



Middle Rio Grande Conservancy District

September 15, 2023

UPDATE:

2023 Irrigation Season

Presented by
MRGCD Water Management Team

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Middle Rio Grande Conservancy District

Irrigation Season Update

MRGCD Exhausts San Juan Chama Water Supply | ABQ River Reach to Dry for Second Time in 40 Years

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

The Middle Rio Grande Conservancy District (MRGCD) is out of stored water to supplement the irrigation water supply and is now dependent on the natural flow of the Rio Grande.

The following is a breakdown of the current estimated inflow to the Middle Rio Grande Valley:

- Total inflow Middle Rio Grande Valley (*Native* + *San Juan-Chama*)-----375 cubic feet per second (cfs)
 - Total *Native* inflow-----285 cfs
 - *San Juan-Chama* inflow (Non Irrigation)-----90 cfs
 - *Native* inflow for Prior and Paramount demand-----158 cfs
 - *Native* inflow above Prior and Paramount demand-----127 cfs

In mid-July, the MRGCD began releasing from its allocation of water from the San Juan-Chama Project (SJCP). These releases supplemented irrigation deliveries through the middle valley through August. MRGCD’s SJCP water has now been depleted, and the natural flow (*Native* water) of the Rio Grande is well below what is needed to meet the irrigation demand of non-Pueblo lands. The remaining water will be first delivered to the six middle Rio Grande Pueblo's Prior and Paramount Lands. MRGCD will do its best to equitably deliver any water in excess of the Prior and Paramount irrigation demand to non-Pueblo lands. In early September water supply was close the amount of water needed to meet the irrigation demand of the Prior and Paramount lands and water deliveries to all other lands above Isleta Pueblo were suspended. Recent inflows from rain events have boosted irrigation supply well above what is needed for Prior and Paramount lands and deliveries to some lands north of Isleta Pueblo resumed. If available supply falls close to the amount needed to meet Prior and Paramount demand, deliveries to non-Pueblo lands north of Isleta Pueblo will once again be suspended.

Each irrigation zone 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 water users, but it will not be enough to meet the irrigation demand. 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.

There are some sections of the Middle Rio Grande Valley that do run dry most years, however last year was the first time the river reach ran dry in Albuquerque since the 1980s. For the second time in 40 years, there is potential for the Rio Grande to run dry in Albuquerque. MRGCD water users have been given prior notice to anticipate extreme water shortage and irrigation delivery limitations.

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 and exercise caution.



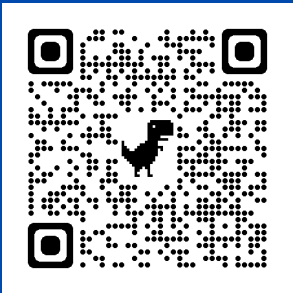
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Temperature & Precipitation Outlook

The National Weather Service (NWS) seasonal temperature and precipitation outlook is forecasting warmer and dryer than average conditions through October. The short-term forecast suggest limited chances for storms through this week followed by a warmer and dryer conditions.

