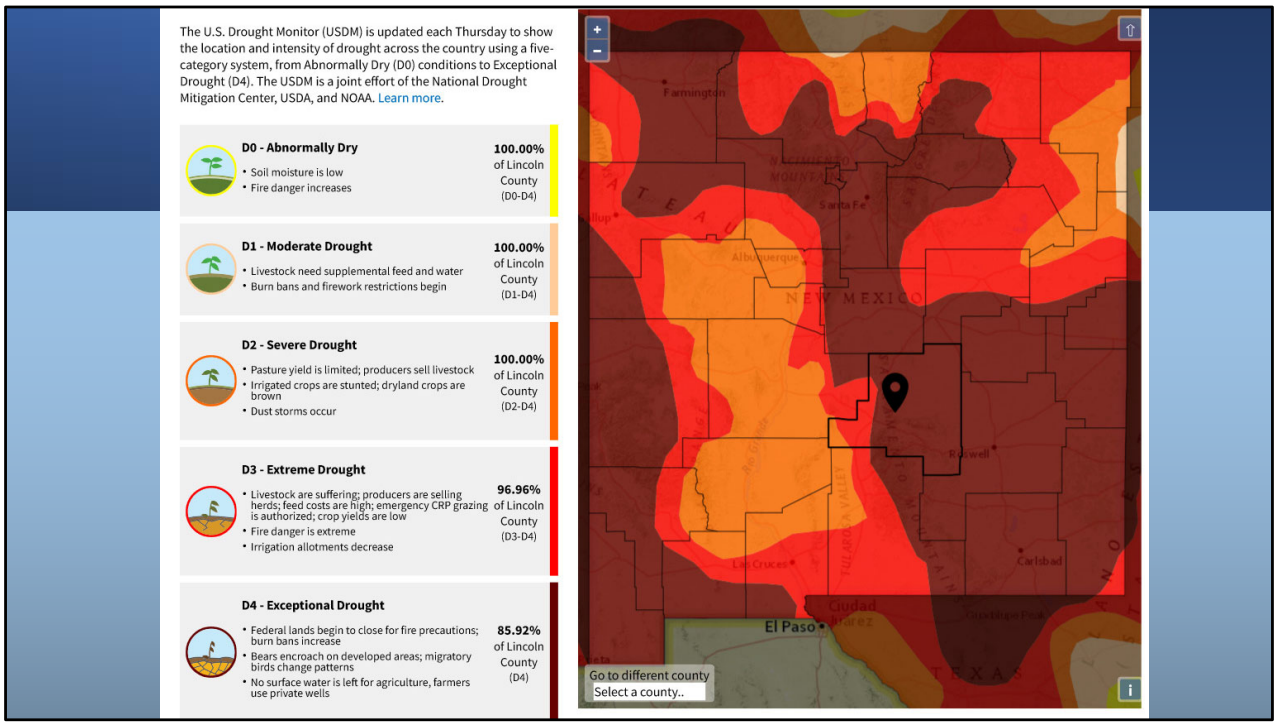
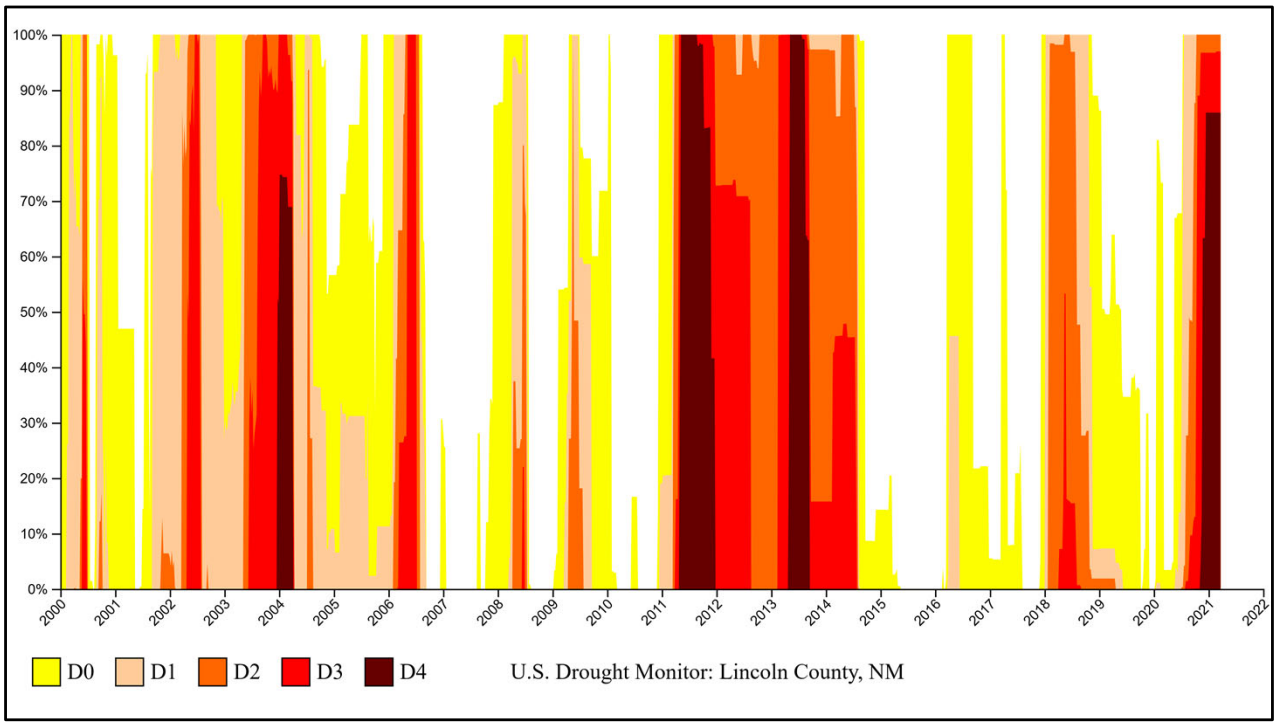
Drought in 2021

Eric Boyda
Water Resource Director



Much of the state is in Exception Drought, especially Lincoln County.



