

# New Mexico Basin Outlook Report May 1, 2019



There's still plenty of snow in the northern mountains. Aaron Miller surveys the Taos Powderhorn at the end of April measuring an average depth of 76 inches with 28 inches of snow water equivalent. What a great water year!

Image Courtesy of Logan Peterson (NRCS)

# Basin Outlook Reports

## and Federal - State - Private Cooperative Snow Surveys

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### *How forecasts are made*

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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## Summary

April experienced relatively warm temperatures for a large portion of the month paired with beneficial widespread precipitation which helped maintain historically low drought conditions. In addition, the northern mountains and southern Colorado continued to accumulate minor amounts of snow well into April. Both the precipitation and late season snow couldn't come at a better time helping to aid a dwindling upper elevation snowpack and facilitate low elevation runoff and soil moisture levels. With more precipitation in the forecast for May the state couldn't be better positioned for a good runoff this year. Water users and managers can expect favorable runoff conditions for most of the state.

## Snowpack

Statewide snowpack is currently at 104 percent of the median compared to 5 percent at this time last year. Snowpack in southern Colorado affecting our water supply is also currently above average, with the headwaters of the Rio Grande down slightly as expected however still at 135 percent of the median. This can be compared to the low 22 percent at the end of last April. All northern basins in the state look fantastic at the end of April as we enter runoff season. The Canadian Basin is boasting 176 percent of the median whereas last year it was bare ground. The Pecos Basin totaled 113 percent and the San Juan is 149 percent of the median. What a great winter for Northern New Mexico! All southern basins have melted out and are well into runoff. Please continue to monitor conditions to determine runoff timing and volumes.

<b>NEW MEXICO STATEWIDE SNOWPACK</b>	Percent of Median	Last Year Percent of Median
CANADIAN RIVER BASIN	176	0
PECOS RIVER BASIN	113	0
RIO GRANDE BASIN	112	0
MIMBRES RIVER BASIN	0	0
SAN FRANCISCO-UPPER GILA RIVER BASIN	0	0
ZUNI-BLUEWATER BASINS	0	0
SAN JUAN RIVER BASIN	147	12
CHUSKA MOUNTAINS	0	0
RIO HONDO BASIN	0	0
<b>Statewide Snowpack Total</b>	<b>106</b>	<b>0</b>
# of sites	18	18

## Precipitation

April provided continued relief from long-term drought conditions for much of the state to include the Four Corners area. Statewide monthly precipitation was 86 percent of the average with the water year-to-date total a healthy 114 percent. The highest monthly totals came from the Canadian Basin this month at 123 percent of average. The Pecos was slightly below average at 98 percent with the Rio Grande Basin at 81 percent of average. The San Juan Basin received 79 percent of the average this month with water year-to-date totals at 125 percent. The southern portion of the state received far less moisture with the Rio Hondo Basin being the highest at 100 percent of the average. The Mimbres, Gila, and Zuni-Bluewater Basins were all well below the monthly average with totals close to 50 percent. Water users and managers will see respectable runoff numbers this year for most basins in the state.

## Reservoirs

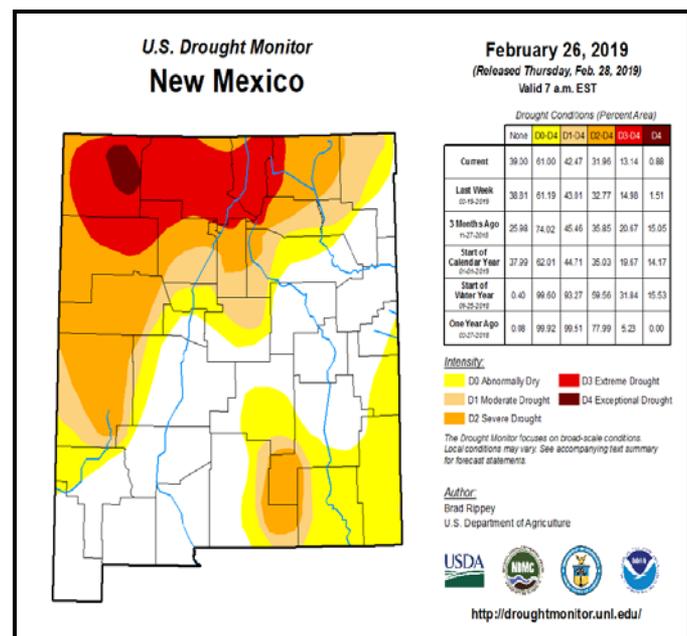
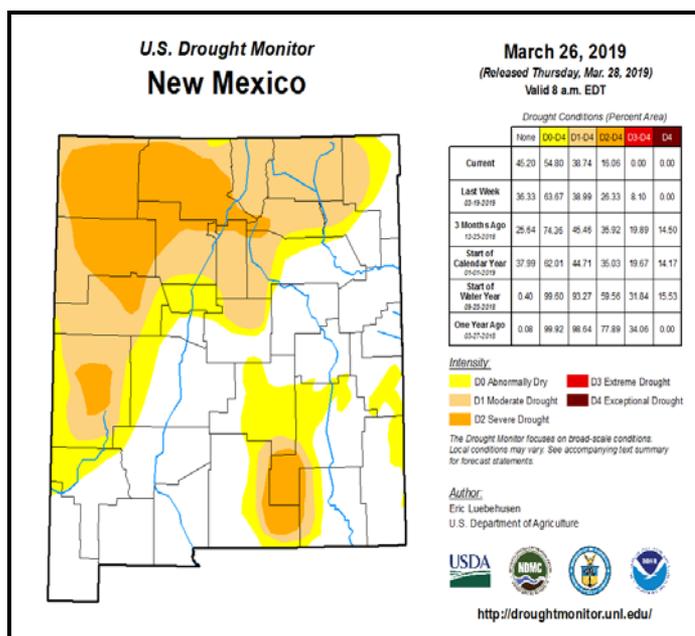
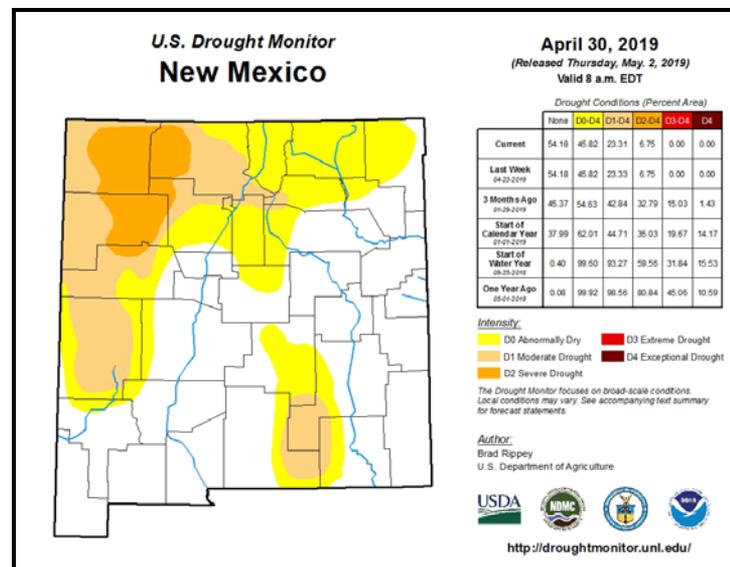
New Mexico's reservoir levels are beginning to rise after having one of the worst winters on record last year. New Mexico is on the cusp of reaping the rewards of a very productive 2019 water year. Outside of Bluewater Lake all basins are below last year's totals however keep in mind that what snow we did receive in 2018 melted out extremely early. This year we can expect a much more normal runoff timeline with melt out occurring well into the summer months in the northern mountains. Current statewide percent of average water stored has increased slightly from 46 percent of average to 54. This is an indication of water moving downstream and into storage and we can expect a lot more over the next several months. With some impressive snowpack and precipitation totals throughout the entire water year users can expect reservoir levels to continue to rise as the high elevation snowpack in the northern mountains begins to melt off.

<b>NEW MEXICO STATEWIDE</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Abiquiu Reservoir	75.2	118.0	162.8	1192.8	6%	10%	14%	46%	72%
Bluewater Lake	11.7	5.7	11.1	38.5	30%	15%	29%	105%	51%
Brantley Lake nr Carlsbad	19.2	30.2	24.9	1008.2	2%	3%	2%	77%	121%
Caballo Reservoir	30.7	46.1	95.1	332.0	9%	14%	29%	32%	48%
Cochiti Lake	53.5	47.3	64.3	491.0	11%	10%	13%	83%	74%
Conchas Lake	124.6	200.4	198.9	254.2	49%	79%	78%	63%	101%
Costilla Reservoir	5.2	12.5	8.4	16.0	33%	78%	53%	62%	148%
Eagle Nest Lake nr Eagle Nest, NM	43.1	42.3	58.0	79.0	55%	54%	73%	74%	73%
El Vado Reservoir	30.6	81.8	133.2	190.3	16%	43%	70%	23%	61%
Elephant Butte Reservoir	313.5	394.3	1269.0	2195.0	14%	18%	58%	25%	31%
Heron Reservoir	81.2	152.3	285.4	400.0	20%	38%	71%	28%	53%
Lake Avalon	2.3	2.6	1.4	4.0	58%	65%	35%	163%	186%
Lake Sumner	29.2	28.1	27.1	102.0	29%	28%	27%	108%	104%
Navajo Reservoir	1116.7	1222.4	1361.0	1696.0	66%	72%	80%	82%	90%
Santa Rosa Reservoir	74.8	91.6	56.6	438.3	17%	21%	13%	132%	162%
Basin-wide Total	2011.5	2475.5	3757.2	8437.3	24%	29%	45%	54%	66%
# of reservoirs	15	15	15	15	15	15	15	15	15