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

14 Day



90 Day

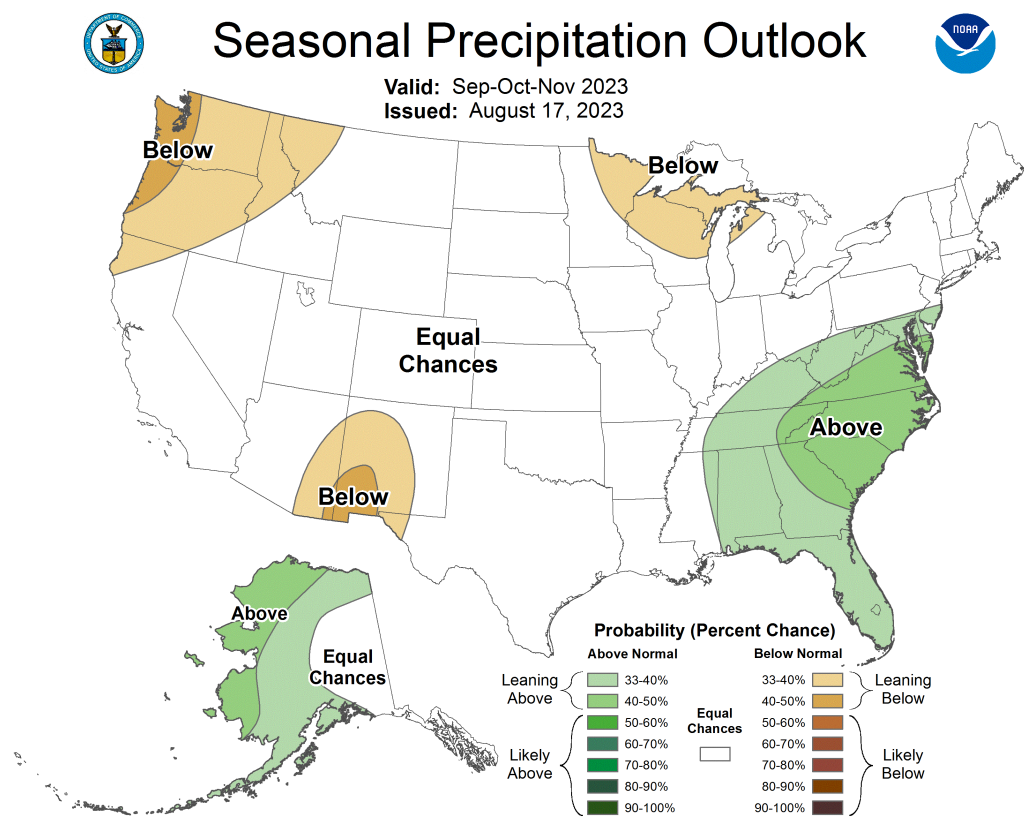


Figure 1. Precipitation
90-day Outlook

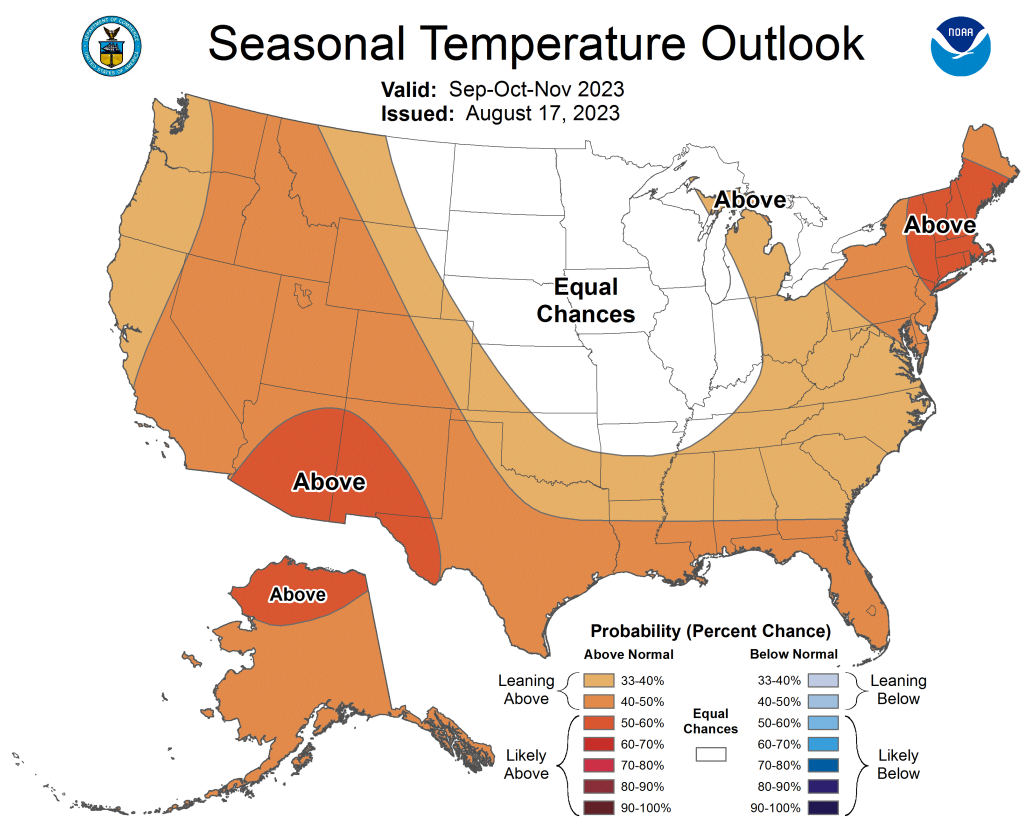


Figure 2. Temperature
90-day Outlook

Location	Maximum Temperature							Probability of Precipitation						
	Fri 09/15	Sat 09/16	Sun 09/17	Mon 09/18	Tue 09/19	Wed 09/20	Thu 09/21	Fri 09/15	Sat 09/16	Sun 09/17	Mon 09/18	Tue 09/19	Wed 09/20	Thu 09/21
Albuquerque	78	78	82	84	84	85	85	20	10	10	10	0	10	0
Santa Fe	75	75	77	80	79	80	80	40	10	0	10	0	10	10
Farmington	75	79	82	82	82	82	80	40	0	0	0	0	10	0
Gallup	75	79	79	80	79	79	79	30	0	10	20	0	10	0
Grants	72	74	79	80	79	80	79	40	10	30	40	10	10	10
Clayton	69	74	80	83	84	83	83	60	20	0	0	0	0	10
Raton	66	72	77	80	79	79	80	80	30	0	0	10	10	0
Las Vegas	69	69	76	79	77	78	78	70	30	10	10	10	10	10
Moriarty	76	73	78	80	81	81	81	30	20	20	20	10	10	10
Tucumcari	76	76	81	87	87	86	87	60	20	0	0	0	0	10
Clovis	76	76	79	85	87	87	87	70	30	0	10	0	10	10
Roswell	88	83	85	90	94	94	95	70	30	20	10	0	10	10
Socorro	83	81	84	86	88	88	89	10	20	30	20	10	10	0
Chama	60	67	72	72	71	73	71	80	20	10	20	30	10	10
Taos	67	70	74	76	74	76	75	60	20	0	0	10	10	10
Angel Fire	62	65	68	69	68	69	68	70	40	0	10	20	10	10
Los Alamos	67	69	71	75	74	75	75	60	30	20	30	20	10	10
Ruidoso	74	67	71	75	76	78	77	30	50	50	50	30	10	20
Quemado	74	77	77	77	77	78	78	10	20	60	50	10	10	10

Figure 3. Temperature and Precipitation Table (source National Weather Service)



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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.

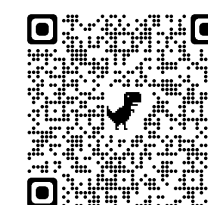
The Rio Grande Basin experienced an abundance of water during this year's spring runoff thanks to late winter and early spring snowstorms that pushed mountain snowpack to above average levels. During this above average spring runoff, the US Army Corps of Engineers (Corps) was forced to store native Rio 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.

Native flows into the middle Rio Grande have decreased significantly since July 1st. Most of the Native flow on the Rio Chama at La Puente is being depleted by water users on the Rio Chama. Most of the Native water entering the middle Rio Grande is from the main-stem of the Rio Grande as represented by the Embudo gaging station.

Figure 4.

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 significantly since the beginning of July.



