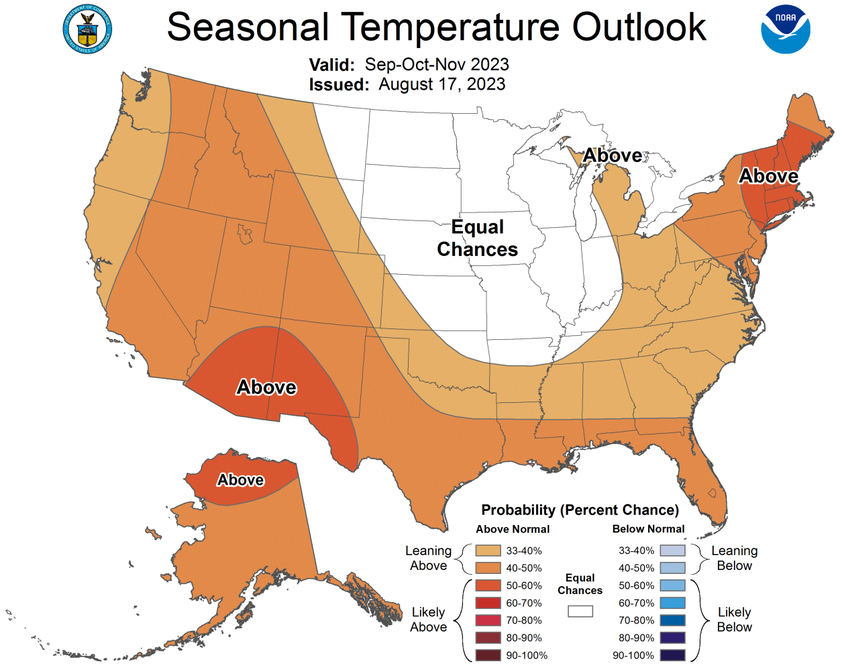


Figure 2.
Temperature 90-day Outlook



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Native Rio Grande Water

Native Rio Grande water is water that originates in the Rio Grande Basin and is subject the rules of the Rio Grande Compact. Certain Pueblo lands have been designated by US Congress as having “Prior and Paramount” water rights. During times of shortage, these lands will receive Native water preferentially over all other MRGCD lands.

The Rio Grande Basin experienced an abundance of water during this year's spring runoff thanks to late winter and early spring snowstorms that pushed mountain snowpack to above average levels. During this above average spring runoff, the US Army Corps of Engineers (Corps) was forced to store native Rio Grande water in its reservoirs to reduce the risk of flooding communities downstream of Abiquiu and Cochiti Dams. The Corps has about 120,000 acre-feet (af) of native Rio Grande water in storage that will have to remain in upstream storage until the end of irrigation season, when it will be released and delivered to Elephant Butte.

Flows into the middle Rio Grande have decreased significantly since July 1st. The Rio Grande at Otowi gage upstream of Cochiti reservoir is measuring about 500 cubic feet per second. About half of the water measured at Otowi is from the natural flow of the river and the other half is from San Juan-Chama (SJC) storage releases from Abiquiu Reservoir.

Figure 3.

Hydrograph of the La Puente gage on the Rio Chama. La Puente measures native Rio Grande flows into the Rio Chama river upstream of the San Juan Chama Project. Native inflows to the Chama have decreased significatnly since the begining ofJuly.