## Streamflow

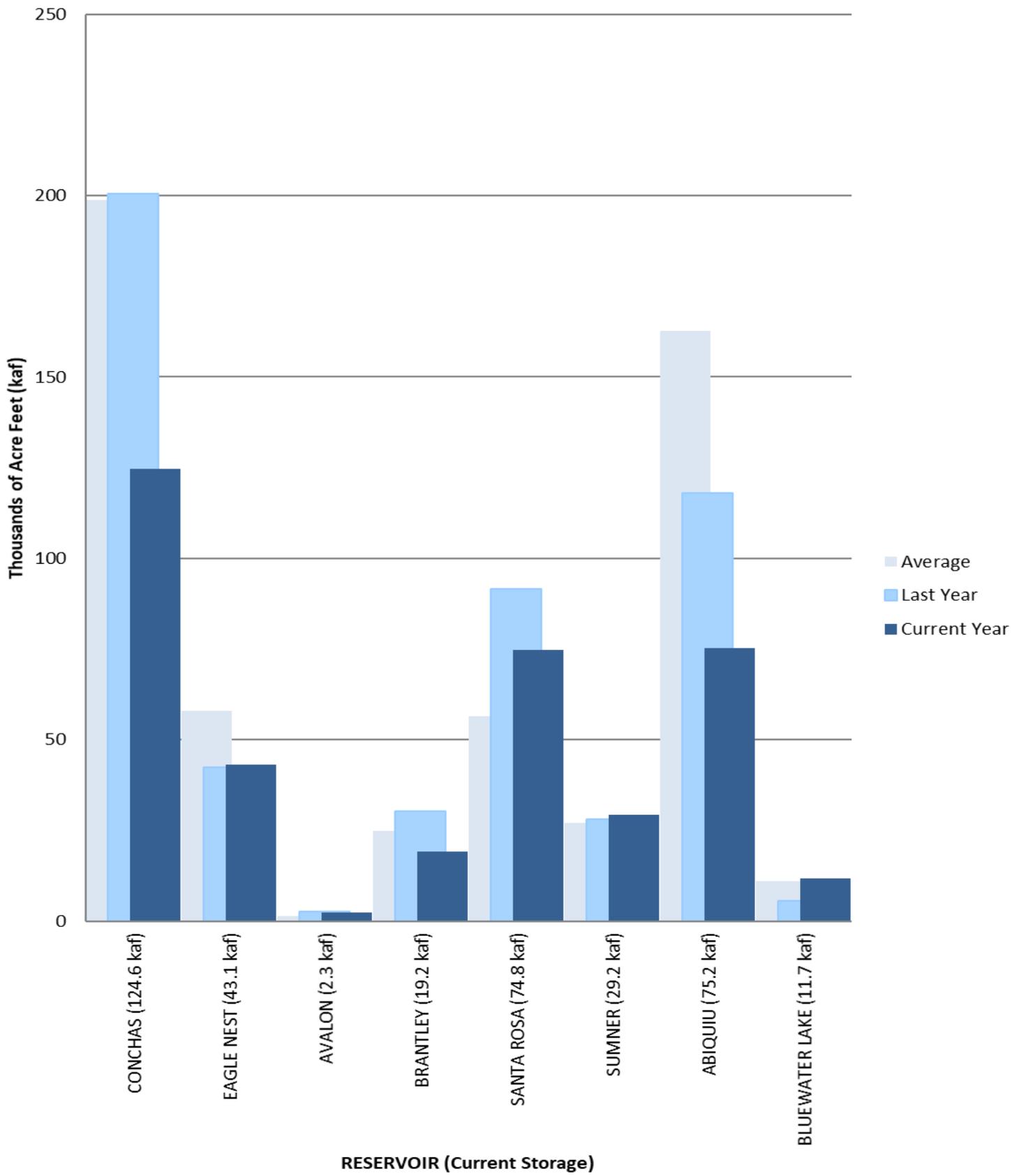
The May 1st streamflow values are much improved over last year for all major rivers reliant on snowpack from the northern mountains. The Rio Grande Basin forecasts range from 145 percent of the average near the headwaters to the low 100's in central and southern New Mexico. The San Juan River impacting New Mexico is between 143-122 percent of the average. The Pecos Basin is currently forecast to be slightly above 120 percent of the average at all forecast points. Additionally, the Canadian Basin has some robust forecast numbers between 147 and 125 percent of the average. The Rio Hondo is forecast to be just below the average at 89 percent. There are no forecasts issued for the month of May for the remaining basins in New Mexico. Please continue to monitor conditions as we wrap up snow accumulation season and transition into Spring.

# New Mexico Drought Monitor, real versus perceived conditions?

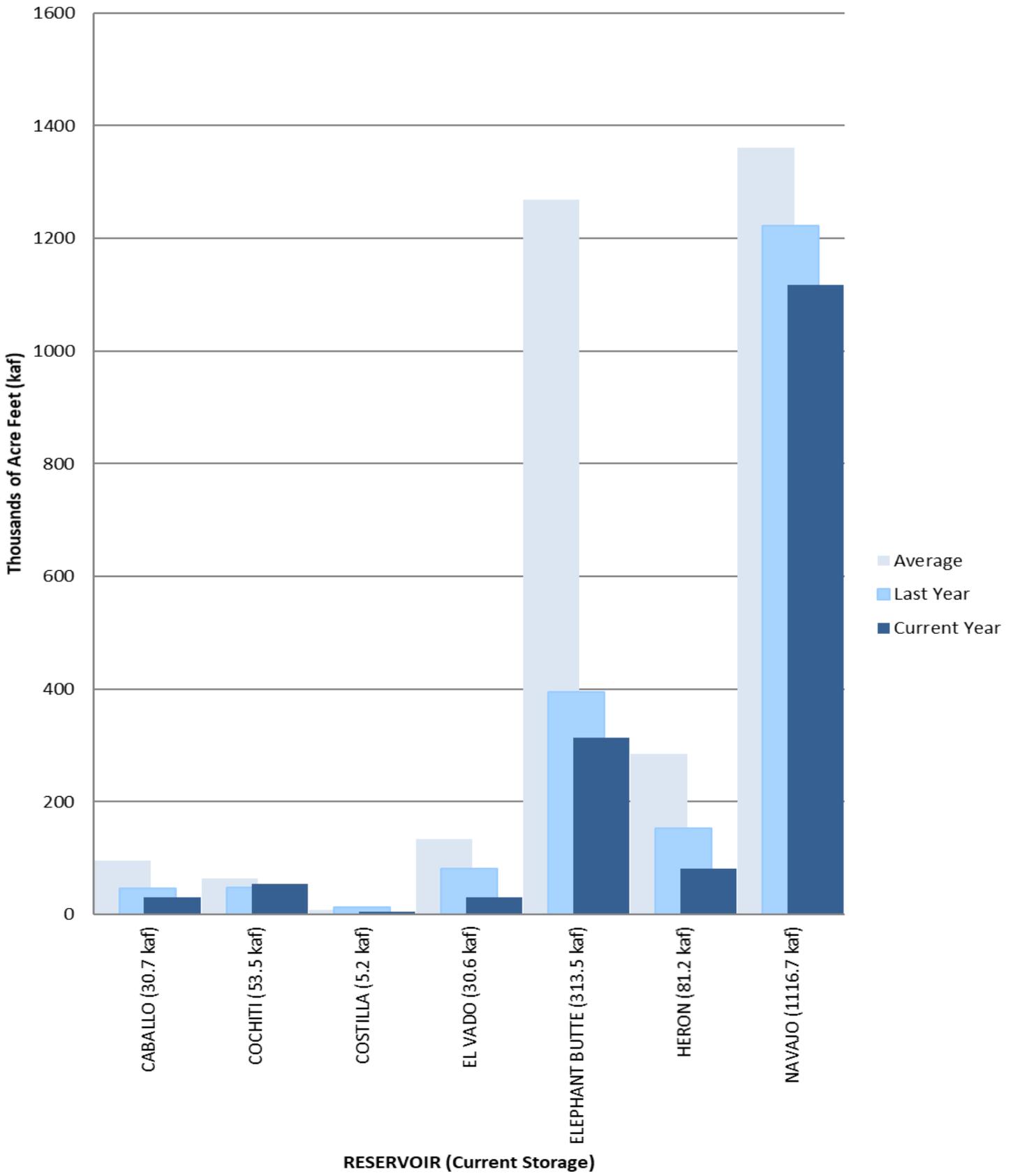


Drought conditions continue to improve over New Mexico with the state continuing to see normal to above normal precipitation through the start of spring. Weather patterns in the month of April began to transition to the usual windy spring pattern with generally above normal temperatures. The trend of above normal precipitation continued over most of the state during the month, helping to keep evapotranspiration rates down. The exception to the above trends has been the Four Corners, specifically the San Juan River Valley. During April, this region was on the drier end with below normal precipitation and increased evapotranspiration. Continued drought improvement is likely along the Northern Mountains; however, trends will have to be monitored into the remainder of Spring and early Summer.

# Statewide Reservoir Storage



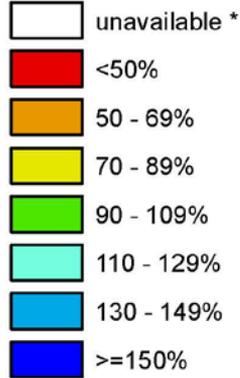
# Statewide Reservoir Storage



# New Mexico SNOTEL Current Snow Water Equivalent (SWE) % of Normal

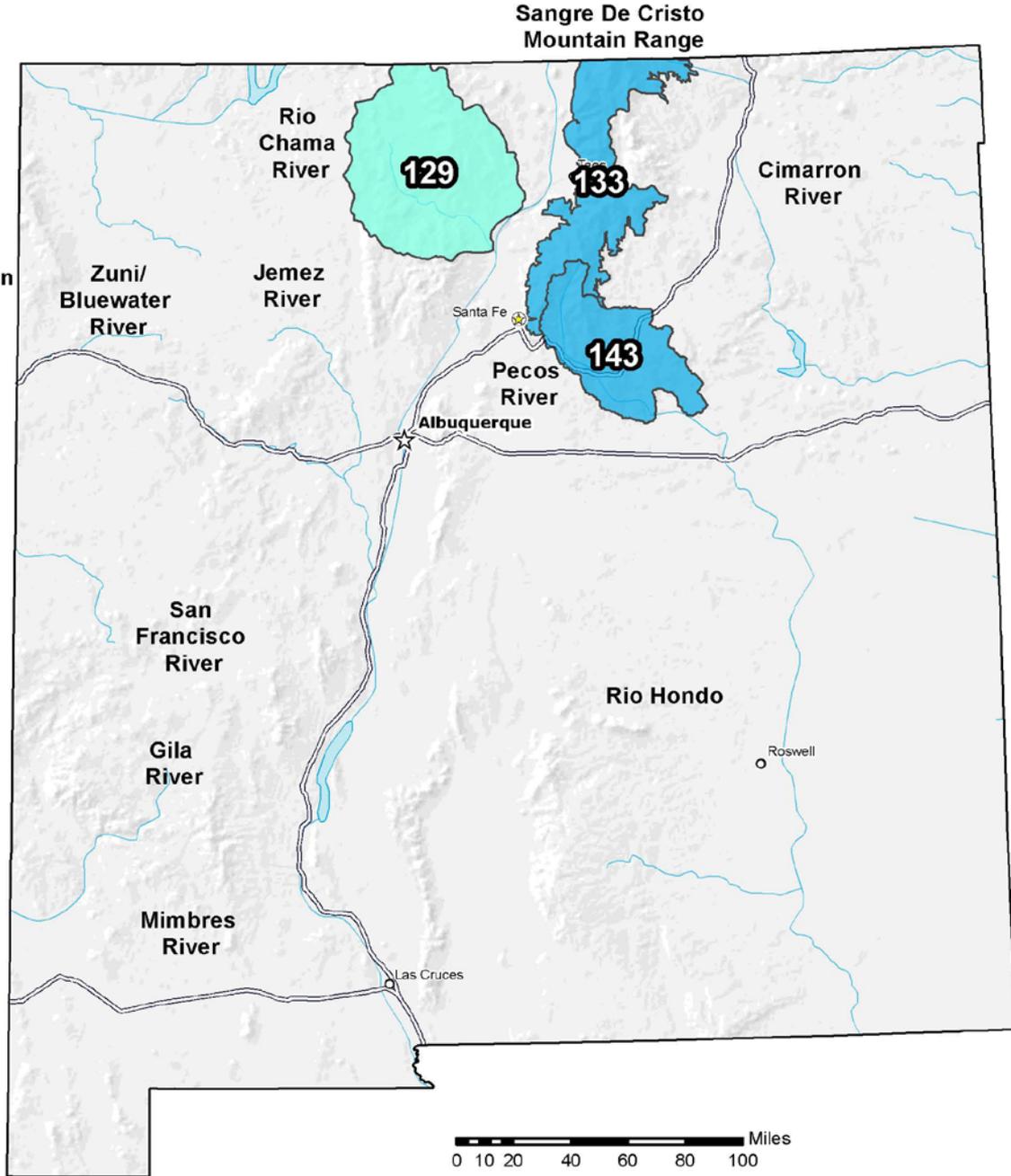
**May 06, 2019**

**Current Snow Water Equivalent (SWE) Basin-wide Percent % of 1981-2010 Median**



*\* Data unavailable at time of posting or measurement is not representative at this time of year*