Scan the code for water data

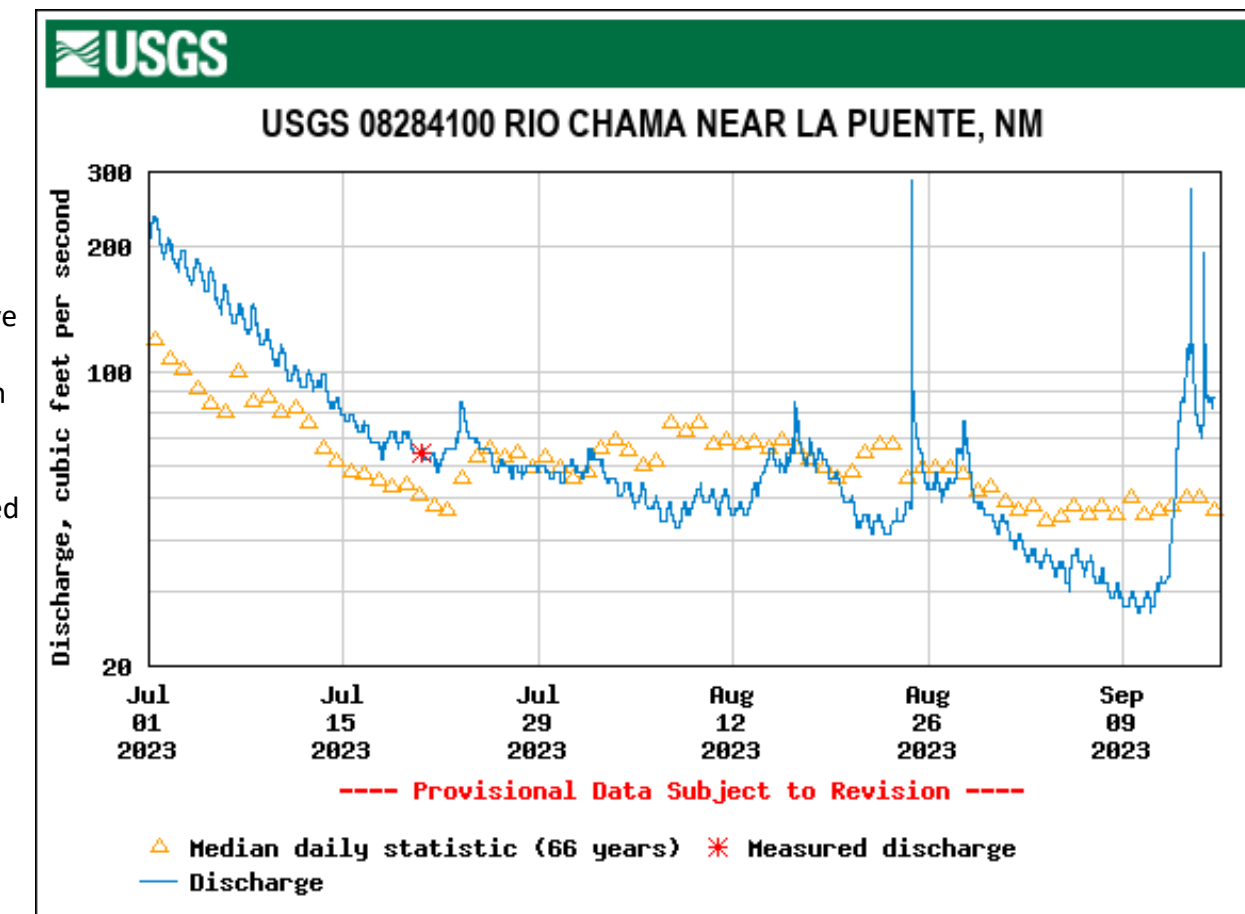


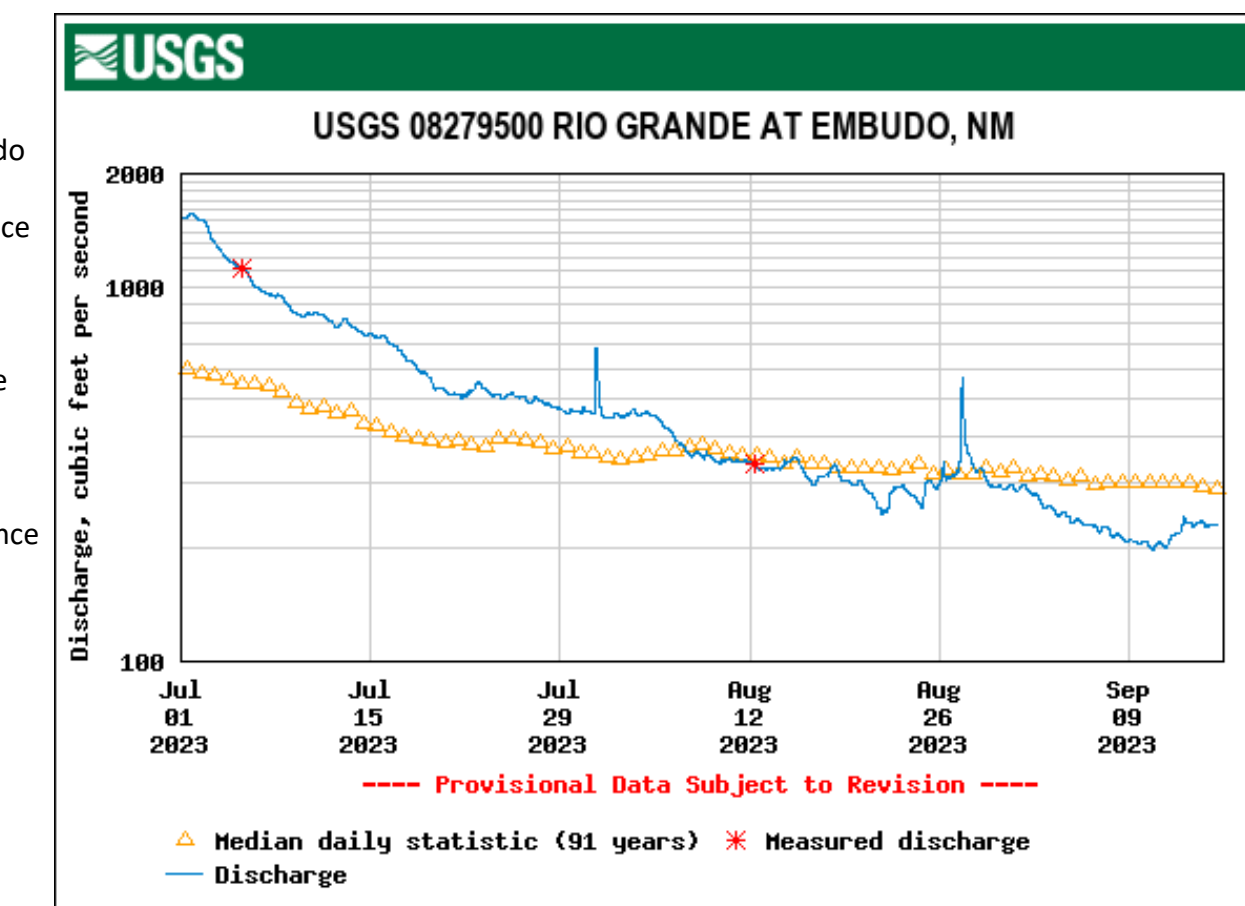
Figure 5.

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 is out of SJC water. Of the total inflow to the Middle Rio Grande Valley 90 cfs of SJC water is being released by the Bureau of Reclamation for in-stream flows for endangered species. This water is not available to MRGCD water users.

Figure 6. 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 is essential to providing a reliable supply of irrigation water for the entire growing season.

It is difficult to estimate where the debt will stand at the end of the year. 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 7.