Current drought is shaping up to be similar to 2012 drought.

Current Conditions for Lincoln County

Precipitation (30-Day % of Normal)

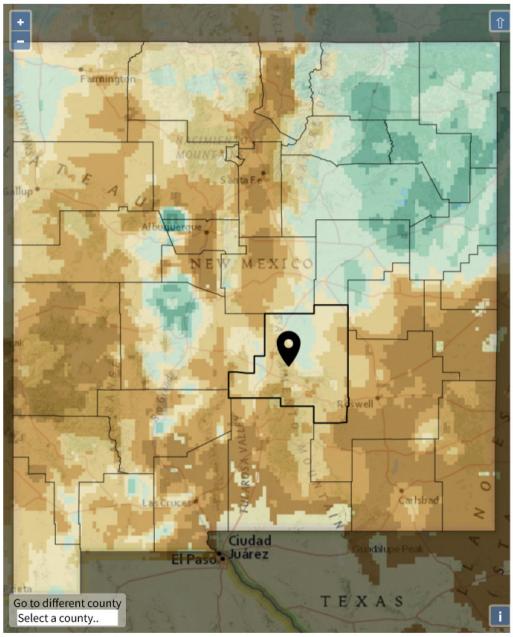
The 30-day percent of normal precipitation shows the difference of the last 30 days from the usual conditions for the same time period averaged since 1980.

This map uses the gridMET and NLDAS precipitation datasets, which are delayed from the current day by 2 to 3 days to allow for data collection and quality control.

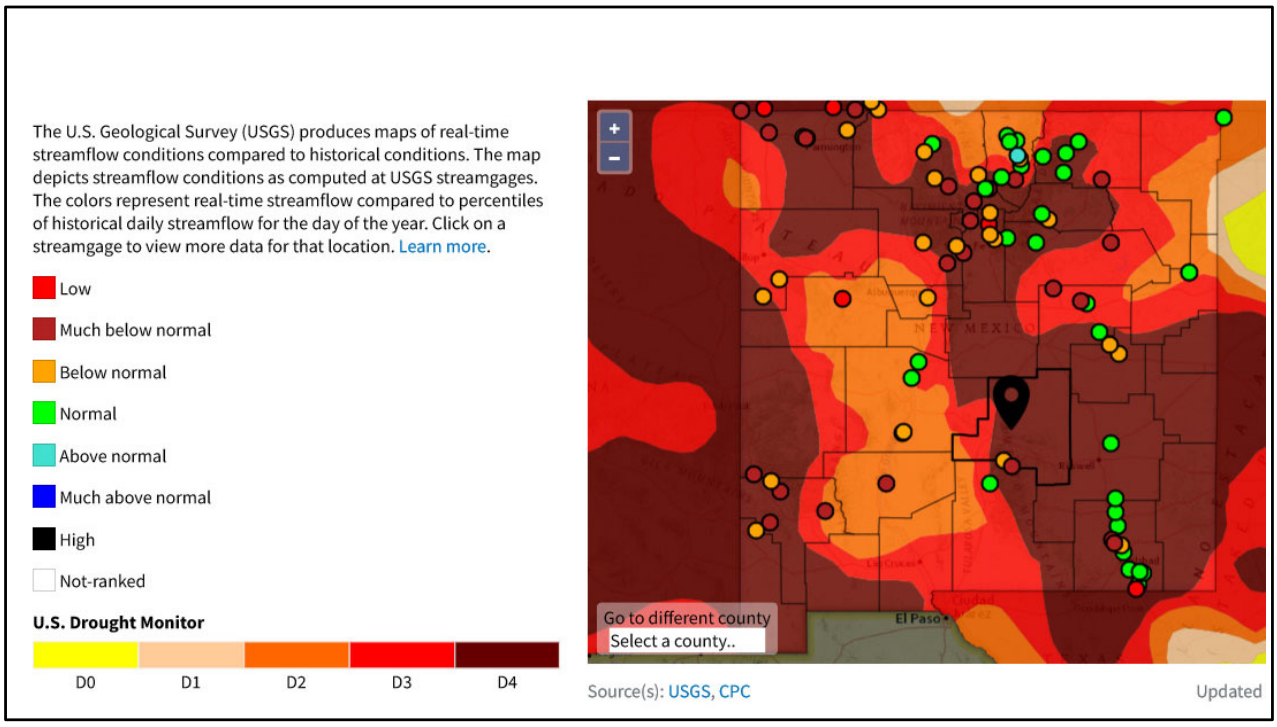
Percent of Normal Precipitation (%)

0% - 25%	25% - 50%	50% - 75%	75% - 100%
100% - 150%	150% - 200%	200% - 300%	≥ 300%