**Provisional Data  
Subject to Revision**



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

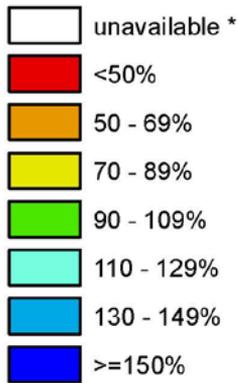
Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

# New Mexico

## SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

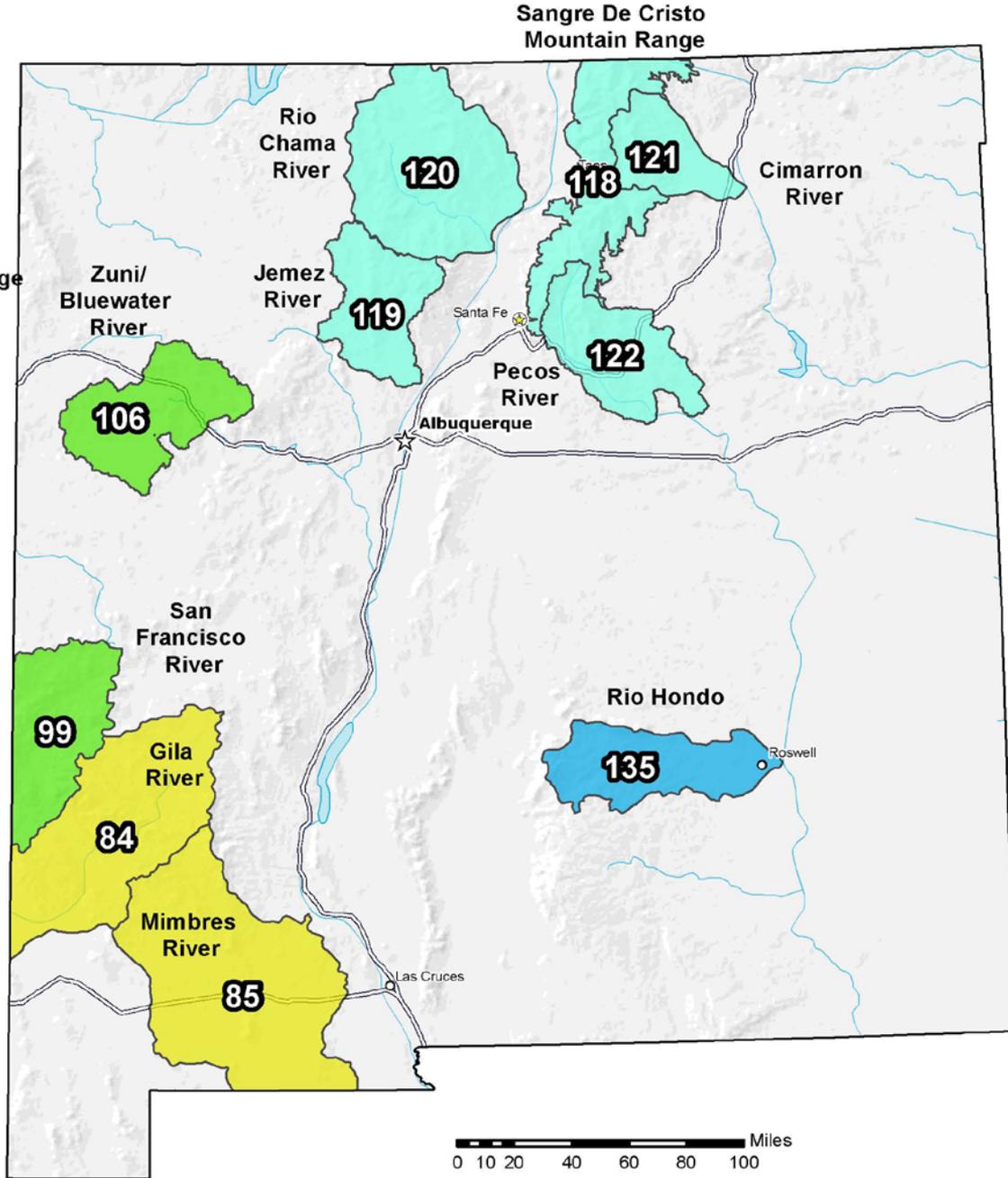
**May 02, 2019**

Water Year (Oct 1)  
to Date Precipitation  
Basin-wide Percent  
% of 1981-2010 Average



\* Data unavailable at time of posting or measurement is not representative at this time of year

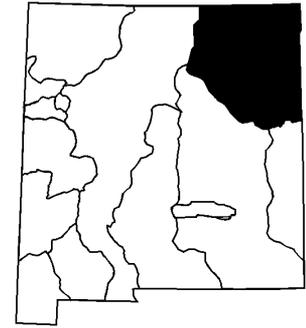
**Provisional Data  
Subject to Revision**



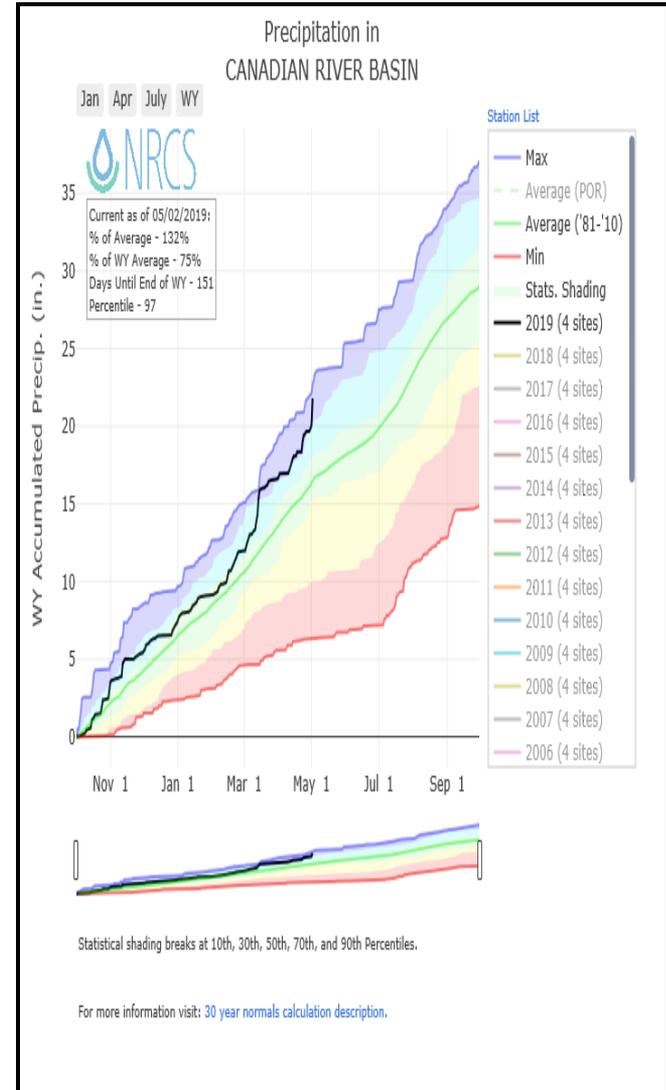
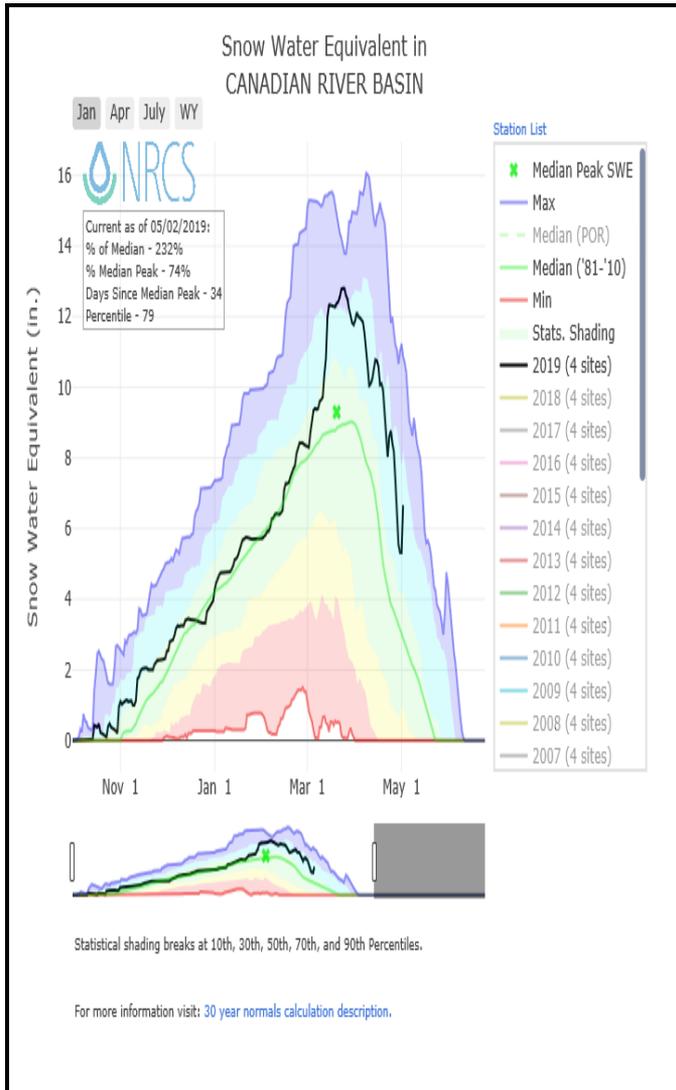
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

# Canadian River Basin Water Supply Outlook Report as of May 1, 2019



The May to June forecasts range from a high of 147 percent of average for the Vermejo River near Dawson to a low of 126 percent at Rayado Creek near Cimarron. The month of April received 123 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation now at 122 percent as compared to 38 percent last year at this time. Snowpack in the basin is at 176 percent of the median! Last year at this time the basin had bare ground. Reservoirs are currently holding 167,700 acre-feet of storage, which is a decrease of 75,000 acre-feet from this time last year. This equates to 77 percent of the average capacity and 65 percent of the average stored water for the basin at the end of April.