Scan the code for water data

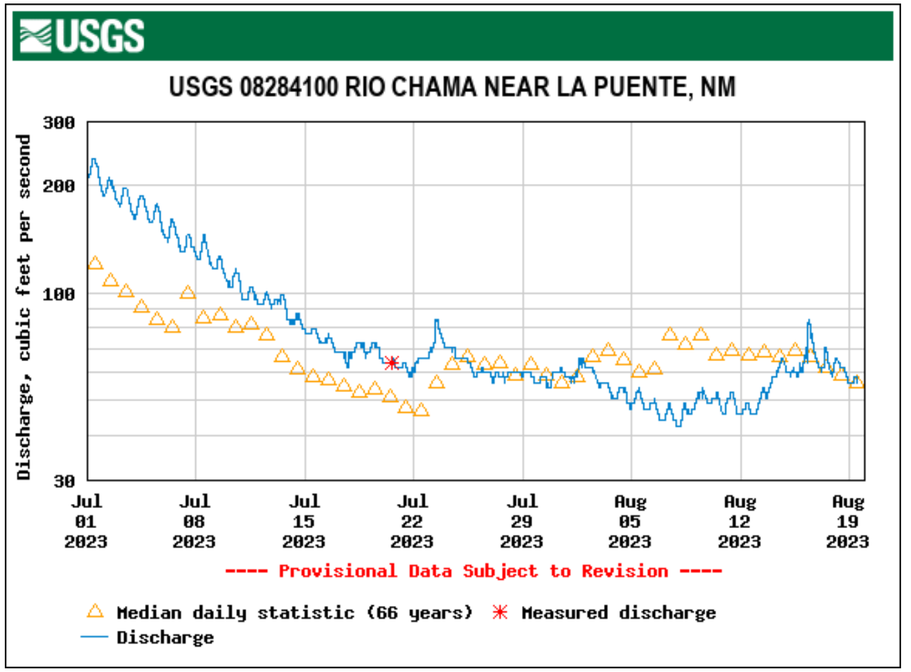
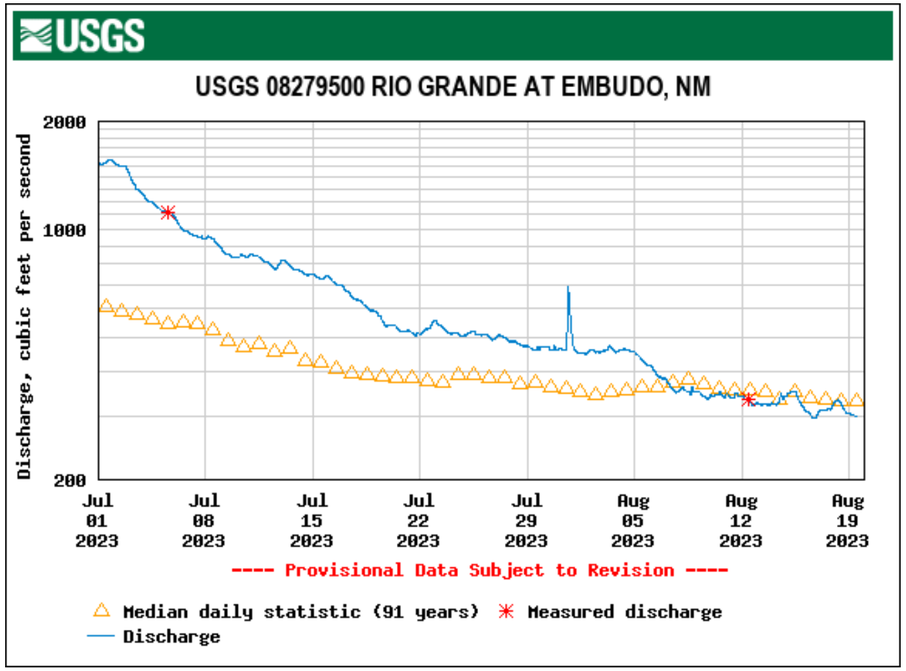


Figure 4.

Hydrograph of the Embudo gage on the Rio Grande upstream of the confluence with the Rio Chama. Embudo measures native Rio Grande inflows on the main stem of the Rio Grande. Native inflows at the Embudo gage have decreased significantly since the beginning of July.

Scan the code for water data



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San Juan-Chama Water

San Juan-Chama (SJC) water is imported to the Rio Grande Basin from the San Juan Basin through the Bureau of Reclamations' San Juan-Chama project. Water produced by this project is available to many different water users. SJC water is not subject to the rules of the Rio Grande Compact.