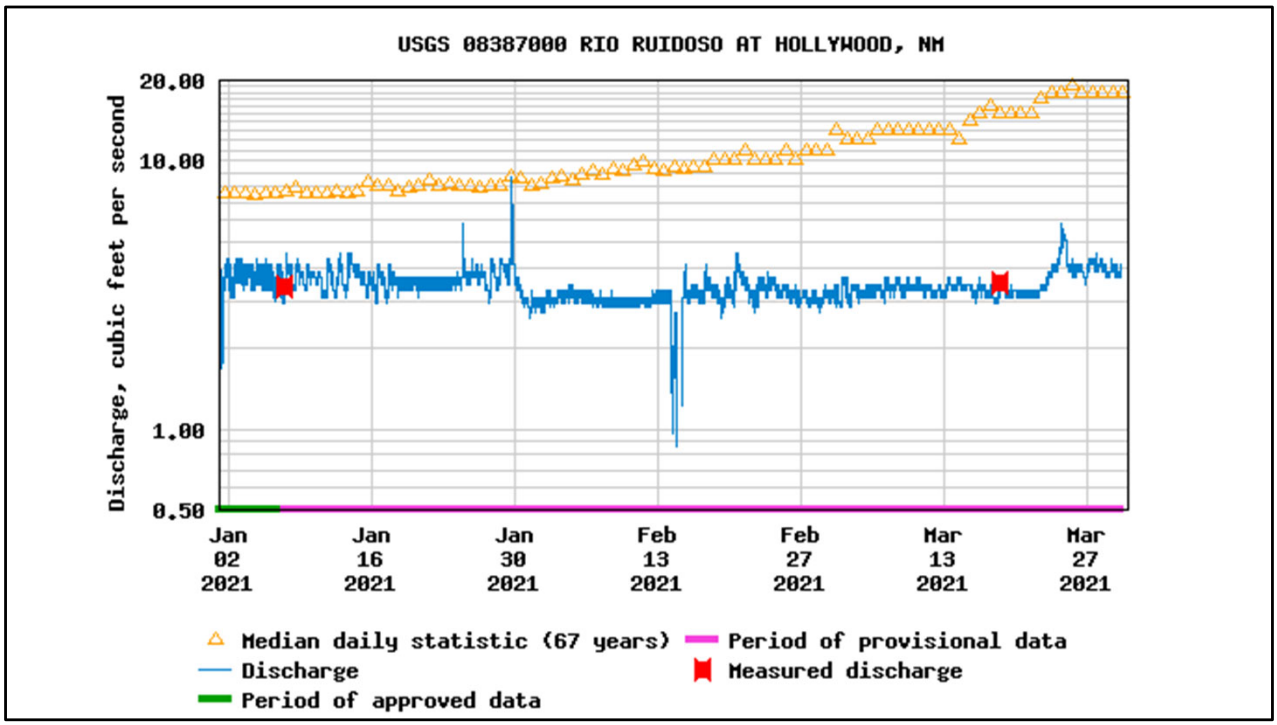
* Currently, data is only available for the contiguous U.S.



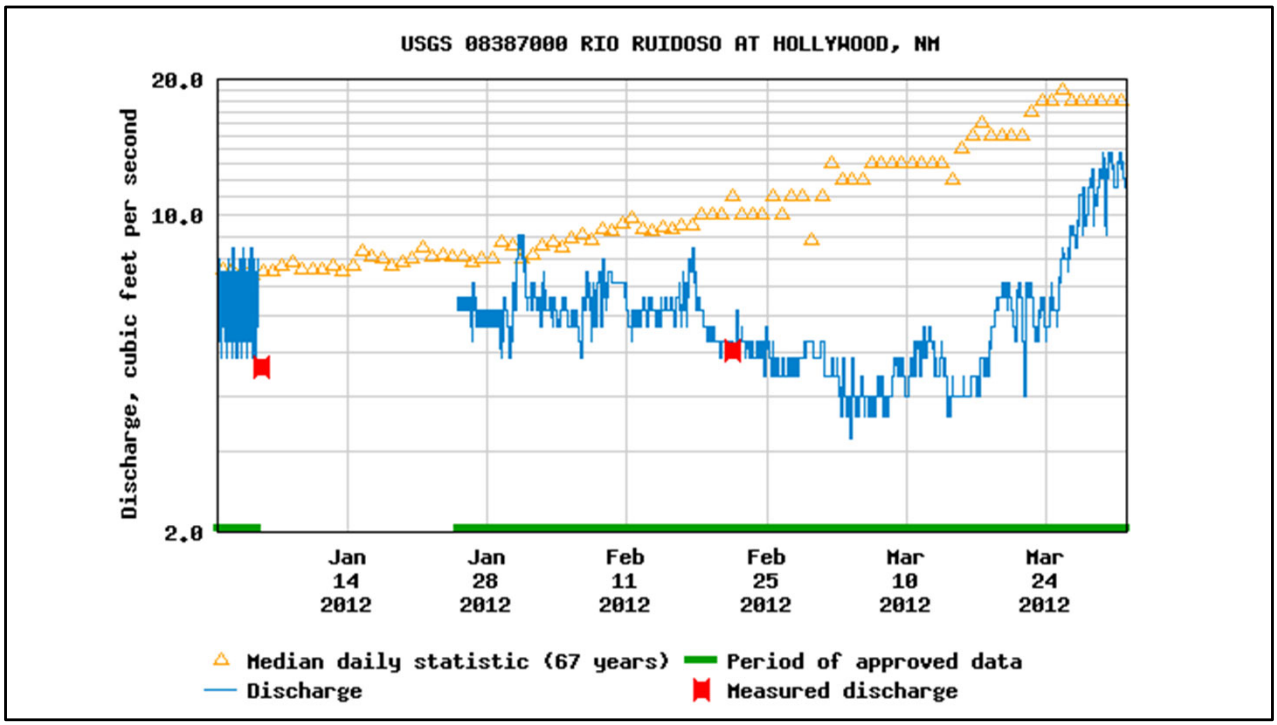
Despite some recent precipitation, precipitation is still down from average.