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### Canadian River Basin Streamflow Forecasts - May 1, 2019

Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

CANADIAN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Vermejo R nr Dawson	MAR-JUN	6	8.1	9.8	126%	11.8	15.2	7.8
	MAY-JUN	4.7	6.8	8.5	147%	10.5	13.9	5.8
Eagle Nest Reservoir Inflow	MAR-JUN	10.4	13.1	16.5	147%	22	32	11.2
	MAY-JUN	1.05	3.8	7.2	147%	12.7	23	4.9
Cimarron R nr Cimarron <sup>2</sup>	MAR-JUN	7.5	16.8	23	146%	29	38	15.8
	MAY-JUN	-1	4.1	10.4	125%	16.7	26	8.3
Ponil Ck nr Cimarron	MAR-JUN	9.3	10.6	11.7	163%	13	15.1	7.2
	MAY-JUN	3.7	5	6.1	133%	7.4	9.5	4.6
Rayado Ck nr Cimarron	MAR-JUN	8.4	9.2	9.8	140%	10.4	11.4	7
	MAY-JUN	4	4.8	5.4	126%	6	7	4.3
Conchas Reservoir Inflow <sup>3</sup>	MAR-JUN	8.5	18.2	28	93%	41	66	30
	MAY-JUN	5.2	13.1	22	127%	33	56	17.3

1) 90% and 10% exceedance probabilities are actually 95% and 5%

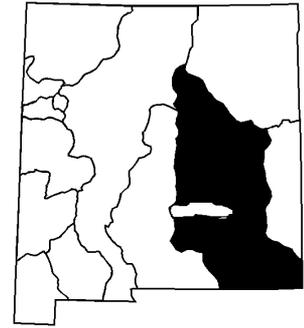
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

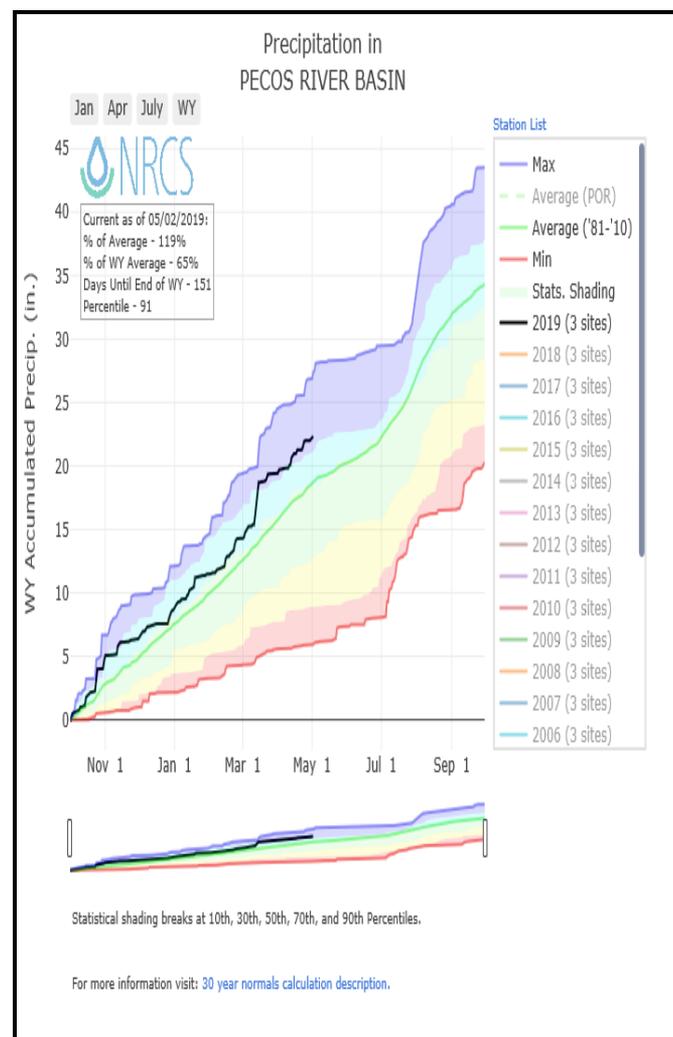
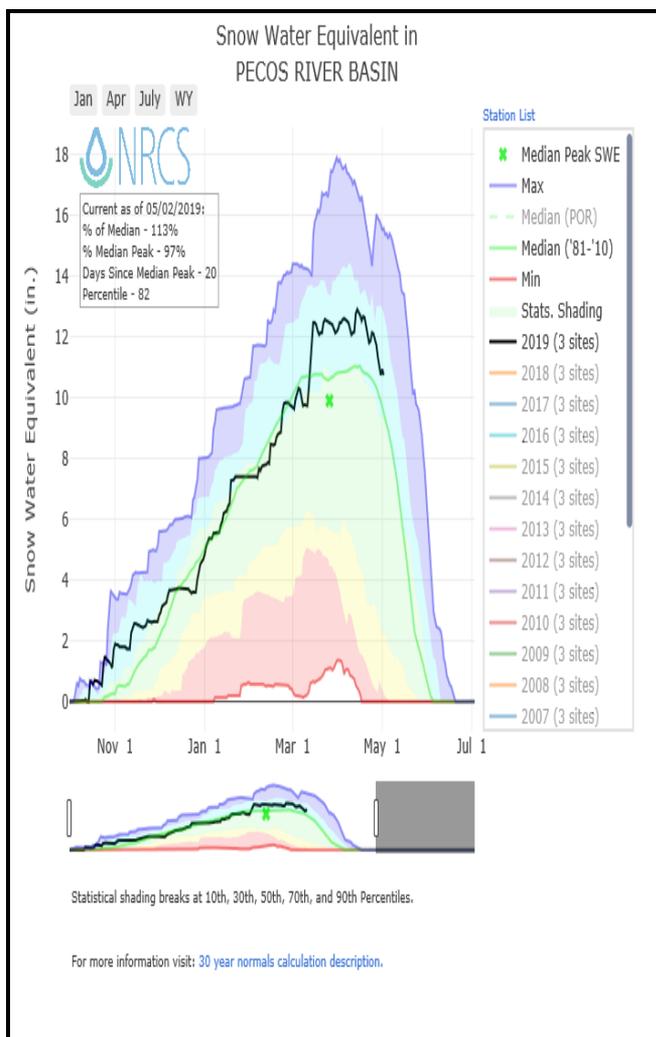
Reservoir Storage End of April, 2019	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Conchas Lake	124.6	200.4	198.9	254.4
Eagle Nest Lake nr Eagle Nest, NM	43.1	42.3	58.0	79.0
Basin-wide Total	167.7	242.7	256.9	333.4
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis May 1, 2019	# of Sites	% Median	Last Year % Median
CANADIAN RIVER BASIN	4	176%	0%

# Pecos River Basin Water Supply Outlook Report as of May 1, 2019



The May to July forecasts for the Pecos range from a high of 127 percent of average for the Pecos River near Anton Chico to 120 percent for Gallinas Creek near Montezuma. April received 98 percent of the average precipitation for the month, putting the basin at 120 percent of average for the water year-to-date. This is 88 percent above last year's average of 32 percent. Snowpack in the Pecos River Basin is now at 113 percent of the median. At this time last year, the basin had zero snow. As of May 1<sup>st</sup>, reservoir storage in the basin is at 125,500 acre-feet. This remains just 7 percent of the average capacity and 114 percent of the average stored water. Last year at this time reservoir storage was 139 percent of the average.



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**Pecos River Basin  
Streamflow Forecasts - May 1, 2019**

Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

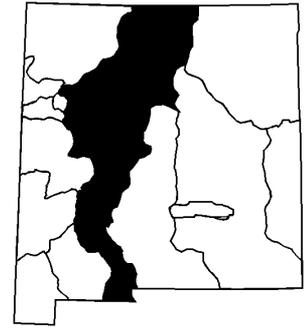
PECOS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Pecos R nr Pecos	MAR-JUL	61	71	78	137%	86	98	57
	MAY-JUL	38	48	55	122%	63	75	45
Pecos R nr Anton Chico	MAR-JUL	80	94	104	165%	115	134	63
	MAY-JUL	33	47	57	127%	68	87	45
Gallinas Ck nr Montezuma	MAR-JUL	9.9	12	13.7	140%	15.6	18.8	9.8
	MAY-JUL	3.4	5.5	7.2	120%	9.1	12.3	6
Pecos R ab Santa Rosa Lk	MAR-JUL	56	70	80	143%	92	111	56
	MAY-JUL	29	43	53	123%	65	84	43