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

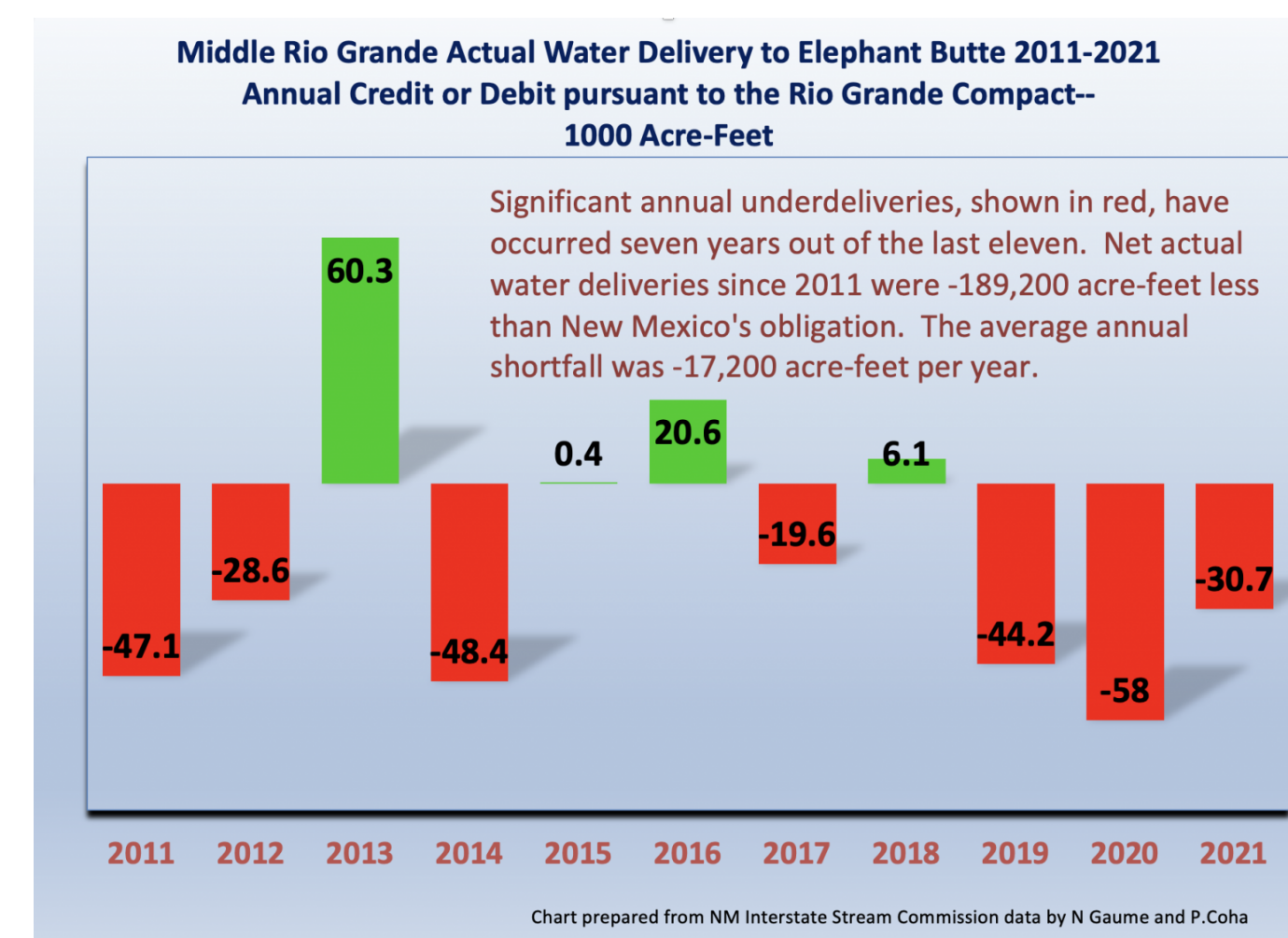


Figure 8.

Chart demonstrating New Mexico annual Compact allocation.