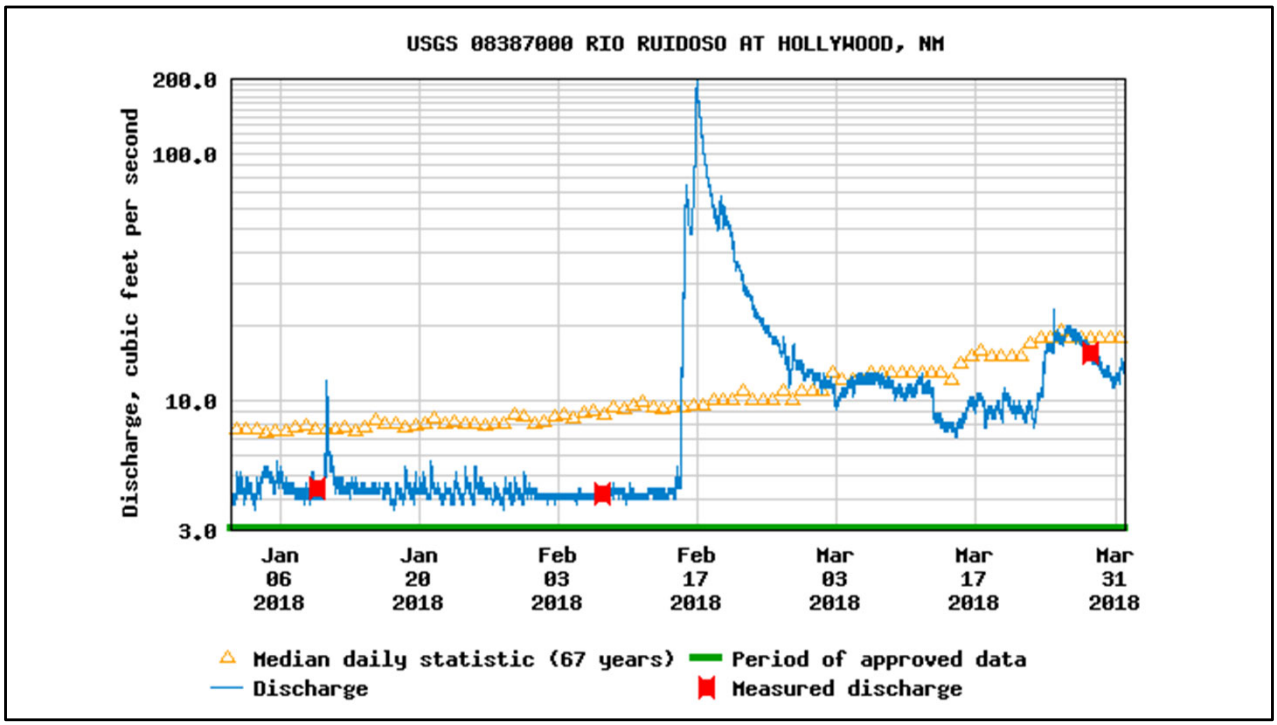
Drought has impacted flows on the Rio Ruidoso and Eagle Creek



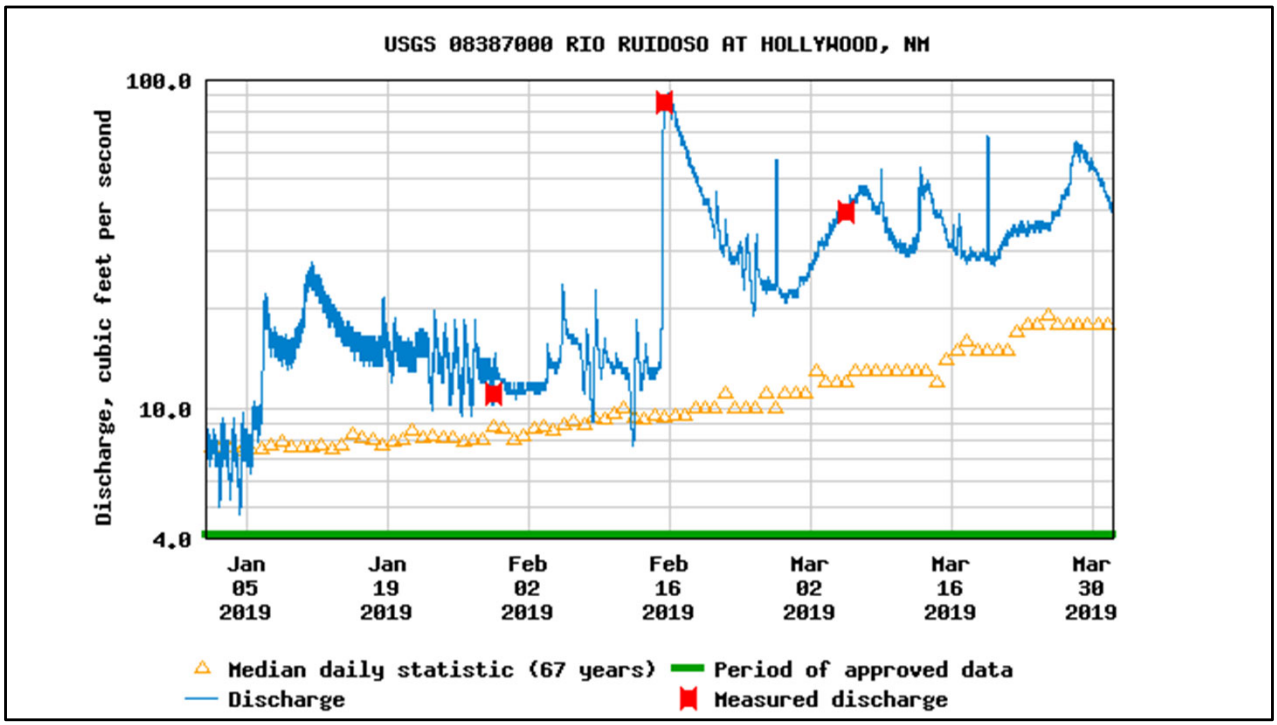
Current flows at Hollywood Gage are well below the median daily discharge