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

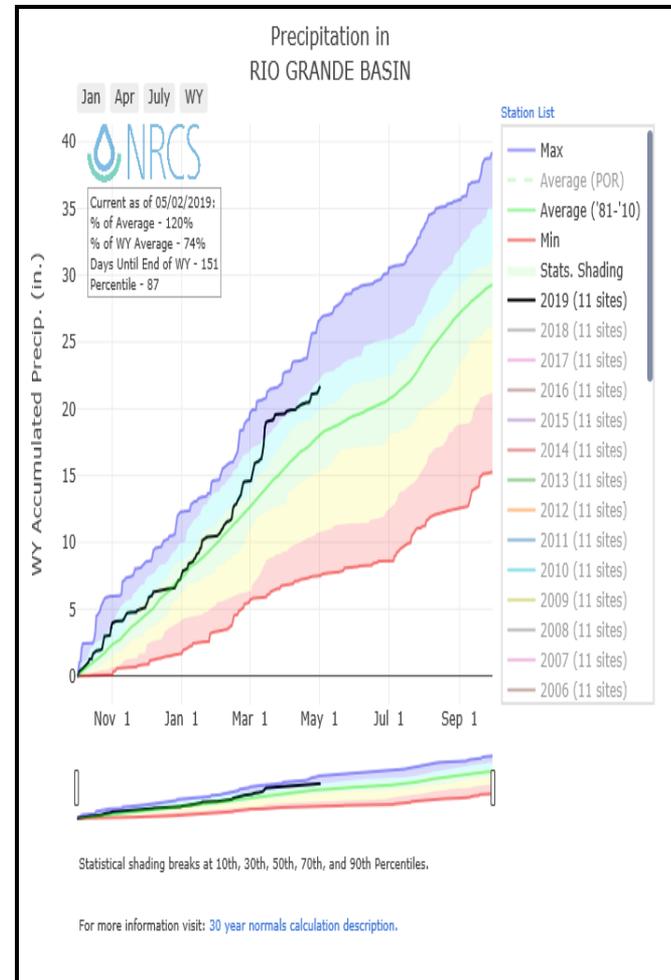
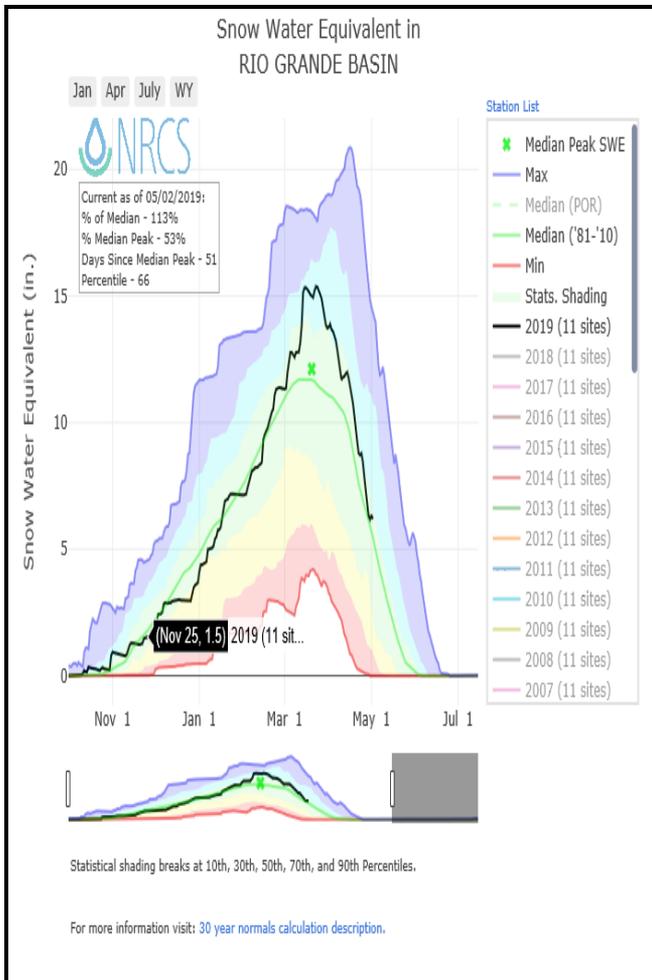
Reservoir Storage End of April, 2019	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Avalon	2.3	2.6	1.4	4.0
Brantley Lake nr Carlsbad	19.2	30.2	24.9	1008.2
Santa Rosa Reservoir	74.8	91.6	56.6	432.2
Lake Sumner	29.2	28.1	27.1	102.0
Basin-wide Total	125.5	152.6	110.0	1546.4
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis May 1, 2019	# of Sites	% Median	Last Year % Median
PECOS RIVER BASIN	3	113%	0%

# Rio Grande Basin Water Supply Outlook Report as of May 1, 2019



The May 1st forecasts for the Rio Grande are all well above to above average for the May to Jul/Sept time period. Near the head waters forecasts are as high as 145 percent of average and just slightly below that near Platoro. The Rio Pueblo near Taos has decreased slightly as is now at 105 percent for the May to July time frame, and further south near Otowi Bridge remains well above average at 143 percent. Forecasts for the Rio Grande at San Marcial have also remained high at 155 percent of the average for the same time period. April was a slightly below average month for precipitation after receiving 81 percent of the average rainfall for the month which equates to 120 percent for the water year-to-date total. Snowpack in the basin has decreased slightly yet remains high at 108 percent of the median which remains well above the 4 percent the basin had last year. Snowpack in southern Colorado near the headwaters of the Rio Grande has decreased slightly, however still looks great at 124 percent of the median as compared to 13 percent last year at this time. Current reservoir storage in the basin has increased to 601,500 acre-feet which is a decrease of 256,400 acre-feet from this time last year. However, keep in mind that last year saw a good deal of high elevation snowpack runoff by this time. This is just 42 percent of the average capacity in the basin and 30 percent of the average stored water.



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**Rio Grande Basin  
Streamflow Forecasts - May 1, 2019**

Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande nr Del Norte <sup>2</sup>	APR-SEP	650	715	755	147%	800	870	515
	MAY-SEP	575	640	680	145%	725	795	470
Platoro Reservoir Inflow	APR-JUL	58	64	69	123%	73	80	56
	APR-SEP	64	71	76	123%	81	89	62
	MAY-JUL	54	60	65	123%	69	76	53
	MAY-SEP	60	67	72	122%	77	85	59
Conejos R nr Mogote <sup>2</sup>	APR-SEP	210	230	245	126%	260	285	194
	MAY-SEP	187	210	225	127%	240	265	177
Costilla Reservoir Inflow	MAR-JUL	10.1	12.1	13.6	123%	15.2	17.7	11.1
	MAY-JUL	8.5	10.5	12	135%	13.6	16.1	8.9
Costilla Ck nr Costilla <sup>2</sup>	MAR-JUL	24	29	33	127%	37	44	26
	MAY-JUL	18.2	23	27	138%	31	38	19.6
Red R bl Fish Hatchery nr Questa	MAR-JUL	29	35	40	118%	45	54	34
	MAY-JUL	22	28	33	122%	38	47	27
Rio Hondo nr Valdez	MAR-JUL	16.6	20	23	125%	25	30	18.4
	MAY-JUL	13.2	16.7	19.3	125%	22	27	15.4
Rio Pueblo de Taos nr Taos	MAR-JUL	13.9	17.1	19.6	115%	22	26	17
	MAY-JUL	7.4	10.6	13.1	105%	15.8	20	12.5
Rio Lucero nr Arroyo Seco	MAR-JUL	7.9	10.5	12.5	115%	14.8	18.5	10.9
	MAY-JUL	6.1	8.7	10.7	119%	13	16.7	9
Rio Pueblo de Taos bl Los Cordovas	MAR-JUL	24	31	37	103%	43	54	36
	MAY-JUL	12.9	20	26	100%	32	43	26
Embudo Ck at Dixon	MAR-JUL	42	52	60	125%	68	82	48
	MAY-JUL	25	35	43	119%	51	65	36
El Vado Reservoir Inflow <sup>2</sup>	MAR-JUL	250	270	285	127%	295	320	225
	APR-JUL	220	240	260	127%	275	300	205
	MAY-JUL	154	173	187	122%	200	225	153
Santa Cruz R at Cundiyo	MAR-JUL	18.9	22	24	131%	26	29	18.3
	MAY-JUL	9	11.7	13.7	102%	16	19.5	13.4
Nambe Falls Reservoir Inflow	MAR-JUL	6	6.9	7.6	117%	8.3	9.5	6.5
	MAY-JUL	3.3	4.2	4.9	96%	5.6	6.8	5.1
Tesuque Ck ab diversions	MAR-JUL	1.28	1.59	1.83	137%	2.1	2.6	1.34
	MAY-JUL	0.64	0.95	1.19	132%	1.47	1.92	0.9
Rio Grande at Otowi Bridge <sup>2</sup>	MAR-JUL	805	895	955	133%	1020	1120	720
	MAY-JUL	545	635	695	143%	760	860	485
Santa Fe R nr Santa Fe <sup>2</sup>	MAR-JUL	5.7	6.2	6.6	153%	7	7.7	4.3
	MAY-JUL	2.1	2.6	3	103%	3.4	4.1	2.9
Jemez R nr Jemez	MAR-JUL	48	51	53	126%	56	60	42
	MAY-JUL	16.3	19.8	22	113%	25	29	19.4
Jemez R bl Jemez Canyon Dam	MAR-JUL	37	42	46	135%	51	59	34
	MAY-JUL	5.7	10.6	14.8	87%	19.7	28	17
Rio Grande at San Marcial <sup>2</sup>	MAR-JUL	550	635	690	135%	745	830	510
	MAY-JUL	380	465	520	155%	575	660	335

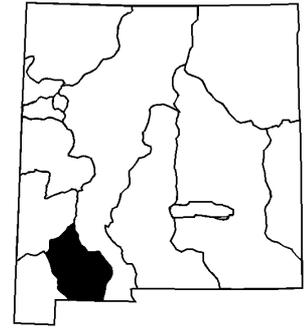
- 1) 90% and 10% exceedance probabilities are actually 95% and 5%  
 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions  
 3) Median value used in place of average

Reservoir Storage	Current	Last Year	Average	Capacity
End of April, 2019	(KAF)	(KAF)	(KAF)	(KAF)
Abiquiu Reservoir	75.2	118.0	162.8	1198.5
Bluewater Lake	11.7	5.7	11.1	38.5
Caballo Reservoir	30.7	46.1	95.1	332.0
Cochiti Lake	53.5	47.3	64.3	491.0
Costilla Reservoir	5.2	12.5	8.4	16.0
El Vado Reservoir	30.6	81.8	133.2	184.8
Elephant Butte Reservoir	313.5	394.3	1269.0	2195.0
Heron Reservoir	81.2	152.3	285.4	400.0
Basin-wide Total	601.5	857.9	2029.3	4855.8
# of reservoirs	8	8	8	8