The MRGCD receives an annual allocation of SJC water. This year it received a full allocation of 20, 900 Acre-feet (AF). This was the only storage water available to the MRGCD for the 2023 irrigation season. MRGCD began releasing SJC water from storage on July 17th when the natural river flow was not enough to meet the irrigation demand. Due to hot and dry conditions the MRGCD used the SJC storage water earlier and faster than it anticipated.

The MRGCD will be out of SJC water soon. The Bureau of Reclamation will continue releasing SJC supplemental water to provide in stream flows. This water is not available to MRGCD water users for irrigation purposes.

Figure 5.

Schematic of San Juan Chama Project.

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The Rio Grande Compact

The Rio Grande Compact is a water sharing agreement between Colorado, New Mexico, Texas, and Mexico to equitably share waters of the Rio Grande.

New Mexico's Rio Grande Compact accrued debt as of January 1, 2023 is 93,000 acre-feet, which is down from 2022 debt of 127,000 acre-feet. The reduction in Compact is largely due to New Mexico meeting its 2022 delivery obligations and a settlement between New Mexico and Texas that credited New Mexico with 32,500 acre-feet of water.

Reducing New Mexico's water debt is important so that once construction work on El Vado Dam is complete the MRGCD will have a better chance of storing a large volume of Native Rio Grande water again which essential to providing a reliable supply of irrigation water for the entire growing season.

MRGCD water users benefited from an extraordinary spring runoff. However, the river channel over-banking last spring runoff could hinder New Mexico's ability to meet its Compact delivery obligations for 2023.

Figure 6.

Chart demonstrating annual over or under delivery to the Rio Compact.

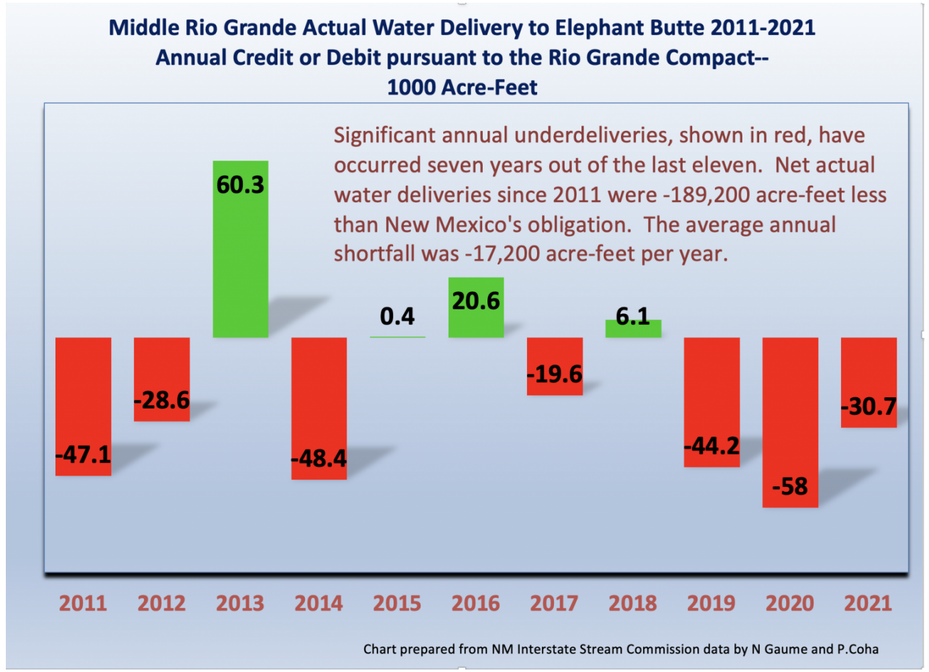

Figure 7.

Chart demonstrating New Mexico annual Compact allocation.