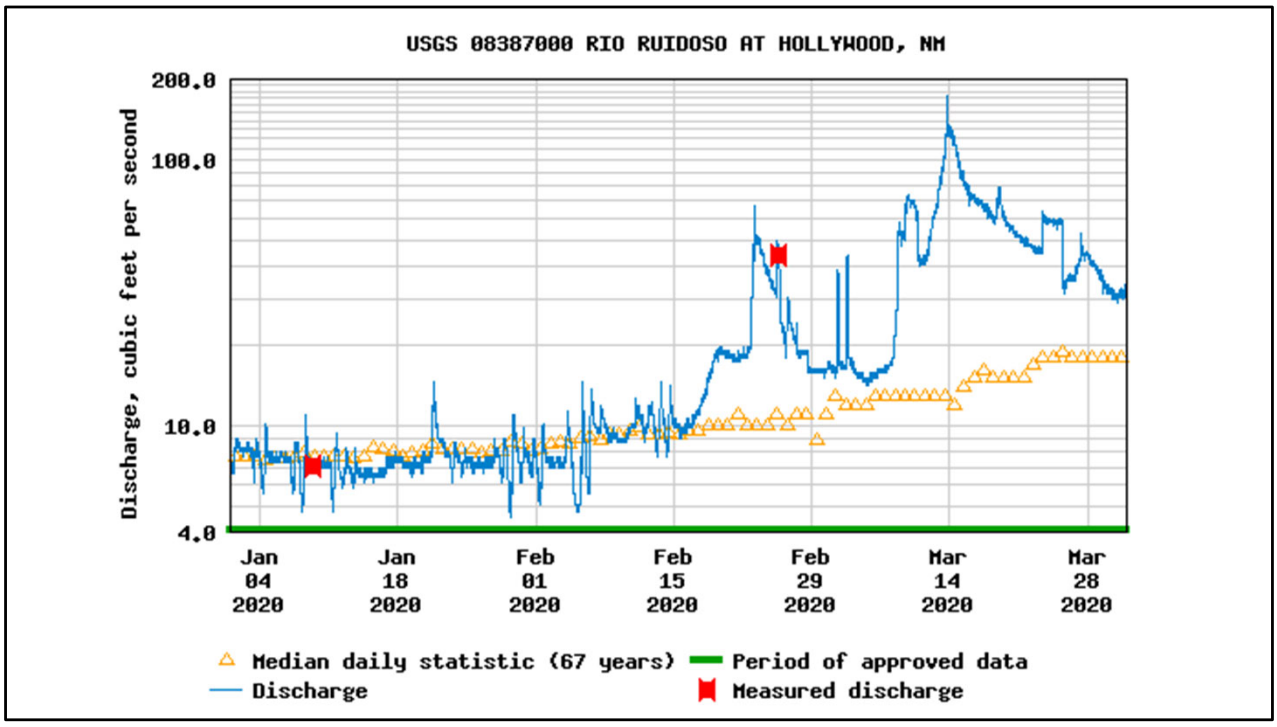


2021 is similar to 2012, however, in 2012 there was some spring runoff from snowmelt



In 2018-2020 there was large storm events and snow to help with winter/spring diversions


USGS 08387000 RIO RUIDOSO AT HOLLYWOOD, NM
Discharge, cubic feet per second
100.0
10.0
4.0
Jan 05 2019
Jan 19 2019
Feb 02 2019
Feb 16 2019
Mar 02 2019
Mar 16 2019
Mar 30 2019
Median daily statistic (67 years)
Period of approved data
Discharge
Measured discharge


USGS 08387000 RIO RUIDOSO AT HOLLYWOOD, NM
Discharge, cubic feet per second
200.0
100.0
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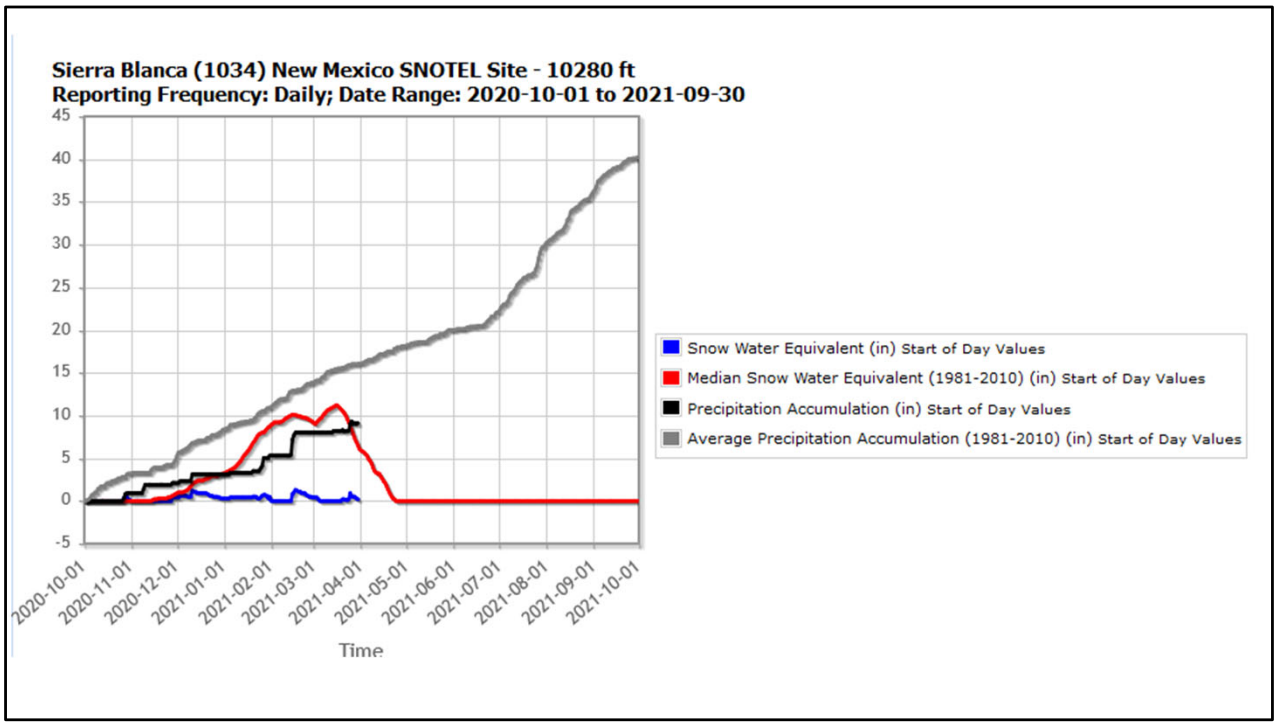
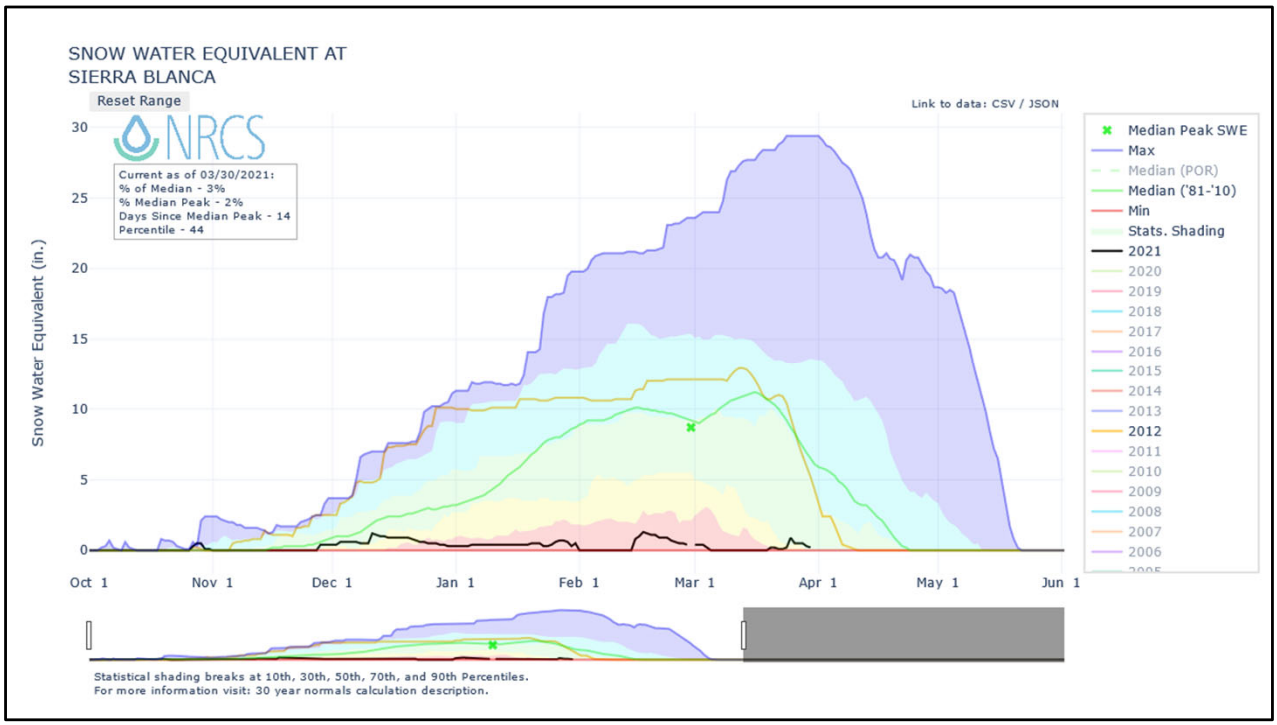
Jan 04 2020
Jan 18 2020
Feb 01 2020
Feb 15 2020
Feb 29 2020
Mar 14 2020
Mar 28 2020
Median daily statistic (67 years)
Period of approved data
Discharge
Measured discharge