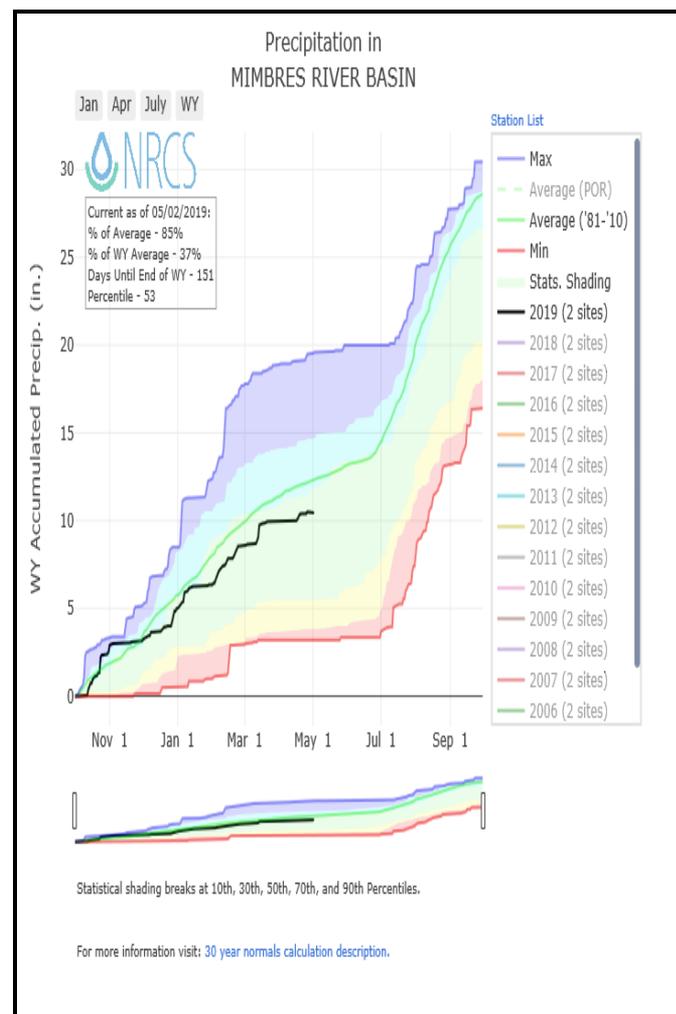
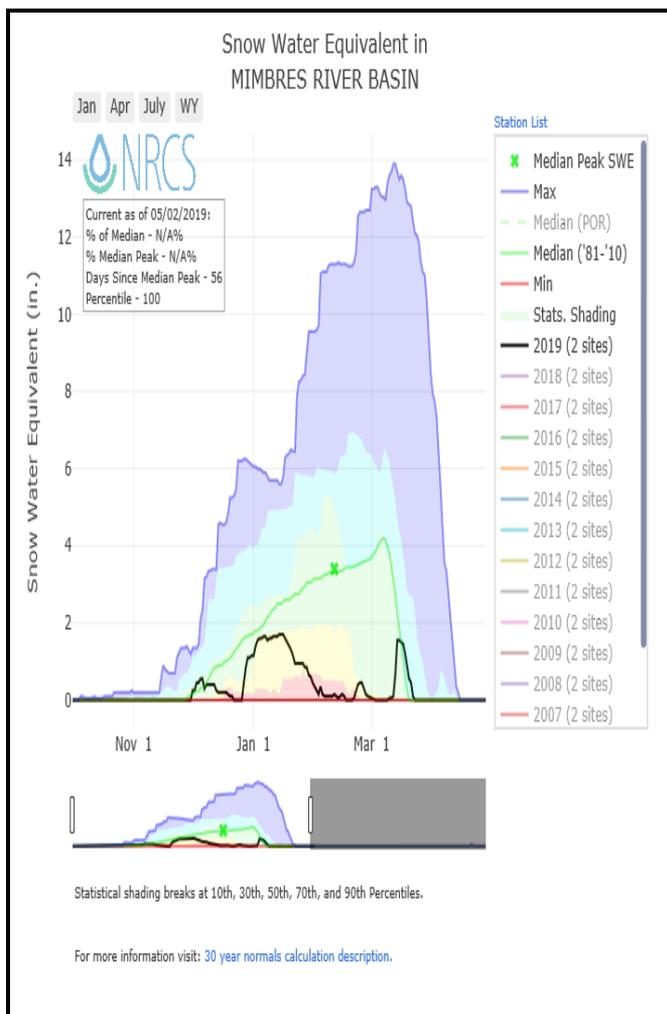
Watershed Snowpack Analysis	# of Sites	% Median	Last Year % Median
May 1, 2019			
RIO GRANDE BASIN	13	108%	4%

# Mimbres River Basin Water Supply Outlook Report as of May 1, 2019



There are currently no May forecasts for the Mimbres River Basin at this time. April was a dry month for the Mimbres which received just 58 percent of the average monthly precipitation. This now brings the water year-to-date total to 85 percent of the average. Snowpack in the basin has melted out.

Users of NRCS Snow Survey data should be aware, due to reduced budget allocations; the manual snow courses at McKnight Cabin and Emory Pass #2 have been discontinued. Data is still being recorded at the automated SNOTEL sites in the basin.

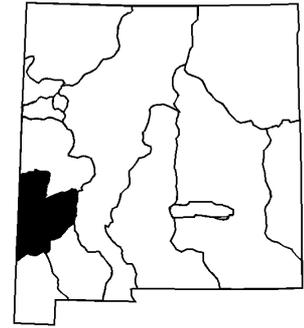


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### Mimbres River Basin - May 1, 2019

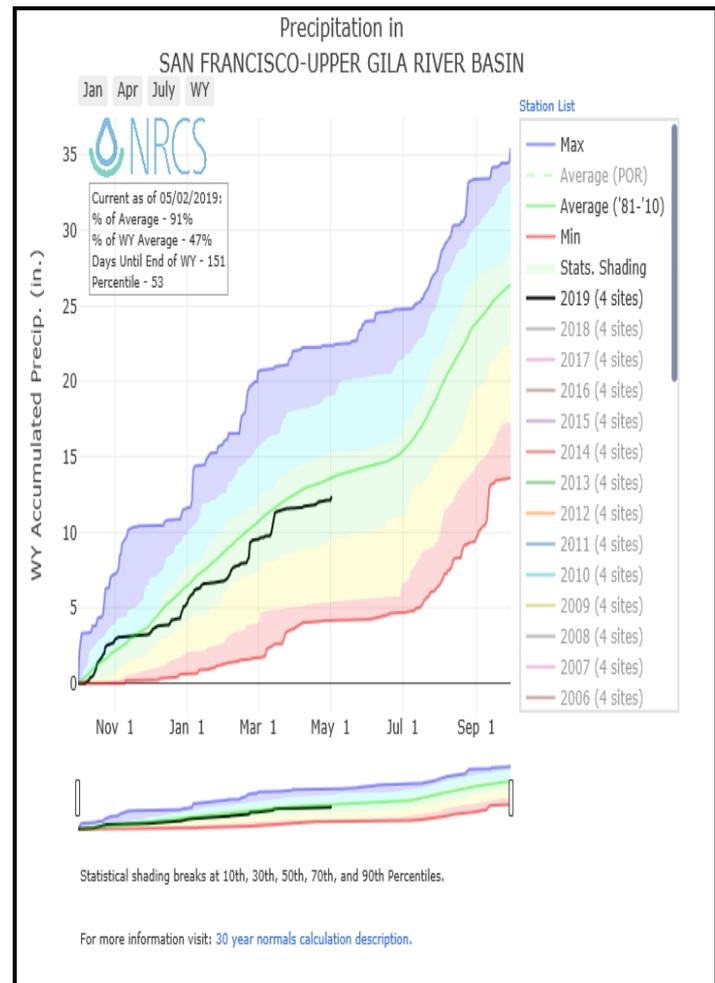
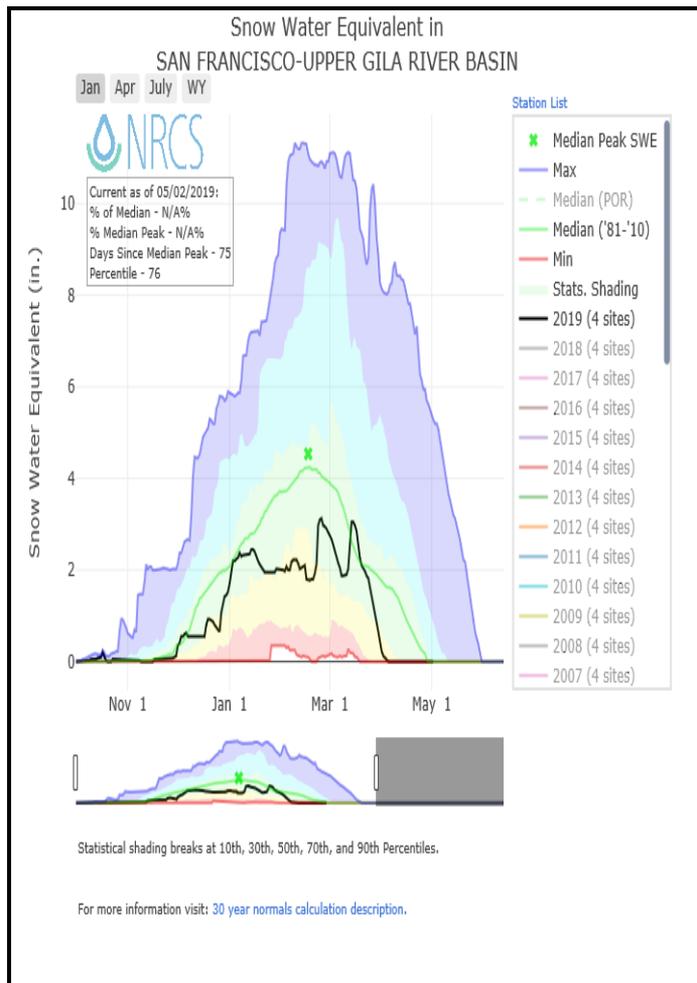
<b>Watershed Snowpack Analysis</b>	<b># of Sites</b>	<b>% Median</b>	<b>Last Year</b>
<b>May 1, 2019</b>			<b>% Median</b>
<u>MIMBRES RIVER BASIN</u>	<u>2</u>		

# San Francisco / Upper Gila River Basin Water Supply Outlook Report as of May 1, 2019



There are no May forecasts for the San Francisco/Upper Gila River Basin at this time. Water year-to-date precipitation is 89 percent of the average after receiving just 51 percent of the average monthly precipitation in April. Snowpack in the basin has been impacted significantly by warm temperatures and has melted out.

Due to budget and contracting issues, the aerial markers at Hummingbird Saddle and Whitewater Baldy are not currently being measured. Plans are in effect to automate these sites with depth sensors which will transmit out data daily as soon as possible.

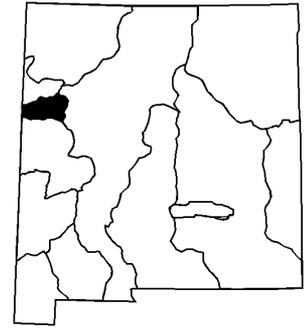


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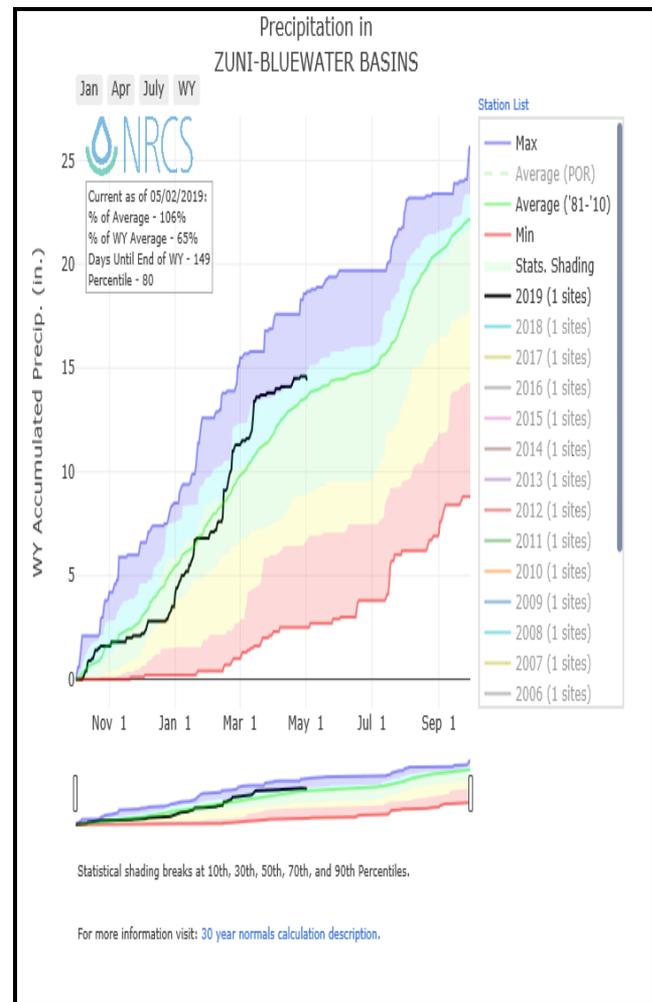
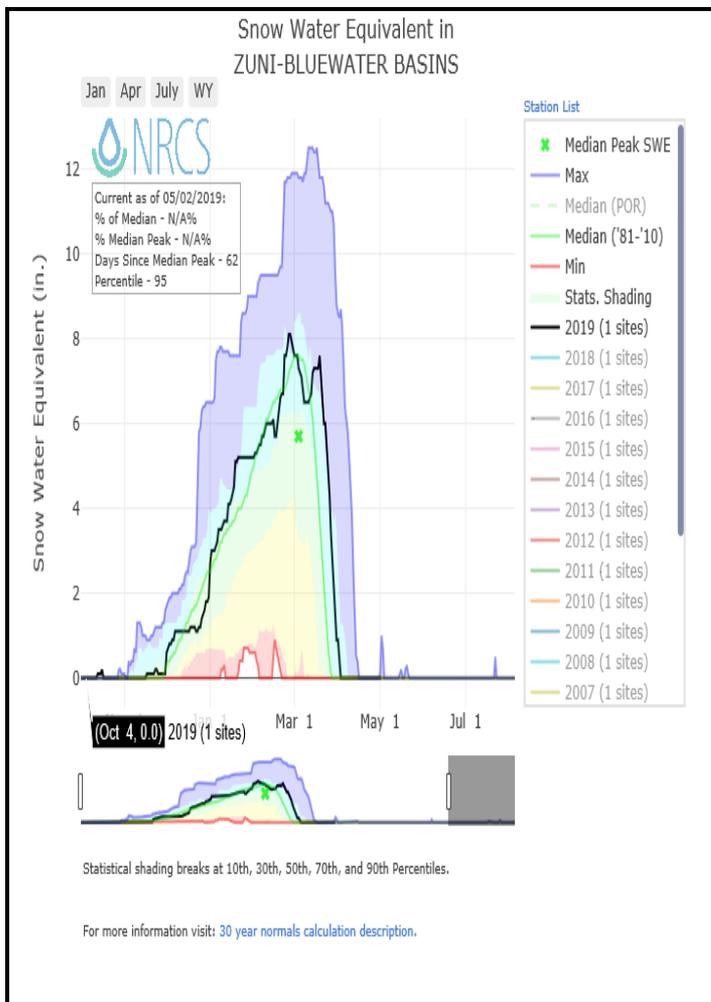
### San Francisco-Upper Gila River Basin - May 1, 2019

<b>Watershed Snowpack Analysis</b>	<b># of Sites</b>	<b>% Median</b>	<b>Last Year</b>
<b>May 1, 2019</b>			<b>% Median</b>
<u>SAN FRANCISCO-UPPER GILA RIVER BASIN</u>	<u>4</u>		

# Zuni / Bluewater Basins Water Supply Outlook Report as of May 1, 2019



There are no May forecasts for the Zuni/Bluewater Basins at this time. Snowpack in the basin has completely melted out. April received just 44 percent of the average rainfall for the month which now puts the water year-to-date total at 107 percent of the average. Last year at this time the basin had only received only 18 percent of the average. Bluewater Lake currently holds 11,700 acre-feet of water versus 5,700 acre-feet at this time last year. This is 105 percent of the average stored water as compared to 51 percent last year at this time.



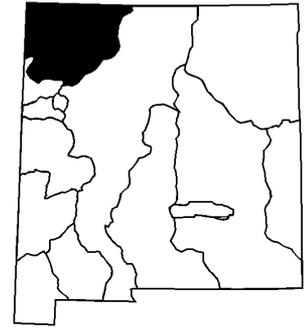
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### Zuni-Bluewater Basins - May 1, 2019

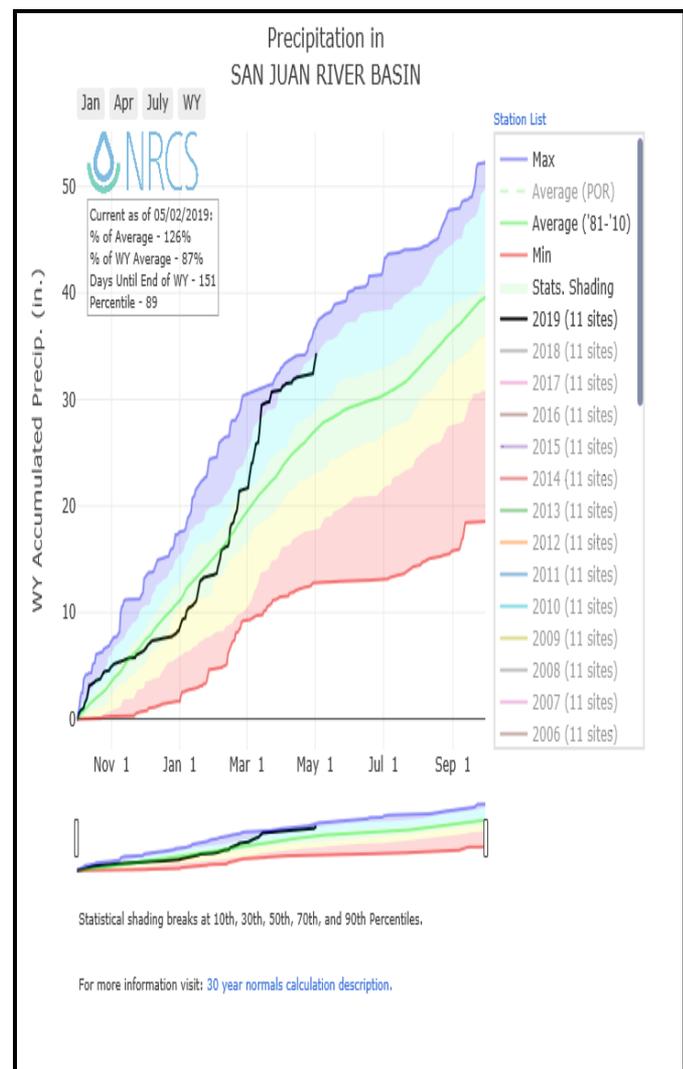
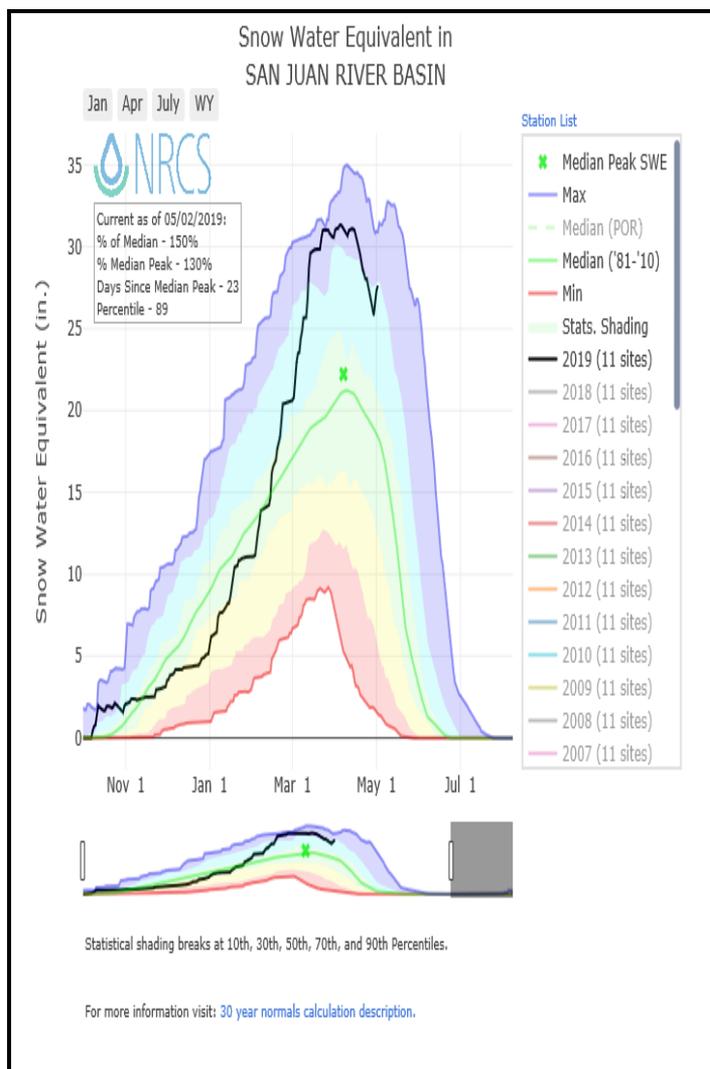
<b>Reservoir Storage End of April, 2019</b>	<b>Current (KAF)</b>	<b>Last Year (KAF)</b>	<b>Average (KAF)</b>	<b>Capacity (KAF)</b>
Bluewater Lake	11.7	5.7	11.1	38.5
Basin-wide Total	11.7	5.7	11.1	38.5
# of reservoirs	1	1	1	1

<b>Watershed Snowpack Analysis May 1, 2019</b>	<b># of Sites</b>	<b>% Median</b>	<b>Last Year % Median</b>
ZUNI-BLUEWATER BASINS	1		

# San Juan River Basin Water Supply Outlook Report as of May 1, 2019



The May through July forecasts for the San Juan all remain above average and now range from 143-122 percent of the average. April received 80 percent of the average monthly precipitation which now brings the water year-to-date total to 125 percent of the average. Snowpack in the basin looks stellar and is now at 149 percent of median which is an increase from 12 percent at this time last year. Navajo reservoir storage contains 1,111,600 acre-feet or 82 percent of the average water stored at the end of March. This equates to 80 percent of the average capacity for the basin's reservoirs.