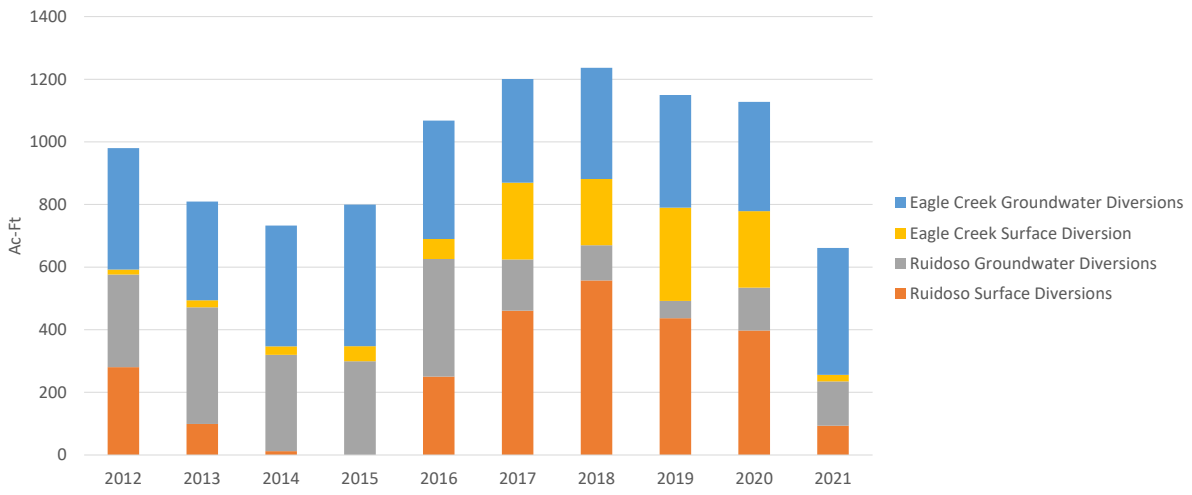


Snowpack for this year has been a small fraction of the median snowpack water equivalent.



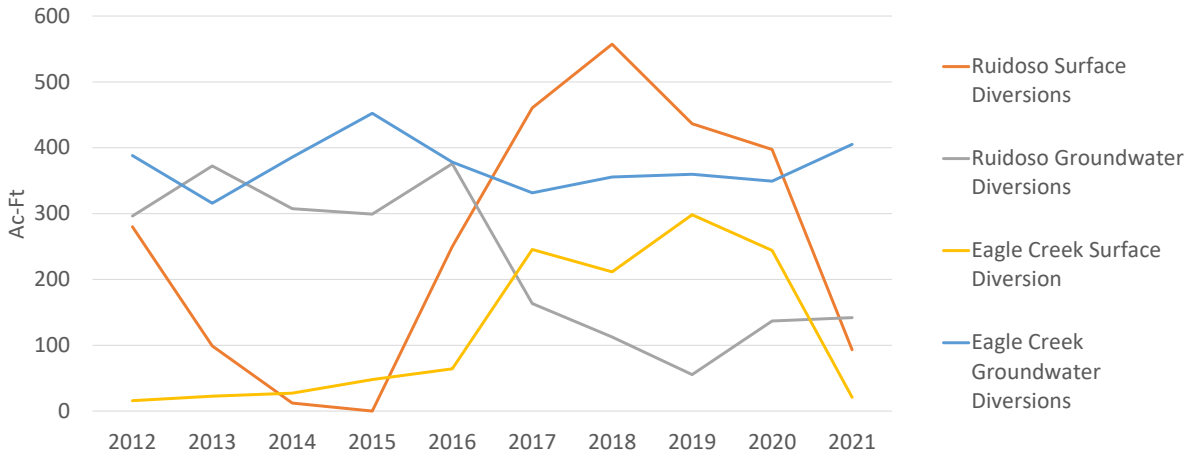
In late March, snowpack was approximately 2% of the median snowpack