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### San Juan River Basin Streamflow Forecasts - May 1, 2019

Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

SAN JUAN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Blanco at Blanco Diversion <sup>2</sup>	APR-JUL	56	63	67	124%	72	79	54
	MAY-JUL	45	52	56	124%	61	68	45
Navajo R at Oso Diversion <sup>2</sup>	APR-JUL	67	75	80	123%	86	94	65
	MAY-JUL	53	61	66	122%	72	80	54
Navajo Reservoir Inflow <sup>2</sup>	APR-JUL	885	965	1020	139%	1080	1170	735
	MAY-JUL	655	735	790	140%	850	935	565
Animas R at Durango	APR-JUL	510	550	580	140%	610	655	415
	MAY-JUL	430	470	500	137%	530	575	365
La Plata R at Hesperus	APR-JUL	27	29	31	135%	32	35	23
	MAY-JUL	22	24	26	143%	27	30	18.2

1) 90% and 10% exceedance probabilities are actually 95% and 5%

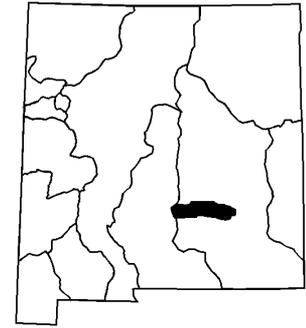
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of April, 2019	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Navajo Reservoir	1116.7	1222.4	1361.0	1696.0
Basin-wide Total	1116.7	1222.4	1361.0	1696.0
# of reservoirs	1	1	1	1

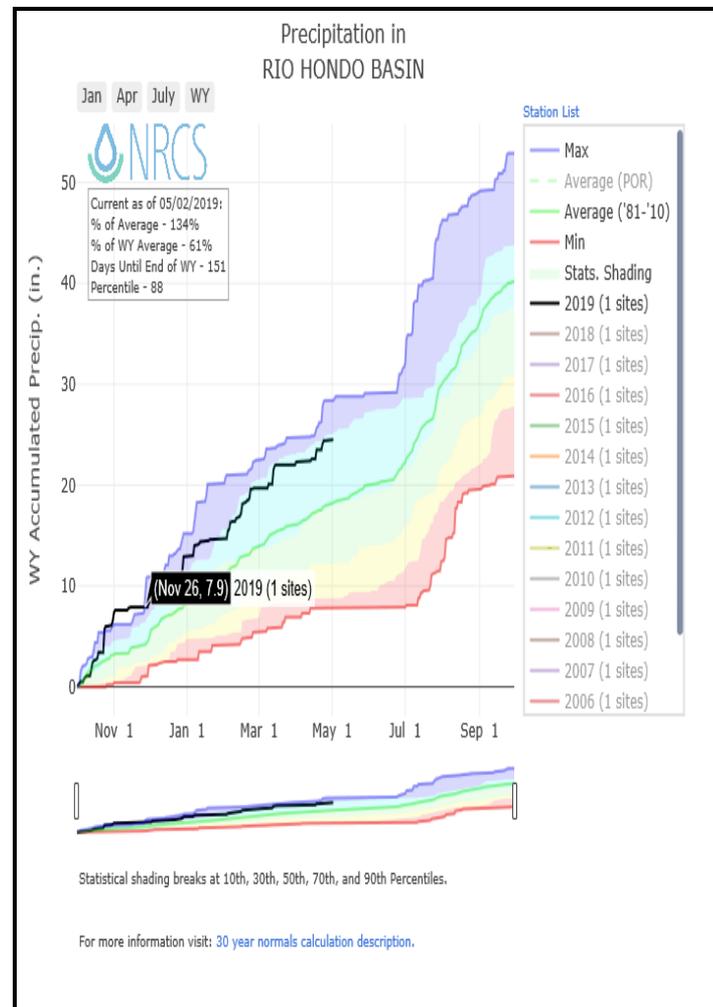
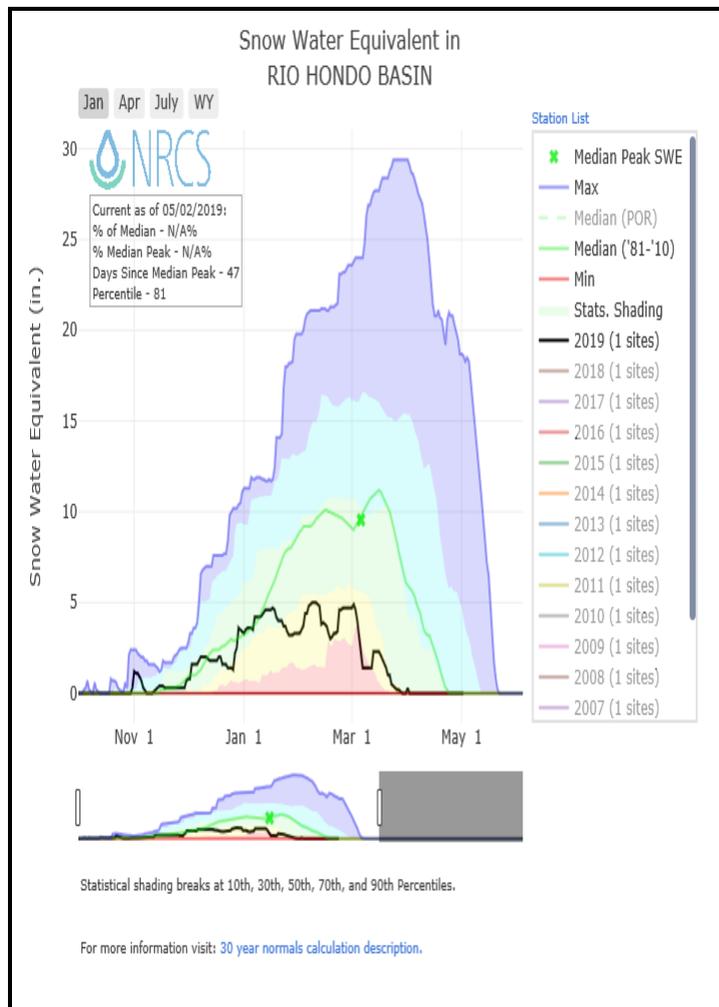
Watershed Snowpack Analysis May 1, 2019	# of Sites	% Median	Last Year % Median
SAN JUAN RIVER BASIN	12	149%	12%

# Rio Hondo Basin Water Supply Outlook Report as of May 1, 2019



The May to June forecasts for the Rio Ruidoso at Hollywood is just slightly below average at 89 percent. April continued to be a wet month for the region receiving 100 percent of the average rainfall for the month. This puts the water year-to-date total at 134 percent of the average. Snowpack in the basin has melted out. This measurement should be used with caution as the Sierra Blanca SNOTEL site was impacted by the Little Bear Fire five years ago.

It should be noted that the switch to using median snowpack values four years ago has had a significant influence on the “average” calculations for the Rio Hondo Basin. Using the old system of computing averages based on the 1971-2000 period, 6.7 inches of SWE was considered normal for January 1. Using the new median calculations based on the 1981-2010 period, 3.2 inches of SWE is now normal. For this reason, comparisons of “percent of average” from year to year will be limited in this basin to minimize confusion.



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**Rio Hondo Basin  
Streamflow Forecasts - May 1, 2019**

Forecast Exceedance Probabilities for Risk Assessment  
Chance that actual volume will exceed forecast

<b>RIO HONDO BASIN</b>	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Ruidoso at Hollywood	MAR-JUN	5.6	6.3	7	104%	7.7	9	6.7
	MAY-JUN	1.1	1.87	2.5	89%	3.2	4.5	2.8

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
- 3) Median value used in place of average

<b>Watershed Snowpack Analysis May 1, 2019</b>	# of Sites	% Median	Last Year % Median
RIO HONDO BASIN	1		

<b>NEW MEXICO STATEWIDE</b>	<b>Network</b>	<b>Elevation (ft)</b>	<b>Depth (in)</b>	<b>SWE (in)</b>	<b>Median (in)</b>	<b>% Median</b>	<b>Last Year SWE (in)</b>	<b>Last Year % Median</b>
Alamitos	SC	9320						
Aztec #2	SC	9880						
Bateman	SNOTEL	9300	6	2.0	4.6	43%	0.0	0%
Boon	SC	8140	0	0.0				
Bowl Canyon	SC	8980						
Chamita	SNOTEL	8400	0	0.0	0.0		0.0	
Dan Valley	SC	7640	0	0.0				
Elk Cabin	SNOTEL	8210	1	0.1	0.0		0.0	
Frisco Divide	SNOTEL	8000	0	0.0	0.0		0.0	
Gallegos Peak	SNOTEL	9800	0	0.0	1.5	0%	0.0	0%
Hematite Park	SC	9500						
Hidden Valley	SC	8480						
Hopewell	SNOTEL	10000	32	12.4	14.0	89%	0.0	0%
Lookout Mountain	SNOTEL	8500	0	0.0	0.0		0.0	
Mcgaffey	SC	8120	0	0.0				
Mcknight Cabin	SNOTEL	9240	0	0.0	0.0		0.0	
Missionary Spring	SC	7940						
Navajo Whiskey Ck	SNOTEL	9050	0	0.0			0.0	
North Costilla	SNOTEL	10600	12	4.0	0.5	800%	0.0	0%
Ojo Redondo	SC	8200						
Palo	SNOTEL	9350	0	0.0			0.0	
Palo	SC	9300						
PanchueLa	SC	8400						
Quemazon	SNOTEL	9500	0	0.0	0.0		0.0	
Red River Pass #2	SNOTEL	9850	0	0.0	0.0		0.0	
Rice Park	SNOTEL	8460	0	0.0	0.0		0.0	
Rio En Medio	SC	10300			4.2		0.0	0%
Rio Santa Barbara	SNOTEL	10664	29	11.1			0.0	
San Antonio Sink	SNOTEL	9100	0	0.0			0.0	
San Antonio Sink	SC	9200	0	0.0	1.2	0%	0.0	0%
Santa Fe	SNOTEL	11445	44	16.9	17.5	97%	0.0	0%
Senorita Divide #2	SNOTEL	8600	0	0.0	0.0		0.0	
Shuree	SNOTEL	10100	0	0.0			0.0	
Shuree	SC	10097						
Sierra Blanca	SNOTEL	10280	0	0.0	0.0		0.0	
Signal Peak	SNOTEL	8360	0	0.0	0.0		0.0	
Silver Creek Divide	SNOTEL	9000	0	0.0	0.0		0.0	
State Line	SC	8000						
Taos Canyon	SC	9100						
Taos Powderhorn	SNOTEL	11057	71	27.2			5.3	
Taos Powderhorn	SC	11250	76	28.2	26.8	105%	3.7	14%
Tolby	SNOTEL	10180	5	1.5	0.0		0.0	
Tres Ritos	SNOTEL	8600	0	0.0			0.0	
Tres Ritos	SC	8600						
Vacas Locas	SNOTEL	9306	0	0.0	0.0		0.0	
Wesner Springs	SNOTEL	11120	43	15.8	11.6	136%	0.0	0%
Whiskey Creek	SC	9050						
<b>Basin Index</b>						<b>104%</b>	<b>5%</b>	
<b># of sites</b>						<b>22</b>	<b>22</b>	

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**New Mexico**  
**Basin Outlook Report**  
Natural Resources Conservation Service  
Albuquerque, New Mexico