Total Diversions (November through March)

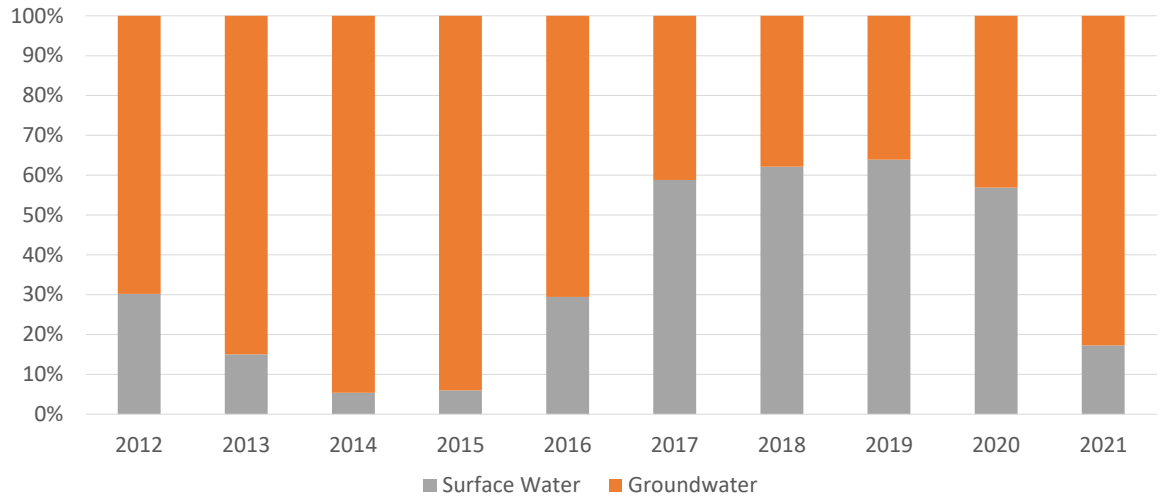


Diversions are substantially down this year compared to other years because of the lack of surface water from the Rio Ruidoso to divert to Grindstone Reservoir and from Eagle Creek to the Alto Crest Water Treatment Plant.

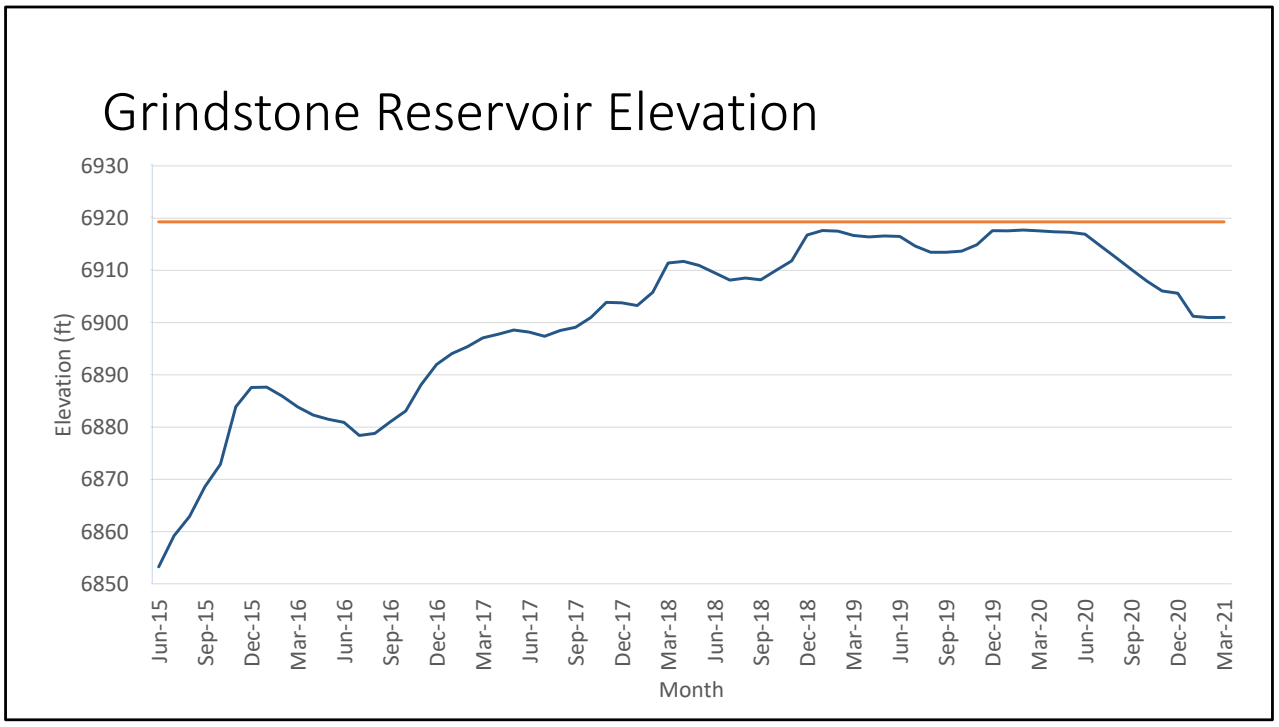
Diversion Breakdown (November through March)



Surface Water and Groundwater Ratios

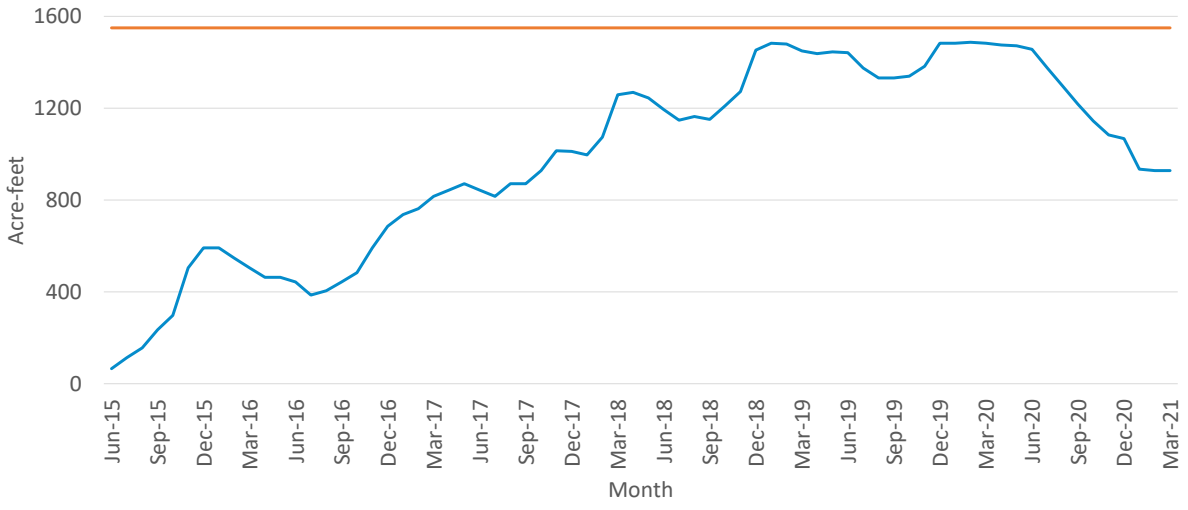


The last 9 years demonstrates the Village of Ruidoso's conjunctive water use strategy of using surface water when it is available and limiting groundwater pumping until it is needed in dry years. 2021 diversion have been predominantly groundwater diversions versus the previous 4 years.



Grindstone Reservoir has decreased in level with the inadequate monsoon season of 2020 and limited precipitation over the winter. Grindstone will not likely be refilled this year without a heavy monsoon season.

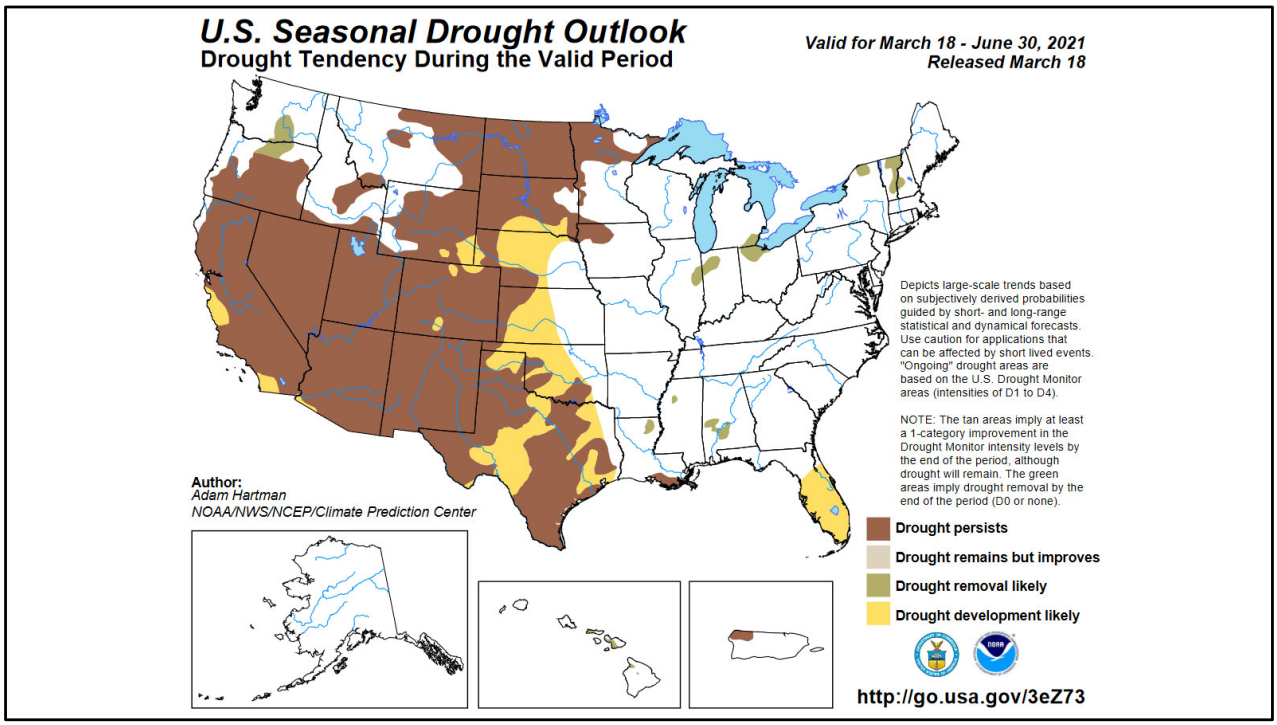
Grindstone Reservoir Storage



Changes to Diversion Strategies

- Using Cherokee well to reduce demands on Grindstone Service area from the Cherokee Interconnect
- Utilizing the Alto-Grindstone Interconnect to bring water from Gavilan Canyon wells to Grindstone Service Area
- Use of Eagle Creek well field in absence of surface water on Eagle Creek

Village has prepared for drought through conjunctive use water diversion strategies.



Drought will likely persist at least until the summer monsoons.